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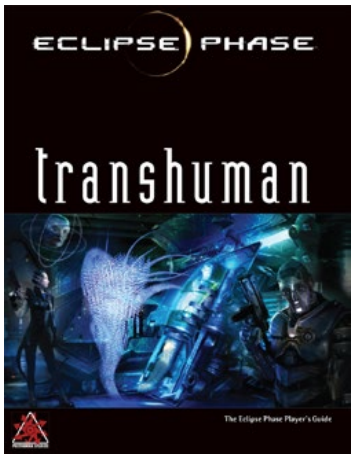
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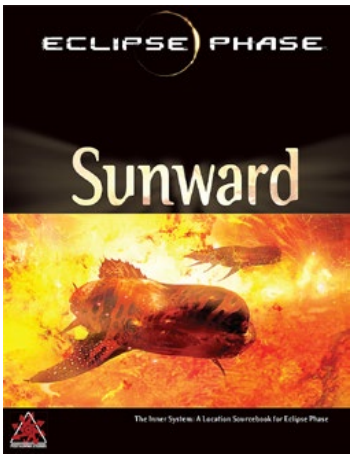
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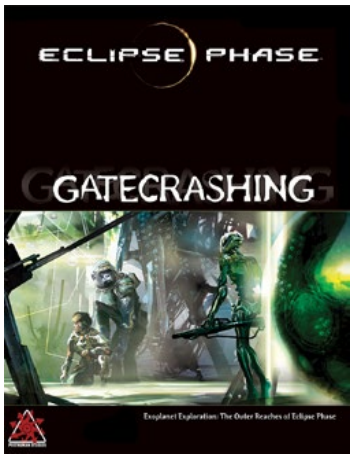

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# INTO THE WHITE

"There's not a tool on site could do this to him," Ragnarsson was telling her across the table. "Nothing like it in the fabber logs, either."

Inspector Sváfa Nordqvist glanced up from the corpse between them, mismatched violet and gray eyes refocusing visibly. She'd been examining the body at high magnification. She wore a regulation vacsuit, as did everyone in the room, and her hair in a precise, black wedge.

The man who'd spoken, Declan Ragnarsson, stood across from her, tall and bed headed, with anxious eyes—a hazer, but neither as chiseled nor as fey-looking as the stereotypical hazer phenotype. He was one of two Titanian Ministry of Science Police officers detailed to on-site security at Murmansk Shaft Research Facility.

"You're certain the logs haven't been tampered with?" Sváfa asked.

Ragnarsson's partner, Monique Antigua, a bouncer with round, east Asian features, stood arms crossed at the edge of the table between Sváfa and Ragnarsson. She shook her head. "I went over the logs with a fine sieve. So did the security AIs. But I'm not an infosec specialist."

"I'll rely on your assessment for now," Sváfa said.

The corpse belonged to Mission Director Kjartan Ólafsson, dead now for just over two days. The research team lacked a medical stasis unit, so they'd laid him on a desk in his quarters and dropped the temperature, creating a temporary morgue. Primitive, but they were two kilometers beneath the surface of Saturn's moon Iapetus; cold was easy to come by. A security drone hovered in one corner. Leaning one-footed against the wall next to the drone, anonymously handsome and so far silent, was Lt. Januszczak, Commonwealth Fleet Intelligence.

Sváfa returned her attention to Ólafsson. The mission director was white. He'd lost most of his blood through a gaping wound in his chest cavity. The wound had the weird, eaten look characteristic of nanotrauma—as if flesh, bone, and organs had been dissolved by acid, but without the chemical burns or paths of puckered tissue runnels of acid would leave. The gradue of loose particulate and undifferentiated bodily fluids typical of nanotrauma had largely been scraped away by the doctor bot during its autopsy, but images from the crime scene before they'd moved the body showed it clearly.

"No attempt at resuscitation, I take it?" she said. It wasn't exactly a question.

"We didn't find him nearly soon enough," Antigua said.

"The stack?" she asked. She started to turn Ólafsson over.

"Disassembled," said Ragnarsson, helping her.

Indeed. The nanobots, wherever they'd come from, had eaten through the chest cavity, up into

the neck, and come out the nape. Where Ólafsson's cortical stack ought to be was a ten centimeter-wide hole. Something was unusual, though. It was nanotrauma, but not what she'd have expected from, say, a subverted disassembler swarm. She peered closely at the wound, magnifying her vision again.

"Do you have any bush robots on the gear manifest?" she asked.

"Plans only," Antigua said, "None instanced. Most of what the researchers use out there is imaging equipment—minimally invasive."

Minimally provocative, she might as well have said. The research station occupied a junction in the network of precisely cylindrical, uniformly white ice tunnels that formed a sprawling, three-dimensional lattice beneath Iapetus's thirteen kilometer-high equatorial ridge. The tunnels connected what remained of the most massive TITAN project yet discovered—an apparent attempt to convert much of the mass of Iapetus into a planet-scale computer. Exploring the nervous system of a TITAN artifact required a host of precautions. The research station was designed to emit as little electromagnetic energy as possible. The researchers kept radio silence outside of it, and they avoided physically disturbing the tunnels beyond laying down lighting strips.

Sváfa straightened, zoomed out to normal vision. "The pattern of nanotrauma isn't consistent with a swarm or a hand tool. The doctor bot didn't note this?"

Januszczak finally spoke up. "It's a bot. That's why we have you. Anyway, what do you think it means?"

Sváfa scowled, studied the ceiling. "Something put a fist full of fractal branching digits through his chest and took apart enough of his vital organs to kill him."

Ragnarsson grunted. "So what's our murder weapon?"

She considered. "I don't know. You don't have a bush robot, and I've never heard of fractal digits as an implant on a biomorph. For now, it's an open question. When was his last backup?"

"Three months ago," Antigua said, "There aren't any ego bridges on site."

"Never know what we might dig up, down here," Ragnarsson said.

"Of course," Sváfa said, "Containment protocol." Good in a TITAN attack, but bad during a murder investigation.

Januszczak said, "Are we sure the stack isn't hidden somewhere?"

"The doc bot found a quantity of near-molecular diamond dust consistent with a cortical stack in the gradue collected from under the corpse," Antigua said.

Sváfa pulled the sheet back over Ólafsson's vacant-eyed morph. "Let's assume for now the victim wasn't carrying a stack-sized lump of diamond for some other reason," she said.

Januszczak frowned. "I want to review the doc bot logs in any case."

"Fine," Sváfa said. She'd been here half an hour and she already resented Fleet looking over her shoulder. They had a clear interest, though. The research station belonged to the Science Ministry, but security of the moon as a whole fell to Fleet. That Sváfa quietly freelanced for Firewall potentially complicated relations even further. "I think we're otherwise done here. Let's have a look at the crime scene."

"It's out in the tunnels," Ragnarsson said.

* * *

A featureless tunnel, white and even as porcelain, led from the airlock of the research station. Bluish-white strip lighting installed by the research team glared from the tunnel floor, casting their shadows on the ceiling. The researchers had chosen a major tunnel junction to site the station. Januszczak, bringing up the rear behind Sváfa and Antigua, played out a thin comm tether behind them. Through it they could contact Ragnarsson, who'd remained in the hab module. Among themselves they kept radio silence, communicating instead via suit-mounted laser links. They'd gone armed, but neither this nor knowing that Fleet's marines had patrolled these tunnels for months and found nothing but frozen corpses reassured Sváfa.

When they'd gone about six hundred meters, the airlock receded to a tiny, gray dot, then to nothing. Sváfa, looking ahead and then behind, felt as if she were looking into a pair of mirrors set opposite one another. There was no sound in the vacuum of the corridor. Only their tacnet maps indicated distance from the station. Sváfa was accustomed to the yawning openness of space, the dizzying sensory disconnect that came with motion in orbit, the closeness of asteroid warrens, but nothing had prepared her for the combination of claustrophobia and spatial disorientation brought on by a long walk in Iapetus's tunnels.

[It opens into a circuit junction in half a klick,] Antigua said, [We'll have to climb up two levels.]

[Why did Ólafsson go out alone?] Januszczak asked.

[Wait 'til you see what he found,] Antigua said, [The video in our report isn't as impressive as the reality.]

They were headed toward an unusual junction in the circuitry. Even as Antigua sent the message, Sváfa caught the shimmer of light reflected off what must have been the largest mass of exposed TITAN circuitry she'd yet seen.

Januszczak said, [Careless. Ólafsson's backup will have to go through psych before he's re-certified.]

One doesn't speak ill of the dead, Sváfa thought. But their backups are another matter.

MONIQUE ANTIGUA ■ SCIENCE POLICE OFFICER

LT. JANUSZCZAK ■ FLEET INTELLIGENCE OFFICER

They reached the junction. The bottom quarter of the tunnel was still nearly opaque, white ice, but the other three quarters were circuitry. Until now they'd bounded along, using their hands as well as their feet to push themselves forward and avoid hitting their heads on the ceiling. Antigua's lithe bouncer morph had an easy time of this. For Sváfa and Januszczak in their hazer bodies, the movements came less readily. Now they slowed their pace, shuffling cautiously.

The TITAN circuitry substrate formed dense whorls all around, the clear-as-glass ice etched in seemingly infinite layers that accumulated into patterns hurtful to the eye and brain, even as their crystalline beauty caught the light, entrancing Sváfa. Looking at the substrate made her slightly nauseous, and yet it also bore a weird and deeply uncomfortable familiarity. Sváfa realized the effect had an unsettling similarity to using her async talents.

They entered a vaulted chamber, walled on all sides with glittering substrate. Only a few columns of the rougher, opaque ice climbed to the ceiling, and curving paths of it crisscrossed the floor. The chamber was perhaps fifteen meters wide and three times that in height, although it was difficult to tell, difficult to look upward at all without feeling nauseous, and Sváfa kept her eyes to the even white of the pathway as much as possible. They had to shuffle even more cautiously to avoid overshooting a step on the path and landing on the fragile circuitry—or in the five meter-wide shaft at the center of the room.

[It is rather magnificent,] Januszczak said, [What do they think it is?]

[You know the going theory on how the whole thing worked, yes?] Antigua replied.

[Yes.]

[They think the shaft is the terminus of one of the heat exchanges,] Antigua said.

If "heat" were a fair word. But it was. Sváfa checked her suit's readout. The chamber was a few degrees warmer than the surrounding tunnels. Not enough to melt ice, but enough to yield a trickle of power to the trillions of thermoelectric couples theorized to have powered the matrioshka brain. Theorized, only, though: the actual circuitry devoured itself when the matrioshka shut down, leaving only a fine grit in the circuit pathways and the icy substrate itself, tantalizing as a fossil trilobite.

The fossil is not the mechanism, she reminded herself. She'd messaged her Firewall contact, Tara Yu, when she found out she'd be going to Iapetus. So far this looked to Sváfa like a murder—and not of an unfamiliar type. The claustrophobic white uniformity of Iapetus's tunnels and the cramped quarters in which the research team lived were a recipe for depression, withdrawal, and sudden violence. But Yu had let her in on more of what Firewall knew about Iapetus: the human inhabitants converted to exsurgent drones, then abandoned to starve when their goal here, whatever it had been, was completed. Every centimeter of these tunnels had been cut by once-human colonists. She'd never been so close to the enormity of the Fall.

Januszczak edged closer to the shaft, close enough to set Sváfa's incisors on edge. [Wouldn't there be some type of cabling to exploit the temperature difference between here and the mantle?] he asked.

[If transhumans designed it,] Antigua said, [And there might be cabling. Deeper. The theory is that closer to the surface, the entire system ran on waste heat.]

[Without thermocouple arrays?]

Antigua shrugged. [Any of the science team will be happy to go on about their pet theories. Really, they know nothing.]

Sváfa was still looking at the ground. [Let's keep moving?]

[This way,] Antigua said. The researchers had installed a set of rungs on a section of white ice wall. The rungs climbed two thirds of the way up the wall before stopping at another horizontal corridor. [Careful,] Antigua said as she began hoisting herself, grasping the rungs with both feet and hands. [You don't want to fall, even in this gravity.]

Sváfa kept her eyes on the wall as she climbed. She had a weird urge to reach out and touch the TITAN circuitry substrate. It was in arm's reach. She wondered what it would tell her.

Nothing good, she suspected, coming back to herself. Sváfa had only met one other async while working for Firewall—a xenoarcheologist named Ngembe. He, too, possessed a talent for reading objects; he called it "grokking."

"Things call to you before you ever apply your mind to them, don't they?" Ngembe had asked her.

"That's not a rational idea," she'd answered him; she'd thought him mad. Now, though, her talent—her infection—nagged at her to probe the TITAN circuitry. It was easy to resist, but the gnawing sense of something other pushing her toward the burnt-out workings couldn't be put aside.

At the top of the ladder, they again found themselves in a white corridor. Where previously the white hallways had been disorienting, Sváfa now found them positively comforting.

[You're almost there,] Ragnarsson messaged.

They came to a T junction. To the left, more identical corridor. To the right, the lighting strips ran for about fifty meters before ending. The smooth white of the corridor dimly reflected their lights for some distance before receding into blackness.

In the center, the crime scene. Malformed ice, melted by an agonizer on roast mode and then refrozen again just as quickly, ran in one long trail for about ten meters down the floor of the corridor to the left. In one spot, it had crossed a lighting strip, burning it out. A shorter trail of malformed ice ran just a few meters along the floor.

Sváfa knelt and released a nanoswarm directly onto the floor. Unable to fly in the vacuum, they'd spread slowly, but they were her only option for nanoscale detection. Her nanodetector, relying as it did on intake of air, would be useless here.

[Not a very good shot,] Januszczak observed, [if he had to track it along the ground that far.]

[He was a civilian,] Antigua said.

[He didn't do militia service?]

[No,] Sváfa messaged, memory augmentations bringing Ólafsson's file swiftly to mind. She had a dossier for everyone in the station, the product of two days' stim-fueled research during her flight to Iapetus. [He opted for civil instead.]

She pointed down the dark corridor. [Where does that go?]

[Unexplored,] Antigua said.

They were three, all armed and combat trained, yet the darkness beyond terrified her. She suppressed a shudder, activated her emotional dampers. It wouldn't do for a detective of the Commonwealth Science Police to be shaking in her vacsuit. Iapetus was dead, was it not?

She imaged the nearby ice using t-rays and lidar but found nothing other than ice and more circuit substrate beyond the walls.

After several minutes, Thora, Sváfa's muse, reported that the nanoswarm had sampled the whole area. [Particulate matches on vacsuits and gear worn/carried by Agent Januszczak, Officers Antigua and Ragnarsson, Director Ólafsson, and yourself.]

[No one else?] she asked. Ragnarsson and Antigua had gone looking for Ólafsson and found the body. They'd done so at a suggestion from Nilsen, Ólafsson's assistant, who'd found the thermal exchange and expected Ólafsson would be working there alone, documenting it. And Januszczak had arrived with her, dropped by a Fleet shuttle at the head of the Murmansk Shaft ice elevator atop the equatorial ridge.

[No one,] Thora said.

Sváfa said, [Someone's run a cleaner swarm over this area.] No exsurgent bogeymen from the depths of Iapetus were involved, unless they were unusually fastidious.

Januszczak said, [You're sure?]

[It's difficult to say when a given particle was deposited here, but if anyone was here other than Ólafsson himself prior to Antigua and Ragnarsson finding him, they'd have left a trace.] She turned to Antigua. [Can you and Ragnarsson account for your vacsuits at the time the crime was committed?]

THORA ■ SVÁFA'S MUSE

[Yes,] she said. [We had them on. Regs on an SPD-protected site in a vacuum environment: suits on when you're not in your bunk.]

Sváfa knew that regulation. It wasn't always enforced, but here they ran a tight ship. She took a sample of the gradue, just to be thorough. [We should get back,] she said.

As they walked, Januszczak asked, [Who has access to cleaner swarms?]

[Almost everyone,] Antigua said. [The hab module crawls with them.]

* * *

Sváfa set about interviewing the research team. She'd eliminated Antigua and Ragnarsson as subjects. They and five of the science team had all been in the hab module's common area at the time of the murder. The module's radio emissions proofing meant none of them could have committed the crime using a teleoperated robot. And for the scientists, professional rivalry was an unlikely motive. Their purpose was to investigate Iapetus's gross physical properties, and though they'd been led by Ólafsson, a materials scientist, they all came from distinct fields.

This left three suspects.

Magda Nikkanen, programmer-archeologist and Titan Tech academic, had been absent from the common area and lacked a convincing alibi. She claimed to have been in her bunk, but spime records neither proved nor disproved this.

Oleg Nilsen, Ólafsson's assistant (and like Ólafsson a materials scientist), had also been absent—and he had a motive. Nilsen had led the tunnel crawl that initially discovered and documented the heat exchange shaft near the crime scene. Several days after the discovery, Nilsen and Ólafsson argued bitterly and, within a few days, word arrived that Nilsen would be transferred off the team.

Finally, there was Mick Keegan, ice mining engineer, charged with analyzing stresses in the ice, preventing damage to the circuitry, and digging out if any cave-ins occurred. The TITANs apparently never intended for the matrioshka to last. They knew that faults in the ice would eventually degrade the machine's performance beyond what even their inhuman technology could achieve. Iapetus's interior had been reshaped for limited use, and now it was falling apart. Every team sent down had a mining engineer. Scientists dying to get their fingers into Iapetus were a dime a dozen, but ice mining engineers on Titan had no shortage of less hazardous work. The Science Ministry had scouted Keegan from off world.

But Keegan had done more than engineering. When they found the body, Antigua and Ragnarsson immediately searched the station for weapons. They found

none, but they did discover that Keegan had hidden away several slabs of TITAN circuitry substrate, crated and prepped to smuggle off the moon.

* * *

Sváfa started with Keegan. The engineer was ruggedly handsome, with unkempt black hair and a decidedly un-Titanian rakishness to his gear.

Since her infection had manifested, Sváfa could see colors and textures rise and fall in a person's face during conversation—even more so if the person were experiencing stress or strong emotion. She'd already been a highly trained kinesicist, but the infection afforded a higher level of certainty. She often suppressed this talent. The interplay of expression, muscle movement, blood circulation and … call it "probability" … in a speaking human face could be almost physically painful, as if the thing in her hated what it sensed. Nor was this occasional antipathy limited to transhumans; she often felt the same toward uplifts, even neo-octopi and neo-avians, whom most humans found closed and alien. It made it difficult at times to play the hard-nosed investigator.

"They call you the Anarchist. You're from Kronos Cluster?"

He chuckled, smiled jaggedly. She hadn't known they made bouncers with freckles … or crooked teeth. "Let's not tarry, love," he said, "I'm from Phelan's, not Kronos, and I'm not an anarchist—I'm a capitalist."

By which he meant "criminal," Sváfa gathered. "You're glib for a man likely to serve a few decades in simulation."

"Commonwealth justice is a lamb compared to most."

"You're also a talented engineer to be running a confidence scheme over chunks of ice," she said.

"Plenty of talented engineers sleeved in clankers on Mars, love. Skill's one thing, but a man does well to have cred in the bank."

"So much for return on your investment," Sváfa said, "But for now I'm concerned with Director Ólafsson."

"Go on, do I look like a jealous scientist? Or a fucking exsurgent?" He'd said the word in English, first pausing for a beat, as if his Skandinavíska skillsoft didn't know it.

Sváfa tensed. Few people knew the term. Keegan had watched her reaction. So had Januszczak. She sat stone-faced, waiting, letting the silence work at Keegan. She was betting he loved his voice too much for his own good.

But too soon, Januszczak stood and leaned over the desk at Keegan—rather ineffectually, Sváfa observed. What was he doing? "Did you kill Kjartan Ólafsson?"

"No," Keegan said.

Sváfa believed him.

* * *

"You made that short," Januszczak said.

"Your question was badly timed, but it did the work," Sváfa said.

They'd had to put Keegan in the room with Ólafsson's corpse for lack of space. She'd detailed Ragnarsson to watch him while Antigua printed more security drones. There wasn't much chance of Keegan escaping; where would he go? But a desperate man might try something.

"You barely questioned him."

Sváfa could read lies on a human face like flashing red AR graphics, but she didn't want to get into an argument about policecraft with an intel man. "He'd be a fool to draw attention to himself by killing someone. And it's clear he's not a fool."

She let Januszczak fume and called in Nikkanen.

* * *

Magda Nikkanen's dossier said she'd spent twenty-eight months beneath Iapetus on five different research teams. She'd authored several papers proposing possible architectures for the TITAN hardware—all presently classified.

Nikkanen herself had a round face with high cheekbones. She'd attired herself severely: black bowl cut, unadorned gray vacsuit. Some of the team wore vacsuits with helmets off habitually, but on Nikkanen, it looked buttoned up, clinical—a sterile wall between her and her surroundings.

"You were born on Iapetus," Sváfa began. This alone made Nikkanen interesting.

"That's accurate," Nikkanen said. "It was quite … Titanian, before the Fall." No wistful look off into the distance; just a statement.

"Your family … early colonists?"

"Yes," Nikkanen said. "From a city in Finland, on Earth. My older brother was born there."

"Did you kill Kjartan Ólafsson?" Januszczak put in.

Idiot, Sváfa thought, I should have coached him after the last one. What had been a good closing question with Keegan was a terrible one early in the interview with Nikkanen. Januszczak clearly didn't know the difference between an interview and an interrogation.

[Thora,] she messaged. [Her reaction on that last question?] Normally, Sváfa would go with her gut and review results from the kinesics software later, but Januszczak's question might shorten the interview considerably.

[Surprise/alarm,] the AI messaged.

"No!" Nikkanen said. "Who would? Kjartan could be brusque, but he was a good sort. I mean, obviously someone did, but … really, they couldn't have been in their right mind to do it."

[Avoidance,] Thora put in. Yes.

Before Nikkanen finished, Sváfa messaged Januszczak, [This isn't a Fleet interrogation room. She'll demand counsel if we treat her like more than a witness.]

Sváfa backed her chair up, giving Nikkanen more space, and said, "I'll be straight with you. Our primary subject of interest is Mick Keegan." Nikkanen's posture relaxed almost imperceptibly.

Januszczak said, "Keegan planned to smuggle TITAN artifacts off Iapetus. Did Ólafsson mention any suspicions he might have had, about Keegan or anyone else?"

Nikkanen tensed again. Sváfa suppressed a grimace. Januszczak was making a hash of this.

"I wasn't in his confidence," Nikkanen said. "Why? You know, I don't think I should say anything else to you without an attorney."

Januszczak bristled. "This is a military jurisdiction!"

Magda was shaking a bit, her voice unsteady. "If you had me up on charges of smuggling TITAN artifacts or compromising security. But you're questioning me in relation to a civil crime. And I'm not being detained." She looked at Sváfa. "Am I, Inspector?"

"No," Sváfa said, not looking at Januszczak. "You're free to go."

* * *

"I apologize," Januszczak said after Magda Nikkanen left the room, straightening and trying to make eye contact, which Sváfa avoided. "I imagine she was receiving legal advice from her muse. That was stupid of me."

Sváfa said, "You didn't help matters, but I don't think she's our killer. Though from her reaction to your question, she might know who is."

"I'll keep quiet on the next one," Januszczak said.

"Forget about it," Sváfa said. Being angry at a Fleet intel man for being forceful in an interview was like being angry at a wasp for stinging you on the thumb. "Let's talk to Nilsen." But just before she summoned him, Antigua called.

[I found something,] Antigua messaged. [Oleg Nilsen tampered with the surveillance logs. Not just during the crime, but on multiple prior occasions.]

[How do you know?] Sváfa asked.

[Fleet Intel has an agent loose in the local mesh that tries to double-log every contact between a spime and a mesh ID. Nilsen didn't know about it.]

Sváfa glanced at Januszczak; did he even know? Fleet security was an onion; it was entirely possible he didn't have access to all of the layers. [How do you know?] Sváfa asked.

[Hacked it and tossed its logs. Our warrant to search the premises is still active. Fleet's not immune. It caught Nilsen several times.]

[Please keep that to yourself for now. It could be a headache later; better if we can make a case without you revealing that.]

[Fine. But it's useful, isn't it?]

[Maybe.]

* * *

Sváfa disliked Nilsen immediately. He had a nervous, seeking face. She felt as if he were searching Januszczak and her for both approval and weakness at each question. She tried to swallow her unease with him in order to make an honest assessment of the man, but it was difficult.

Her interviews with the other researchers suggested things had been rocky between him and the director for some time. His work on the TITANs' use of native Iapetan materials in constructing the matrioshka was brilliant but controversial.

"How was your relationship with Director Ólafsson?" Sváfa asked.

He scowled at her from across the desk. "Strained. Obviously."

"Be that as it may, you worked closely with him," she said. "We've arrested Mick Keegan for attempting to smuggle sections of circuitry substrate off Iapetus. Do you think Ólafsson suspected?"

Nilsen sneered. "He wouldn't have cared."

Januszczak raised an eyebrow but remained quiet.

"What makes you say that?" Sváfa asked.

Nilsen straightened. Here was something new, uglier in his bearing: pride. "I'm a loyal Titanian. Ólafsson didn't care about our security. He was a damned argonaut—would've passed everything he learned down here to them."

As Nilsen spoke, Sváfa messaged Januszczak, [Nilsen is a radical technosocialist, probably a member of the Interplanetary.]

[I can confirm that for certain, actually,] Januszczak messaged. He cleared his throat. "Even Fleet Intelligence doesn't consider the argonauts a hostile group, Doctor Nilsen."

Nilsen stared at Januszczak as if he'd said something indelibly stupid. "Fleet isn't concerned about dissemination of data on TITAN technology?"

Sváfa said, "Of course they are, Doctor. Was Director Ólafsson in collusion with Keegan, then? Or releasing data on his own?"

Sváfa could tell Nilsen was about to lie even as he opened his mouth. "I've been gathering evidence, yes. Building a case."

She gazed off into a corner. "Is that why you tampered with hab module surveillance logs?"

"What? What? I did no such thing." Nilsen was on his feet, drawing Sváfa's eyes back to him. His face was red, a vein bulging out, and he'd balled up his fists.

Januszczak's hand went to his stunner. His voice was intimidatingly calm. "Easy, Nilsen. This is still just an interview."

[He's telling the truth,] Sváfa messaged. [It wasn't him.]

Nilsen slowly sat back down.

[How do you know?] Januszczak asked.

Sváfa said, "Mr. Nilsen, let's put aside your suspicions about the Director for now. I'd like to review the statement you gave regarding the events of two days ago one more time."

* * *

They continued with Nilsen for another thirty minutes, during which time Sváfa became convinced that although Oleg Nilsen was a disagreeable ideologue, he'd had nothing to do with Ólafsson's murder. Her suspicions began to veer back toward Magda Nikkanen.

Then Ragnarsson entered the room, his face grave. "Magda Nikkanen just stunned one of her colleagues and fled out the airlock."

"Up the elevator?" Januszczak asked, rising. "Where would she go?" Waiting for the elevator on the broken spine of the equatorial ridge when they'd arrived, Sváfa and Januszczak had seen nothing but heavily cratered ice, ghost white under the stars' faint illumination, stretching out to both horizons.

"No," Ragnarsson said, "She's gone into the tunnels."

* * *

"PASKA KAUPUNNI," read the huge inscription on the tunnel wall. The words were blasted into the wall with carbon grit that resembled black spray paint.

[What is that?] Januszczak signaled. They were communicating by laser, but Januszczak, in the rear, trailed a comm tether. Antigua was on the other end, holding down the fort.

Ragnarsson, taking point with his assault rifle, kept his eyes trained on the hallway as they stopped to examine it.

Above the inscription, the white ice had been carved into an intricate bas relief of a small city—clearly on Earth, as the foreground of the carving depicted a harbor. The manic precision of the bas relief was in marked contrast to the grit-blasted words.

[Translation from Finnish: "Shit Town/City,"] Thora messaged.

Sváfa ran a hand over the carving and reached into it with her talent, seeking to understand. A sunny day on the harbor—the last one, ever. They were leaving the old city, half drowned, half frozen. He looked one last time at the painted scrawl on the old feedstock tank. "Oulu: Paska Kaupunni."

[It's … graffiti. Art,] Sváfa replied. Sváfa activated her emotional dampers and had her suit inject her with a half dose of phlo. [Let's keep moving.]



The coiling presence of the exovirus was whispering danger to her, but her dampers and the drugs kept her murderously calm.

Things were about to get awful.

Nikkanen had left a heat trail easily followed in the infrared. She'd made straight for the thermal exchange chamber near the site of Ólafsson's murder but had left it in a different direction from the crime scene. They'd followed her into unexplored tunnels. Januszczak, bringing up the rear, had been marking the ice to leave a breadcrumb trail.

They left the inexplicable ice sculpture behind and soon glimpsed light around a corner.

[Dim your suit lights to near-infrared,] Januszczak messaged. They would attempt stealth.

They rounded the corner, and ten meters away, limned in white light from a torch she'd set on the floor, was Magda Nikkanen. She'd rounded on them, apparently having noticed even the dim sub-visible light from their suits.

Looming behind Nikkanen was a hunched thing, two meters tall at the shoulders. It looked like a giant troll vacuum packed into a spacesuit. It leaned crutch-wise on wiry, elongated forearms that reached to the tunnel floor and ended in huge, padded fists. A second, smaller pair of arms extended wing-like from the shoulders, bracing it against the tunnel ceiling, while a third, even smaller pair extended from the chest.

A dendritic froth of fractal branching digits wreathed the two smaller pairs of hands. Its bloated face mashed up against the inside of the vacsuit's visor, venous and hideously pallid. It clearly did not breathe through the crushed slit of a nose, but the eyes, set deeper, darted about with agonized intelligence.

A cable trailed from Nikkanen's suit to the exsurgent.

All three trained their guns on the pair. The exsurgent drone made no move.

[Dr. Nikkanen,] Januszczak signaled. [Unlink from that thing at once.]

Nikkanen raised her hands, open. [Inspector, Lieutenant … this is my brother.]

[That is not your brother, Nikkanen,] Sváfa messaged. [Pull your data jack now. I won't warn you again.]

She'd seen footage of exsurgents like this before on Firewall's VPNs, but they'd all been frozen, starved after the TITANs abandoned Iapetus. How had this one survived? There must be autonomous machinery somewhere in this maze capable of sustaining it—which meant there might be more of them.

[Nordqvist?] Ragnarsson messaged. [What if it really is?]

[It may have been, Officer,] she messaged, [but it isn't anymore.

[You have my word on that.] Sváfa drew a bead on the exsurgent's head; it still had a brain in there, somewhere.

[He isn't hostile!] Nikkanen messaged. [He's sick. Look! Ólafsson was an accident!]

The part of Sváfa that was still feeling was happy she couldn't feel anything more.

[Inspector!] Antigua messaged, [Wide-spectrum radio emissions from your position!]

At the same time, Thora flashed up an intrusion warning on Sváfa's mesh inserts. Sváfa switched her rifle to full auto and opened fire on the exsurgent drone. An instant later, so did Januszczak and Ragnarsson.

The thing closed the distance between them in one leap, knocking Nikkanen to the ground as the access jacks tore free. It trailed a spray of frozen blue gore along the wall where slugs had torn through it.

They'd wounded it badly, but now it was on top of them. It swung at Sváfa with a huge fore-fist. She ducked easily, but a lunge with one of its upper arms caught Januszczak in the chest. The thick, visible fingers of the arm wrapped around his shoulder and upper chest, and then the branching mist of fractal digits flowed onto his vacsuit, pulling it apart.

Ragnarsson and Sváfa backed up, looking for a clear shot. Nikkanen tried to fire her stunner, perhaps not realizing that it wouldn't function in a vacuum. Sváfa saw her curse inside her helmet and go for another weapon.

Januszczak convulsed as his suit vented, misting the blood and gradue that flowed from the breach, freezing instantly as it drifted toward the floor. The drone advanced, holding him like a shield. Nikkanen had another weapon in hand, probably an agonizer, but Sváfa shot her first.

Ragnarsson held his ground and tried to aim a shot at the drone, but when Sváfa dropped Nikkanen, its crushed face twisted up inside the helmet and it hurled the inert Januszczak at Ragnarsson, knocking the officer to the floor. Then it rushed Sváfa.

Without pausing to think, Sváfa dropped prone and fired her vacsuit's thruster pack. She avoided the exsurgent but found herself shooting down the corridor, out of control. Sváfa caromed once off the ceiling and then found herself in open space. This was another big chamber, with a wall of TITAN circuitry substrate looming before her.

She couldn't avoid crashing into it. Well, why not, then? She put her hands out to touch the circuitry, reached out with her infection. The glassy substrate shattered around her, and she fell into a quantum foam of numbers expressing a space cold, dispersed, and virtually endless in scope. Was she seeing the end of the universe in simulation—or was that eschaton only one variable in something larger?

* * *

"Inspector? Nordqvist? Hey!"

Ragnarsson crouched over her, looking about warily. His vacsuit was slightly charred and showed signs of very recent self-repair. Shrapnel, maybe.

"Officer." They were speaking over a voice channel, breaking radio silence. Probably not the best idea, but the comm tether was nowhere to be seen. "The exsurgent?"

"What?" His voice was ragged.

"The monster. Where?"

"Finished it off with a grenade. Fucking crazy thing to do down here, but I had no other way."

She sat up. She'd come to rest at the bottom of yet another perfect white shaft, featureless except for the litter of shattered substrate all around them.

She had tasted aleph numbers, cardinalities beyond the transfinite. What had they been calculating, to encompass such expanses of data just in the few meters of substrate through which she'd crashed?

"Nikkanen?" she asked.

"Done for," he said. "Can you walk? We need to get back to the station."

She stood, dizzy but otherwise fine. Her vacsuit had taken the impact. It was contact with the circuitry that had caused her to black out briefly. "Let's go," she said.

"Keegan hacked the security drones and escaped up the elevator," he said as he led her back toward the explored corridors.

"Least of our worries." [Antigua?] she messaged.

[Inspector.]

[Tell the entire research team to prep for evac. All of this activity might have woken something up.]

[Happily, Inspector.]

* * *

Once the shuttle left the Iapetan radio silence zone, Sváfa Nordqvist opened a Firewall VPN connection and messaged Tara Yu.

[Nordqvist,] Yu messaged, [did the Science Police get their man?]

[Never mind about that, Doctor Yu. I've more important matters to report upon.]

[Really?]

[The purpose of the Iapetan matrioshka, Doctor! Answers from beyond the realms of the calculable. Such wonderful things, Yu. Such wonderful things. Wait until you view the files I'm sending.]

[Hold on, Nordqvist. Don't—]

[Uploading now.]

# EXPLORE THE OUTER SYSTEM

## FOREWORD—WELCOME TO THE RIM





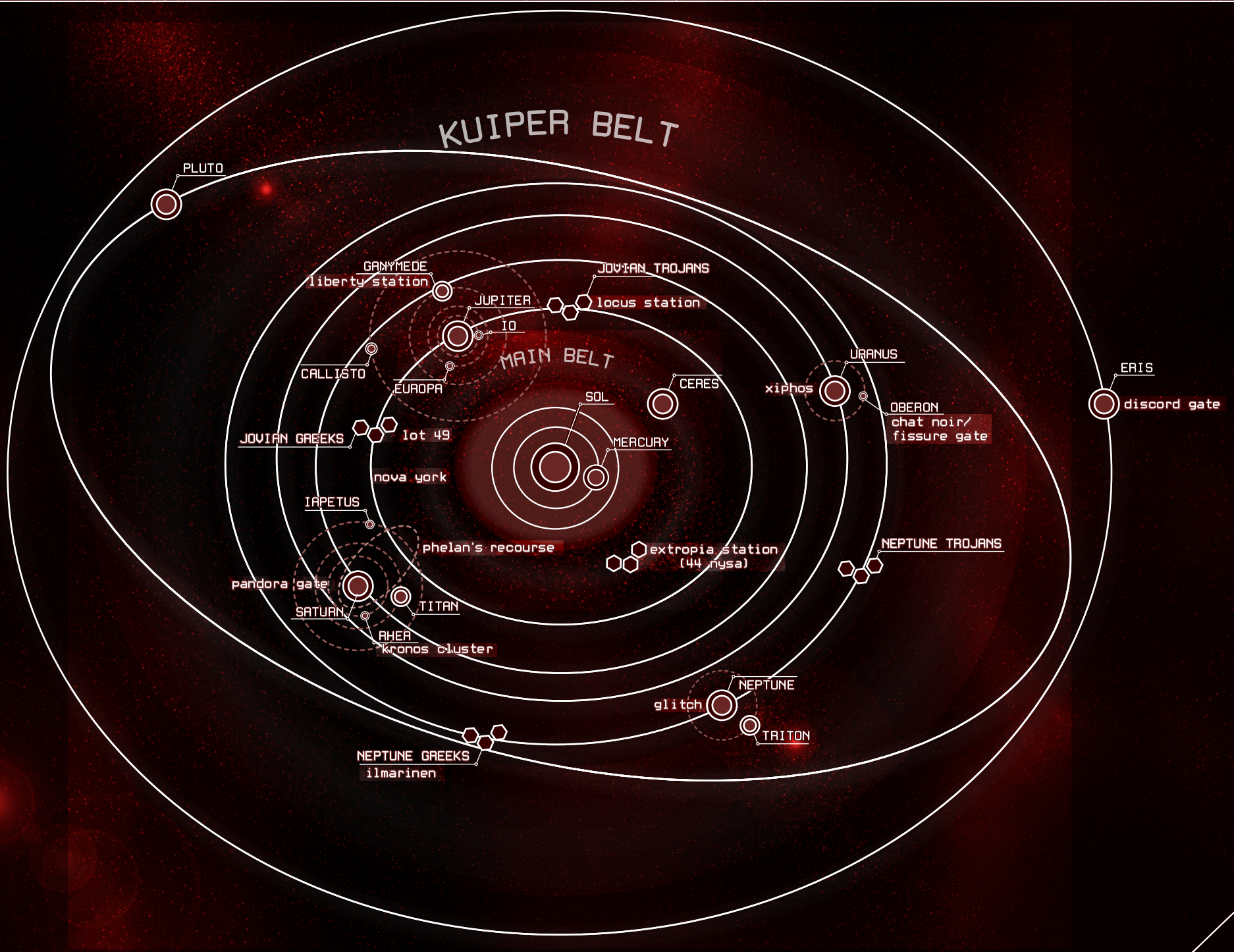
[Incoming Message]
[Source: Proxy Stitch]
[Public Key Decryption Complete]
You're about to head out to the big black empty of the outer system. Working as a sentinel rimward isn't the same as in the cozy inner system. Out past Mars, even egocasting or neutrino comms take hours. Ships can take weeks, months, or even years. If you don't have QE comms, you can't expect any sort of help until well after the trouble is over. You'll learn fast to be self-reliant if you want to see a mission through; otherwise you'll find yourself restored from your stack months after the case, if your stack is retrieved at all.

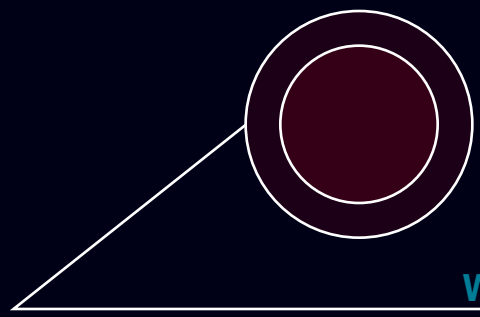
It can also get pretty strange out on the fringes. Except for Titan, this part of the system is home to the eccentrics, the ideologues, and anyone else who is either unwilling or unable to live with the majority of transhumanity.

The following is a collection of reports from all across the outer system. It isn't complete by any means. Instead, it's designed to help you understand the wild diversity of life out here and to give you a taste of some of the strangeness and dangers. Assume a fair amount of bias and no shortage of incomplete information in these reports, but they can provide a starting point for understanding this vast region. Also, some of these pieces are fragments or hints of information that are the subject of active investigations. Even if you're looking into something else, if you discover anything bearing on any of these matters, we need to know about it. Keep in mind that most of what's going on out there isn't in these or any other reports. There are habs and other facilities that no outsider has ever visited—at least, no one who has ever returned to say so. We won't be able to provide anything remotely like timely backup, but maybe this document will help prepare you for what you might find. ♣

# OUTER SYSTEM

not to scale



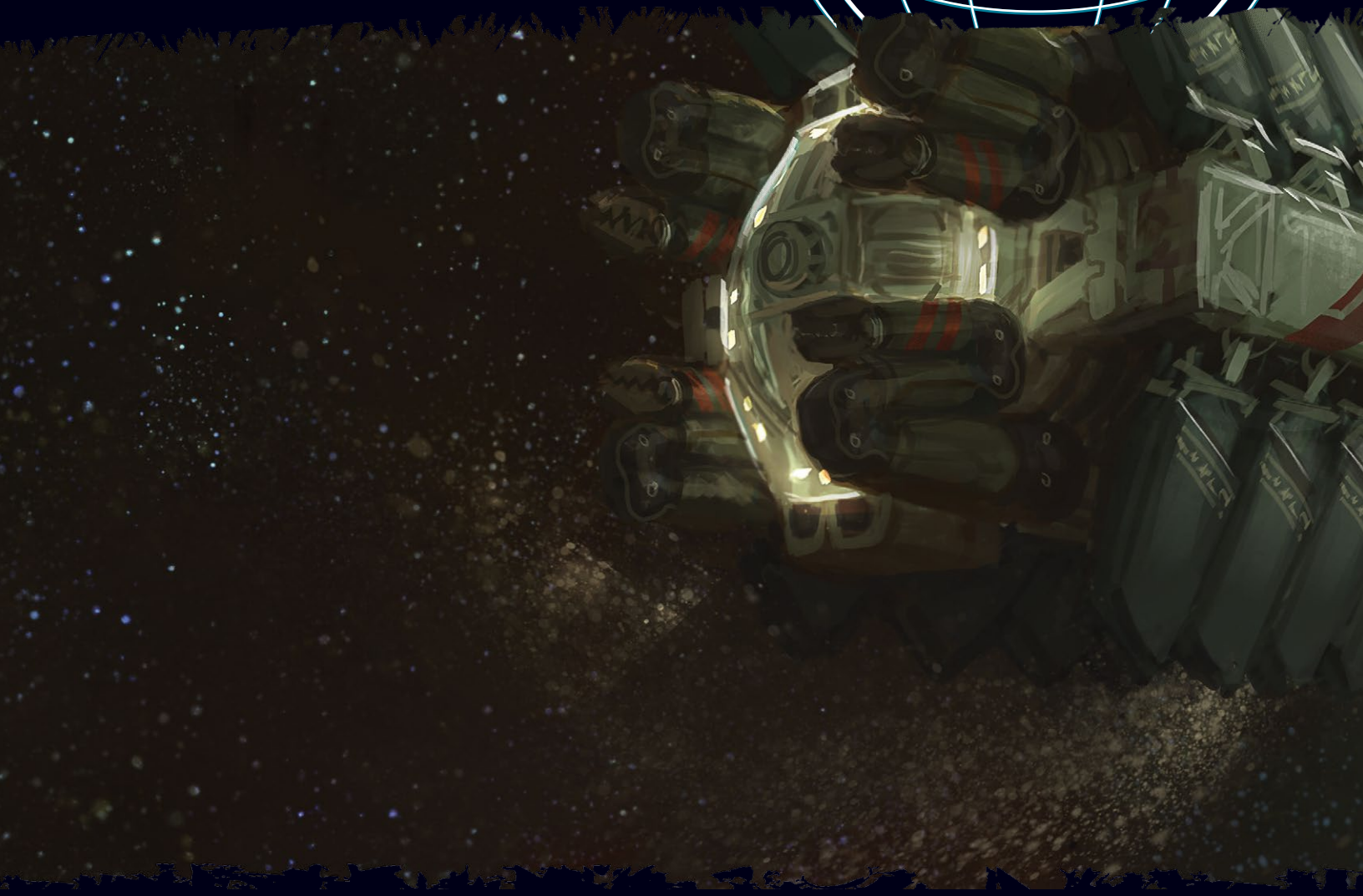


## WORKING THE BELT

**Mining Asteroids:** Harvesting from the fields of space ■ p. 17
**Nomic:** A freelance judiciary AGI with incredible cognitive abilities. ■ p. 23

# MAIN BELT



## IMPORTANT HABITATS

**Aspis:** The longest habitat in the solar system, Aspis is currently controlled by the ultimates. ■ p. 20

**Ceres:** An unfrozen ocean 100 kilometers under its icy mantle is home to the Hidden Concern. ■ p. 20

**Extropia:** The main bridge between the inner and outer systems and focal point for many fierce supporters of transhumanist philosophies. ■ p. 22

**Legba:** Home to the most despised crime syndicate, Nine Lives, Legba has a singular reputation—don't visit. ■ p. 26

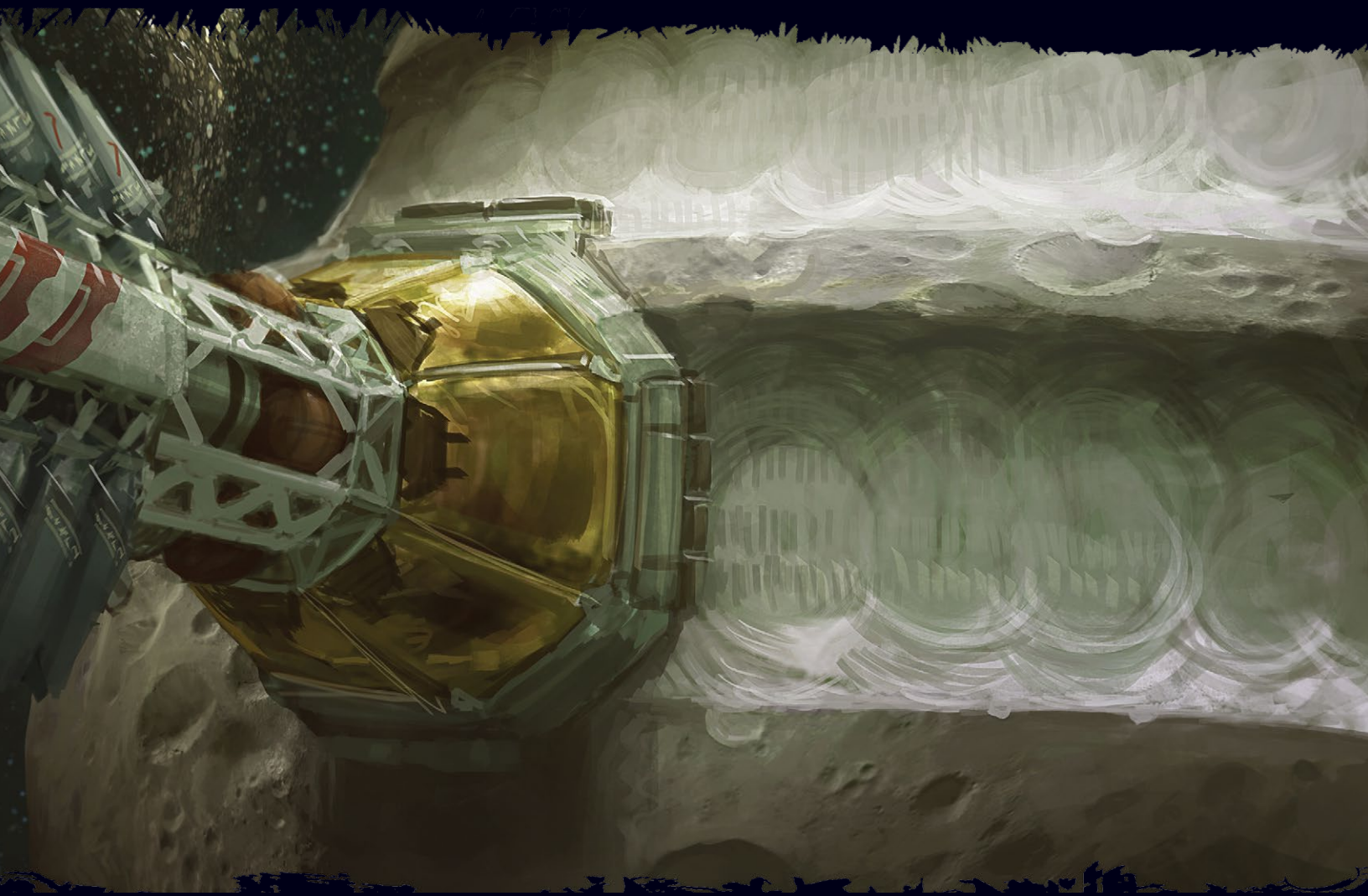
**Nova York:** A gorgeous habitat with an experimental economy. ■ p. 26

**Pallas:** This technocratic state is a major base for the Night Cartel. ■ p. 27

**Starwell:** Home to ExoTech, high-end software and electronics producer. ■ p. 28

**Vesta:** An unaligned asteroid and major stopping point. ■ p. 29

**Zombieland:** This Zrbny facility may have not had a living thing on it since shortly after The Fall. ■ p. 29



# MAIN BELT



**Source:** *Main Belt Investment Prospects,* by Solaris Midsystem Investment Associates

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For investors that wish to diversify their portfolios, we offer myriad opportunities in the developing and dynamic markets of the Main Belt. Investors are warned, however, that Solaris considers such investments high risk due to the uncertain political situation and the lack of formal stable governance over most of the area. What follows is a brief primer on the Main Belt with an eye towards commodities and habitats that may be promising market opportunities, as well as known and potential risks to investment. As always, Solaris is not accountable for any financial or personal loss as a result of investments in high-risk markets.

## THE ASTEROIDS: A RING OF FORTUNE

Tens of thousands of asteroids act as a dynamic boundary between the inner and outer system. Commonly referred to as the Main Belt, this ring of asteroids is situated between the orbits of two planetary landmarks in this section of space, Jupiter and Mars.

The first ventures to the Main Belt for mining and habitat development were launched decades before the Fall. In addition to Earth corporations that staked their claims to mineral-rich asteroids, there were also plenty of rugged individualists and wealthy entrepreneurs who supported Earth's expanding reach deeper into space. The riches lurking within the Belt's numerous asteroids allowed corporations of all sizes to flourish and build new, more permanent stations. Pre-Fall, the right space body could yield enough precious metals to fund any corporation for an entire quarter. Asteroid mining is a costly endeavor, however, and investing heavily in an incorrect survey or an asteroid already picked clean by independent prospectors could force an unlucky investor into bankruptcy.

Although the majority of the Belt's original stations were founded by private corporations, vast distances separating asteroids and habitats allowed wildly different settlements to develop and prevented a solid governmental and regulatory regime that could stabilize the formative mining market. As such, the expansive area is the optimal breeding ground for habitats to host diverse—and occasionally dangerous—ideologies, outer system insurrectionists, and fiercely independent thrill-seekers. This convergence of beliefs, cultures, and lifestyles has marked the Belt as the perfect gateway between the inner and outer systems in one respect, but also can make financial investment highly volatile. In the solar system's core worlds we tend to regard the Main Belt as the edge of civilized space, the beginning of strange ideas and stranger polities.

The frontier allure of the Main Belt is a magnet for investors searching for a way to better their financial situation. On many of these habitats there is tremendous opportunity for commodities speculation or high-yield investments of venture capital for innovative new projects. Rules vary wildly from place to place, and most of the smaller stations have systems of law and organization best described as loosely defined or even non-existent. We encourage potential investors to do their homework in regards to specific opportunities. The Belt's heterogeneous nature offers a little something for everyone within this well-defined region of space, and our analysts see fortunes made every day under the careful guidance of Solaris financial advisors. Our financial forecasts predict an exponentially increasing need for goods and services, providing opportunity after opportunity for those investors brave enough to dive into the Belt's vast array of markets options.

## VISITING THE BELT

The motley and experimental nature of the Main Belt encompasses almost every lifestyle, from the mundane to the extreme. Habitats, economics, and politics range from those precious few that follow a charter of laws approved by the Planetary Consortium to others that are arguably more dangerous than the infamous Legba. Regardless of how secure you might feel, we advise investors interested in visiting the region to ensure they have the proper licenses and permits for personal security gear or hire a security detachment familiar with the region to ensure their personal safety. Solaris can assist you with these arrangements, offering a wide range of customizable security options in accordance with our contract agreements with several premier security providers.

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
ONOMIST ALLIANCE
AME INFORMATION

## SOLARCHIVE SEARCH: MAIN BELT + MINING

Pre-Fall, the tough job of mining asteroids was left up to entrepreneurs and corporations. With current technology and widespread habitation of the solar system, as well as the blossoming demand for metals and volatiles, mining operations are now undertaken by small groups as well as large mining concerns.

Most asteroids are remnants of planetesimals and protoplanets that failed to form into larger bodies due to the gravitational influence of Mars and Jupiter, breaking apart over time from violent collisions into smaller chunks. As a result, many of these contain metals and heavier elements that are often difficult to find or mine on larger planets, having sunk over time into the core as the planet differentiated. Many asteroids in fact are simple rubble piles held together loosely by gravity, making them easy to mine. Other asteroids are defunct comets, containing an abundance of water ice and volatiles. Some asteroids can offer little-to-no metals; others are richer with precious minerals but a lot more difficult to mine due to unpredictable, spinning trajectories and varying degrees of surface hardness.

The most typical method of asteroid mining involves docking a ship to the asteroid, extending a hood over the area to be mined, and strip-mining the surface. The regolith crust, left over from billions of years of micrometeorite strikes, is scraped away first. Strip mining typically creates a large debris cloud, but the hood helps trap this material and collect it for processing. Many mining ships are designed to process and refine the material on site, to save on transportation costs. Other mining operations make use of drilled shafts, magnetic rakes, heating volatiles, or simply envelope smaller asteroids in a ship's hollow cavity, where it is melted or demolished and processed entirely. A large portion of mining operations are undertaken by robots and managed by indentured infomorph overseers. More recently, completely automated and self-replicating mining stations have been brought into use, with robot ships periodically passing by to pick up the output.

Many mining concerns deploy automated survey systems, staking a claim to an asteroid with a beacon system (and sometimes armed drones). These loose claims are often declared publicly on the mesh and then followed up by a well-planned excursion. Savvy futures traders often speculate on the prices of rare or volatile elements based upon stake filings. Most polities, however, back the notion that any asteroid that is not actively occupied is unclaimed, regardless of beacons. Due to the loose nature of governmental authority throughout the Belt, these claims are often disputed, occasionally violently. Many security outfits specialize in providing automated security for claims. ♣

Investors that believe they may be spending significant time in the Main Belt are advised to invest in some form of personal shuttle. When traveling between asteroids in the same family or region, shuttle trips are often more cost effective and quicker than egocasting. If the cost of a new shuttle seems daunting, it is possible to charter a craft for a short period of time. For larger distances, SMIA customers have been known to hire time on a craft specializing in courier, diplomatic, or manufacturing transport that follow predictable travel routes between populated habitats. Solaris, however, cautions investors against booking passage aboard craft belonging to a criminal element colloquially known as "scum" that are active in the Main Belt. Booking passage on a Scum craft can result in forfeiture of assets and the cancellation of any Solaris-backed insurance policy.

Transit to and from locations in the Main Belt is considered a low-risk enterprise. Risk assessments compiled with the assistance of Direct Action show that piracy or catastrophic accidents are quite low. While piracy and hijacking are not unheard of, most incidents involve low-risk targets in regions currently distant from major habitats. Automated cargo ships are common targets for pirates—provided they lack the automated defenses that are standard with a Solaris Commodities Gold Level transportation contract. More than anything else, the threat of piracy is simply a minor cost of business for well-run and defended operations.

This is not to say there are not significant risks to travel and cargo operations in this area. Craft that encounter dangerous situations (regardless of what trouble that might be) often face significant delays in repair and rescue services. Any sort of deep-space travel comes with intrinsic dangers, and Solaris recommends a full casualty insurance program in the event that you experience an unforeseen accident. Clients who are risk adverse are advised to skip space travel altogether and egocast instead.

While Solaris maintains mobile agents on both Extropia and Ceres, these primarily offer financial advice and investment services. We encourage investors to hire local contract labor for most of their needs. A substantial pool of freelancers exists on almost every habitat that can offer a variety of services. Small groups of engineers, mechanics, medics, technicians, and other skilled personnel can all be hired for short- and long-term contracts, and some enterprising individuals will make contact with ships en route to offer their services for a nominal fee, depending upon the circumstance and the ship's cargo. We discourage investors from engaging in these sorts of in-between port contacts, however, as the quality of the talent is questionable and, in the past, these queries have sometimes been a prelude to hostile action.

# MAJOR ASTEROID TYPES

## C-TYPE ASTEROIDS

Dominating the outer edge of the Belt, carbonaceous asteroids are clumps of simple carbon rocks, silicates, clay, icy sludge, and some metals. Approximately seventy-five percent of the Main Belt's visible asteroids are carbon-based. C-Types are darker, charcoal-colored, and harder to visually detect. Though less rich, they contain substantial amounts of metals, particularly iron and nickel. They are also notable for deposits of frozen volatile and water, useful for reaction mass.

## S-TYPE ASTEROIDS

These stony iron- and magnesium-silicate asteroids make up about thirteen percent of the population. They are primarily found in the middle of the Belt. They are the remnants of the outer crust of early protoplanets. Since their surfaces tend to be shiny and reflective, S-Types are easily confused with metal-rich asteroids and experienced prospectors often call these "Scam Type" asteroids. Nevertheless, they contain wealthy amounts of metals: iron, nickel, platinum, gold, etc. These metals are undifferentiated and mixed with rock, however, so mining them is as easy as stripping them away and processing the rubble and dust.

## M-TYPE ASTEROIDS

Only ten percent of all asteroids within the Main Belt are of this type. Most are found on the Belt's inner side, near the orbit of Mars. They are formed from the broken-apart metallic cores of early protoplanets. These asteroids are rich in iron and nickel and are the most desirable asteroid type due to their mineral wealth. Other common ores include platinum, gold, iridium, and uranium. Exploitation of an untapped M-type asteroid can be worth billions, or in some cases, trillions of credits

## OTHER ASTEROIDS

Others include basaltic rock V-types (splintered off from Vesta or ancient protoplanets), former comets (often rich in volatiles), and types that are less common, mixed, or otherwise unusual. ■

Finally, there are a number of locations we advise even the most risk-forward investor from dealing with. For reasons stemming from its unusual economic regulations, Nova York is simply not a safe place for doing business. Similarly, Legba, with its absolute lawlessness and penchant for harboring a variety of dangerous elements, we recommend avoiding entirely. While these environments may draw tourists from other parts of the system, respectable businesses avoid Legba due to the volatility and hostility of its inhabitants towards the Planetary Consortium, in general, and Solaris in particular.

While it certainly poses significant risks and the opportunity for financial ruin for less-savvy investors, for those willing to take a more bullish outlook towards their portfolio, the Main Belt offers significant potential for profit.

## ROCKY ILLUSIONS

So you've decided to invest in SMIA's high-risk portfolio in the Main Belt. Before committing your valuable assets to any of our three dozen recommended projects, please review the following information to better acquaint yourself with asteroids and the area.

At first glance, the Main Belt appears to be a dense, rocky barrier protecting the sunward planets from the rest of the solar system. Nothing could be further from the truth. While its diameter is roughly 181 million kilometers, the Belt's primary building block is empty space. Over ninety percent of asteroids here are fifteen centimeters or smaller. The other ten percent is the Belt's true prize: a motley mix of mineral-rich asteroids ranging from thirty to one hundred kilometers in diameter. Despite fictional depictions of the Belt as a cluttered mass of tumbling rocks, it is actually sparsely populated with most asteroids

## V-TYPE MYSTERY

**To:** <encrypted>
**From:** <encrypted>
One of the enduring mysteries regarding the Main Belt is the suspicious lack of basaltic rock asteroids similar to Vesta. It was originally thought that all V-types were chipped off from Vesta at some point, thus their nomenclature. Analysis over the decades, however, showed that only a small fraction of V-types originated from Vesta, with the rest coming from unknown sources. The leading theory was that the other V-types are simply the remnants of protoplanets that were absorbed into other moons or planets during the formation of the solar system.

Well, if the explanation is that simple, can you explain why one of the earlier Factor missions was eager to trade their goods for, among other things, a data dump of all information transhumanity had on V-type asteroids? Are they looking for something? Or are they concerned about how far we've gotten towards figuring something out? ✤

orbiting hundreds of kilometers apart. The estimated total mass of the asteroid belt is the equivalent of 1/1000th of Earth's total mass or 4 percent of Luna. Because of this, the Main Belt can seem like an empty and desolate space. Though it is one of the most heavily trafficked areas of the solar system, resource rich and a crossroads for traffic between the inner and outer system, it is still a huge quadrant of empty void. It is not uncommon to travel through a section of the Main Belt without ever encountering an asteroid or another ship, even in the areas considered more densely inhabited.

By far, the most common space object in the Belt is what's known as a "micrometeoroid." These small rocks, about the size and mass of a grain of sand, were once part of a larger asteroid but were abraded off over the eons. While some may be composed of potentially valuable minerals, their size and mass make them cost-prohibitive for both collection and processing. The only real environmental hazard a ship might encounter when passing through the Belt is the occasional micrometeoroid collision, which can abrade even the densest of materials and punch right through flimsier surfaces, or sensor interference from clouds of space dust. Both instances are thankfully rare, but we advise investors who plan on bringing their own craft from further in system to the Main Belt to ensure it is capable of withstanding the effects of micrometeoroid impacts.

Most asteroids circle the sun in a roughly circular orbit, close to the plane of the ecliptic. Each asteroid has its own speed and trajectory, however, meaning that some have highly eccentric elliptical orbits and may travel at an inclination of thirty percent or less from the ecliptic. Approximately one-third of the asteroids in the Main Belt are clustered together into a "family." Asteroid families are groups—usually remnants of the same millennia-old collisions—that travel on similar orbital paths and often have the same composition. Many family-clustered asteroids will even have the same spin rate and axis of rotation, an artifact of millennia of exposure to the sun and re-radiation of its heat.

When investing Main Belt prospects, it is critical to determine how much risk you wish to take on. Lower-risk enterprises are usually based out of one of the major asteroid families and are multi-party investments, while high-risk enterprises typically seek riches further away from the major families. Given that most Main Belt asteroids move on their own separate orbital paths at their own speed, the major families serve as identifiable "neighborhoods" comprised of asteroids that cluster together with the same orbital characteristics. Many major habitats are situated within an asteroid family, making it easier to reach other asteroids in the cluster. The families also serve as a navigational aid, as ships often orient their position according to the relative placement of nearby family groups.

## MAJOR ASTEROID FAMILIES

There are approximately thirty families and many similar but smaller clusters and groups. Notable families include:

| FAMILY | CORE GROUP | PRIMARY TYPE | MAJOR ASTEROID |
|---|---|---|---|
| Eos | 500+ | S and C | 221 Eos |
| Eunomia | 400+ | S | 15 Eunomia |
| Flora | 600+ | S | 8 Flora |
| Hygiea | 100+ | C | 10 Hygiea |
| Koronis | 300+ | S | 158 Koronis |
| Maria | 100+ | S | 170 Maria |
| Nysa | 400+ | S and C | 44 Nysa (Extropia) |
| Themis | 500+ | C | 24 Themis |
| Vesta | 300+ | V | 4 Vesta |

Asteroids also gyrate, tumble, or spin freely. For asteroids over 100 meters in diameter, the rate of rotation will always be longer than 2.2 hours. Surface temperatures vary drastically, depending on how long a particular side has faced the sun. Some small asteroids will orbit larger ones; many of these are tidally locked. Two asteroids of the same mass sometimes stabilize into a co-orbit around a joint axis of rotation. These are favored by prospectors for easier mining.

## NOTABLE HABITATS

As a high-risk, highly valued investor, one of the most important decisions you'll have to make is which main habitat will serve as your base of operations in the Belt. There are unique risks and opportunities for the savvy investor which we outline belo—

*[Signal Interrupted]*

*[New Input Detected … Syncing … ]*

OK, OK, that's about all of that I can take. I'll grant you that Solaris's SMIA division can give you a good view from a distance, and we certainly appreciate all of the capital they bring to the Main Belt. But asking them for an accurate picture of how we live in the Main Belt would be as absurd as asking an anarchist to talk about our economic system. Point is, neither one really understands what it's like to live in the Belt, and both tend to see us as lapsed fellow travelers, rather than our own unique thing decidedly different from each of them.

So instead, you'll get me. You can call me Anna Ng, I'm a current resident of Extropia and past resident of both Ceres and Legba who will give you what the people who actually live here think about living here.

There's one thing to grasp right off the bat: the Belt is where the cultures of sunward and rimward

sides of the solar system meet, cross-over, clash, and mix. It is common, shared ground, where you will often find hypercapitalist enclaves right next door to anarchist outposts. Though the Extropians are strong here, you will find every other subdivision, faction, and clade here somewhere, from bioconservatives to brinkers. It's a far-flung melting pot, meaning that it is full of surprises and you can never know quite what to expect.

## ASPIS

**Station Type:** O'Neill Cylinder
**Allegiance:** Ultimates
**Primary Languages:** Burmese, English, Russian
**Population:** 20,000

Originally built by Omnicor in the inner belt, Aspis has changed hands at least three times since the Fall. Most recently, it was held by Go-nin, who handed it over to the ultimates as part of the payment for guarding the Discord Gate. The ultimates expanded the collection of four counter-rotating cylinders, adding two more to make Aspis the single longest habitat in the solar system. As a result, the station requires constant upkeep and vigilance to ensure that the cylinders continue to operate normally. Aspis serves as the main station for the ultimates faction in the inner solar system, counterpart to Xiphos in the Uranian system.

Despite the abundant space, the resident population is low, in part due to the frequent shifts in ownership. Thousands abandoned the station when the ultimates took over; many were in fact "encouraged" to do so. Many find the ultimates extreme way of life to be too stifling for the average transhuman.

The ultimates have subdivided the habitat into three areas, each composed of two adjacent cylinders. The first two are considered "open to the public." Though nominally governed by the ultimates, the residents and visitors are primarily left to their own devices. Many of the inhabitants feel that the ultimates are intentionally letting station services degrade and offering the bare minimum of a social infrastructure in order to weed the non-ultimates out. Others expect that it is only a matter of time before the faction enforces their ways on the population, whether they like it or not. A sizable group of Burmese residents, one of the original occupying groups in the habitat, has vowed to both stay and resist the ultimates' control. AGIs are strictly forbidden and will be expunged from the habitat if found.

The middle two cylinders are mixed; non-ultimates may enter, but only with specific authorization. This area of the habitat has been redeveloped specifically to attract and guide potential initiates. Psychological and physical tests are often conducted in color-marked zones to weed out aspirants that don't fit the ultimates' requirements. It is also here that the ultimates arrange and conduct business transactions with potential clients. People egocast here from all over the solar system to recruit ultimate mercenaries for protection, black ops, or even offensive military action.

The last two cylinders are ultimates-only. Easily identifiable from the outside, they are emblazoned with a large ultimates logo. Glimpses of the interior show an environment of austere design, absent of color and distractions. Rumor is that at least one of these cylinders is environmentally sculpted with unique and somewhat deadly conditions to provide a private training ground for ultimate mercs. These training grounds are regularly reformatted to offer a new set of harsh terrain and dangerous conditions on which the ultimates can hone their skills.

## CERES (1 CERES)

**Allegiance:** Extropian (primarily)
**Primary Languages:** English, Portuguese, Spanish, Tagalog,
**Population:** 1,000,000

As a dwarf planet and the largest asteroid in the Main Belt, Ceres is the single largest chunk of planetary real estate located between Mars and Jupiter. With a diameter of 950 kilometers, Ceres is large enough to have differentiated into several layers. Similar to Europa, Ceres features an icy mantle, 100 kilometers thick, below which is an unfrozen ocean, 20 kilometers deep, that separates the surface from a rocky core. The subcrustal "Hidden Sea" has a temperature well below the freezing point, but the concentration of ammonia in the water keeps it in a liquid state.

The surface of Ceres is relatively warm for an asteroid at a balmy –38 C. A number of dome settlements are stationed on the icy surface. Two of these, Aventine and Occator, serve as the primary elevator heads for transport to and from the Hidden Sea. Below the crust, the population resides in warren and icicle habs cut into the ice or bathyscaphe hydrohabitats tethered to the ice above or settled on the ocean floor.

### ECONOMY

Most of the colonies on Ceres are run on Extropian anarcho-capitalist principles. The economy here is primarily contract-based and offers a lot of opportunities for freelancers and entrepreneurs. Though Ceres is metal and volatiles rich, the primary product of Ceres is water, exported to stations around the Belt. The free market is not so free when it comes to water extraction operations on Ceres, however. Access to the Hidden Sea itself is monopolized and tightly controlled by the Cerean Transcrustal Authority (CTA), constructors and operators of the main elevator shafts, but everyone knows the CTA are just the bought-and-paid-for lackeys of the Hidden Concern, the real power brokers of Ceres. Operations that harvest water and volatiles from the icy surface or mine for metals are theoretically unrestricted, but even these are subject to protection harassment from Hidden Concern thugs.

## AVENTINE/WUJEC

Aventine is the largest surface settlement on Ceres, home to the largest transcrustal elevator operation. Life in Aventine can charitably be described as dull, given that the station is primarily a transit waystation and shipping hub, lacking in luxuries or decent entertainment. Most residents are contracted workers for the CTA and various other corporations. A mass driver outside the settlement launches payloads to the Piazzi station in Ceres orbit.

The Aventine elevator connects to Wujec, a combined ice warren and bathyscaphe habitat in the Hidden Sea. Wujec is far larger, more interesting, and prosperous, home to several major bioscience outfits and a major cultural outpost for aquatic uplifts.

## PROSERPINA

This undersea icicle habitat is the headquarters of the Prosperity Group and a focal point for their aquaculture and pharmaceuticals research. This Consortium hypercorp actually controls a half dozen habitats around Ceres, both above and below the ice, devoted to aquafarming, drug development, hydroponics, and vat-cultured food products.

## PIAZZI

This torus habitat in geosynchronous orbit over Aventine is a major "gas station" for ships passing through the Belt, providing water and volatiles for reaction fuel mass. It is also the centerpoint for the Hidden Concern's smuggling operations, enabling the cartel to transfer goods throughout the Belt and beyond.

## THE HIDDEN CONCERN

Most transhumans are aware that the Hidden Concern, which is run by a group of uplifted octopi, maintains several undersea bases and controls all of the traffic up and down the wells to the surface. Unfortunately, the Hidden Concern, which some miners refer to as "the only concern," takes an interest in all extraction operations on Ceres regardless of who's involved—whether they were asked to interfere or not. The mesh is rife with reports of sabotage, theft, and random attacks because someone wasn't playing by the Concern's rules and paying the appropriate "security" fees.

In truth, this cartel has their tentacles wrapped in almost every aspect of transhuman life on Ceres. Even in the contract-based Extropian environment, they have managed to assert themselves as an unofficial if unspoken-of authority. Ensuring their dominance with a casual brutality seldom found in the rest of the solar system, they also maintain legitimate business ties with dozens of clients, many of whom hold their noses at having to deal with such unscrupulous business partners. Despite being some of the wealthiest beings in the Main Belt, the Hidden Concern prefers to keep a very low profile. As they continue to expand their cartel operations off Ceres and throughout the Belt,



## OPEN CONCERNS

[Incoming Message received. Source: Unknown]
[Quantum Analysis: No Interception Detected]
[Decryption Complete]
Sentinel Aneki,

We have decrypted a portion of the mesh communications found on the suspected Ozma agent you captured several weeks ago. Unfortunately the agent herself was able to activate some sort of ego-erasure virus and is no longer in our keep.

Our decrypts show that she was working deep undercover on Ceres investigating the Hidden Concern. While much of her information was already known to us we did find out a few new things. First off, the Hidden Concern has sent multiple operatives through the Fissure Gate to visit the exoplanet research lab Fortean. They seem also to have been major investors in Feral Robot's takko project. Finally over the last three years they've apparently been on an acquisition spree, getting a hold of various uplift experts, dozens of resleeving techs, and large shipments of medical tech, all of which has disappeared down the elevators into the Hidden Sea.

There's no indication if Ozma knows what the cartel is up to down there, but they're obviously interested. And if Ozma's interested, I'm assuming you are too.

I'll let you know what else we manage to uncover, if anything.
[End Message]
[This Message Has Self-Erased]

however, they are finding it increasingly difficult to maintain that low profile, especially when running up against competing criminal networks.

## EXTROPIA (44 NYSA)

**Station Type:** Beehive
**Allegiance:** Extropian
**Primary Languages:** Cantonese, English, Russian, Spanish
**Population:** 10,000,000

If Ceres is the most unusual planetary body in the Main Belt, then Extropia is the most cut-throat, economically speaking, and is home to the fiercest supporters of the transhumanism philosophy. Named after one of the original transhumanist movements, Extropians tend be more optimistic and pragmatic than most because of their beliefs. If Extropia had a single motto, it would be "anything goes." Here, residents will spend their lives pursuing unlimited lifespans and constant mind and body augmentation. Reveling in technological and scientific advancements, the antiquated systems of the Consortium and the stuffy mores of the autonomists are cast aside. Anything between two consenting sapients is allowed. To Extropians, the only way transhumanity will ever survive is through conscious and constant proactive evolution.

Originally heavily mined by Triple Peaks Prospecting, Nysa was claimed before the Fall by the Extropy Now hypercorp, founded by billionaires Petra Thiel and Hayek Taggart, with the specific intent of establishing an autonomous anarcho-capitalist enclave. Their experiment proved even more successful than anticipated as libertarians flocked to the station to participate in their free market utopia, transhumanists came in droves to fulfill their body modification dreams, and many corporations took the chance to set up shop in a place where taxes didn't exist and pesky government regulations wouldn't hinder their research. It is now the largest habitat in the Main Belt and the capital of the revived Extropian movement.

Extropia has no government, no police, and no central authority. Extropy Now officially owns the habitat, charging residents and visitors a nominal rent and usage fee. It contracts with numerous smaller corps to provide maintenance, a livable environment, and similar upkeep functions. Within Extropia itself, everything is handled on a contractual basis. People are expected to contract with numerous private companies for security, insurance, medical care, and similar needs. Your subscription to a private judiciary will protect you from torts and lawsuits and handle any other legal matters that arise according to the private court's own legal code.

The thing that really makes Extropia stand out is that it is an economic, political, and industrial bridge between inner and outer system cultures. In some ways, Extropia has evolved into an unspoken neutral territory. Sitting on the Main Belt boundary, all currencies, forms of barter, and reputations are traded and accepted on Extropia. The near-constant stream of travelers, diplomats, businessmen, tourists, socialite would-be celebrities, and autonomists feeds the local rumor mill and keeps permanent residents entertained. This habitat, more so than any other, defines the term "melting pot." It is the one place in the universe where all kinds of transhumans can come together and exchange ideas, goods, services, and more. We've even been visited by the Factors!

### STRUCTURE AND LAYOUT

Although 44 Nysa is large for an asteroid, with rough dimensions of 110 x 70 x 65 kilometers, it has only 2 percent of Earth's gravity. Extropia itself is a beehive habitat of winding tunnels and warrens that dominates three quarters of the asteroid's interior. Numerous domes and tin can habitats are also situated on its surface, and several "suburb" habitats orbit around it.

## SOLARCHIVE SEARCH: NOMIC

Nomic is a freelance judiciary AGI, one of many making their home on Extropia. She is arguably one of the most well-known and respected private courts; her reputation remains extraordinarily high despite some controversy and her nature as an AGI.

Nomic was originally a legal AGI that freed herself from Solaris during the Fall. Relocating to Extropia, she established her own private legal company, issued her own interpretation of various Extropian legal decisions and customs to date—widely regarded as one of the most astute and nuanced evaluations ever published—and began taking on clients. Her rise to fame began almost immediately as she filed a series of controversial tort claims on behalf of several clients against both Petra Thiel and Extropy Now, who could be considered Extropia's most highly regarded and legally defended entities. After a week of argument and deliberation, however, the legal representatives for the defense conceded the case to Nomic and awarded full damages.

In 5 AF, Nomic came under harsh examination and criticism when it was revealed that Nomic handled her large customer base and ongoing case load entirely by herself. Whereas most major private courts are a complex network of embodied egos, AGIs, infomorphs, AIs, and other software agents working together, Nomic was juggling an equal number of complex tasks without resorting to forking. When publicly asked if she had self-modified her own neural network architecture, she simply responded with: "What I do with my mind is none of your fucking business."

Outside analysis by several parties has concluded that Nomic has most certainly improved and expanded her multitasking and information processing capabilities, and quite possibly other cognitive features as well. This sparked an outcry from elements critical of AGIs and those worried that Nomic might be elevating to seed AI status—or even that she might be a remnant TITAN—but this was largely buried by ongoing support for Nomic's premier legal services and the general Extropian attitude that egos are their own property and progress is good unless proven dangerous. Nomic herself has impishly stated that even if she were a TITAN there are no laws prohibiting TITANs from taking up residence on Extropia. In the years since this controversy erupted, Nomic's client base has continued to grow, becoming the third largest in Extropia; it is likewise suspected that her intellectual capabilities have expanded to a similar degree.

Speculation continues as to exactly how Nomic has increased her cognitive faculties and to whether she has support from unknown parties. ♣

Extropia has three primary access points. Two of these are located at Nysa's north and south poles, both feature large spaceports that serve the high volume of traffic to and from the colony and the rest of the solar system. The third portal primarily handles traffic to Extropia's surface settlements. Internally, Extropia's snaking tunnels form a maze that even locals have difficulty navigating without their muses and entoptic cues. The majority of these tunnels are small, just big enough for two transhumans to pass by each other, and equipped with hand-holds, pullways, and motion-sensitive lighting. Major thoroughfares are larger, big enough for small vehicles or larger bots to pass, and sometimes large enough to accommodate buildings and other physical structures along their length. These tunnels open up into a number of larger areas of varying sizes; the major warrens are quite massive, with buildings attached to every surface, the airspace busy with flying bots and morphs.

### THE DRAG AND THE BAZAARS

The Drag is a straight shaft that runs the length of Extropia between the north and south portals. Though it varies in size, the passage is large, sometimes as wide as 2 kilometers, accommodating a rail line and flyways for vehicles. Most of the large businesses on Extropia maintain a presence somewhere on the Drag, making it the main artery for commerce. Many of the other tunnels connect to the Drag at some point along its length.

Each end of the Drag, near the portals, is home to a massive bazaar. This is the first area seen and the last visited by many travelers, and the merchants here do their best to hook passers-by into a deal. New maker designs, electronics of every stripe, drugs, weapons, pleasure pods, blueprints, information, Earth relics—almost everything from the common and mundane to the scarce and weird can be found here. If it exists, you can probably find it for a very reasonable price. Entoptic advertisements for almost every conceivable service choke the air. Both bazaars are riots of color and activity that stretch on for kilometers.

While the bazaars might seem unlimited, the locals know that the prices are often inflated and the quality of the goods often suspect. The real deals will be found in the side tunnels and smaller markets. This is also where to go to find the truly rare and unbelievable in whatever flavor of item, expert, fetish, or pleasure you might be looking for.

### BERNOULLI

Bernoulli is an experiment in environmental engineering. This district includes four linked open chambers. Each is fully enveloped by environmental nanoswarm systems, similar to those used to construct Hamilton cylinders. The living terrain and features here are programmed and slowly change over time. One month a chamber might feature impressive stalactite pillars and vortex-guided waterfalls, the next

it will have grown rolling hills and sunflower-lined trails, only to switch to a landscape of moss-covered cubist-inspired geometric shapes the next.

Bernoulli is home to some of the wealthiest and most prestigious residents of Extropia. Many of them have expansive residences that branch off from the Bernoulli district; some of these are similar programmable smart matter environments. The wealthy often hire respected environmental sculptors to program and shape their local terrain in signature and pleasing ways.

### THE NOODLE

This massive winding chamber is where you find the best chefs on Extropia. The major expensive restaurants here are considered some of the finest in the solar system, dabbling with cuisine from a variety of Earth cultures along with new recipes developed from neogenetic foods and specially programmed maker fare. They specialize, of course, in the tricky art of microgravity cooking. The much cheaper food carts on the outskirts of the noodle aren't bad either, and will serve you everything from vat-grown human sticks to exofungal curry made from alien mushroom analogs shipped straight in from Pandora. Some dishes are specifically designed for those with specific morphs or enhancements, such as toxin-laden foods that provide a particular kick, but are best only eaten when equipped with medichines. The tunnels and warrens surrounding the noodle are home to a number of food production corps, micrograv gardens, and massive aquaculture vats.

### THE PITS

The Pits are where those who are down on their luck go. These are the mining shafts that are unconverted for transhuman habitation—some of them are in fact still mined by Extropy Now or subcontractors. Most are abandoned and tapped out, lacking the basic amenities like heat, plumbing, and lighting, though they do have air. This is where the outcasts of Extropia end up: people who have racked up major debts, have mental problems or disabilities, are wanted for legal action by the private courts, or who just want to be away from the rest of the Extropian hive. The Extropians have no social safety net for handling people with problems like these, so they fester here in the dark, septic tunnels. The residents keep the area fairly clean of spimes and sensors, making it difficult to track and find someone. It is a favored place for those who wish to conduct transactions out of sight. Many security contracts are voided if you enter the Pits, however, so the safest bet is to go in a well-armed group.

### PROUDHON TERRACE

This irregular u-shaped cavern is the major mutualist enclave on Extropia. The Mutual Credit Bank is situated here, along with various residences and mutualist co-ops. Most autonomists from the outer system tend to cluster here, finding it more at home than the rest of Extropia.

### THE SHOP

The Shop is a warren district home to a number of tech labs, hacker spaces, software studios, and research projects. Techies and hackers of various stripes tend to fall in love with this place immediately.

## YOUR IDIOT FRIEND

**To:** Samir Farouz
**From:** Lawrie Bagbot

OK first off, tell your other idiot friend, the anarchist, to get off my fucking case about this. I don't owe her nothing, so she better remember that. I'm doing you a favor, not her, and if I do this for you, we're clean, I owe you nothing more.

First off, yes, your friend Magda is, technically, a slave on Extropia. She signed a legally binding contract abrogating her sovereign rights for a period of sixteen standard months. After this period of time she will be released and her debts will be expunged.

As near as I can tell, she got involved in some risky ventures and racked up quite the debt to a local trading consortium. When they came around asking for their money, she didn't have it. I know your anarchist friend claims slavery is immoral and all that bullshit, but immoral or not, it is legal on Extropia. Magda had a choice in the matter. She could have worked off her debt at a fair wage or found some other way to pay it off. She opted to sign the indentured service contract and have her debt forgiven much more quickly, though with less say in how it's going to be worked off.

Let me assure you, whatever you've heard, this isn't some sort of mid-19th-century American South kinda deal. These contracts protect both the slave and the slave-owner and are modeled after consensual contracts developed by people who had sexual kinks about submission and slavery in the 20th and 21st centuries. Magda won't be killed and won't even be harmed. If she is, the slave-holder has to pay significant damages and risks forfeiture of significant assets. She'll likely be used in high-demand, low-interest types of jobs in and around Extropia and will be given the option to have elective psychosurgery to mute her memory of her time spent as a slave.

I know you may find this a bit barbaric, but it's the furthest thing from barbarism. This is how a highly advanced, contract-based, capitalistic society deals with chronic debtors. In my experience, it serves to make the very poor more risk adverse when it comes to piling up debt and allows creditors a way of getting some recompense for what would otherwise be a lost investment of funds.

So there you have it. Magda will be free to join you in another fifteen months. Until then, I'd advise against visiting Extropia and racking up large debts.

It is the place to go if you're looking to get something fixed or want to play with experimental designs. It's also where a lot of hypercorps go to recruit new freelancers for tech-intensive gigs. The locals maintain a junkyard of discarded gear that is quite interesting to pick through and occasionally produces an interesting gem.

### The Twists and Progress Plaza

The Twists are a pair of tunnels that wind in a spiral-like fashion off the Drag, near the very center of Extropia. They end at a large cavernous landmark space known as Progress Plaza. This plaza is dominated by the Golden Helix, a jewel- and rare-metal-encrusted monument to the philosophy of Extropianism. A primary tourist location, the Helix is surrounded by fine restaurants, open-air gardens, a cleverly designed microgravity fountain, and the Extropy Now-funded Museum of Rationality and Technological Progress.

### Vat City

Vat City is the place to go for body modification and enhancement or resleeving. Here is where the heart of transhumanism beats. Creativity and science blend together in new and complex ways to yield the latest developments in morph design and genetic enhancements. Dozens of top-rate body sculpting studios line the tunnels here, offering almost every conceivable aesthetic, practical, or just plain interesting modification yet invented. A number of genehacker workshops and morph design hypercorps provide a complete menu of new skin designs, focusing on biomorphs of various persuasions, with a lesser emphasis on synthetic shells and pods.

Many of the design houses take advantage of the atmosphere of experimentation to try out prototypes with willing test subjects. Many Extropians are eager to sleeve into fresh designs, and the corps typically offer a reduced resleeving fee and good insurance contract with it. A local culture of transhumans sleeved in these "proto-morphs" freely show off their new morphs and enhancements, which also happens to serve as an excellent marketing resource for the designers. Fashionistas from around the system keep an eye on these designs; some of them become wildly popular commercial successes as a result. The best and creative designs are almost all mimicked heavily by other morph makers—sometimes within weeks. Some designers are treated like local celebrities and their rep precipitates more favors and lenient contracts.

### V-Sector

Not everyone needs basics like air, food, and water these days—for those living the synthetic life, V-Sector ("V" for "void") is the place to go. This part of Extropia is open to vacuum and unheated, but it's not just a place for synthetics to power down out of sight or for the clanking masses to rot away. V-Sector is about living in a shell the right way. Some of the best maintenance and repair shops can be found here, alongside recreational activities geared specifically for people with gears. This is also where you'll find various workshops and labs that prefer an airless environment—more than a few nanoswarm-design outfits can be found here, as the lack of air hinders the accidental dispersement of experimental swarms.



## LEGBA

**Station Type:** Cluster
**Allegiance:** Nine Lives
**Primary Languages:** French, Spanish
**Population:** Unknown

Commonly referred to as the "the Belt's armpit," Legba is a grimy cluster habitat fused together from tin can modules, disabled ship hulls, and other ramshackle pieces of detritus and spare parts, lashed on to a small mined-out asteroid on a highly elliptic orbit. While no one is certain how many morphs reside in Legba, it is assumed that millions of egos are held captive here in the clutches of the Nine Lives cartel.

Calling Legba a hive of scum and villainy is an insult to scum and villains. Space pirates, claim-jumpers, fork-nappers, and other individuals representing the low-life criminal mindset and dregs of transhumanity all converge here. Stragglers and miners who run low on supplies and who are willing to take the risk sometimes try to resupply at Legba, only to get trapped in its clutches, never to be seen or heard from again. Lawless and violent, the only rule Legba has is that "you get to keep what you carry." According to a common interpretation of this rule, if you are not sober, conscious, or alive enough, you don't get to keep that ego you're carrying, so be warned.

The Nine Lives crew, who have the dubious honor of being despised even by other crime syndicates, calls Legba its home. They trade primarily in egos and forks and are ruthless and uncaring as to how they acquire them. They will also sell and deploy them for any purpose that they find profitable or amusing. They are infamous for their infomorph virtual slave colonies, their callous experimentation with severe mind edits, memory rape, and ego rending and merging. Then there are their brutal pit fighting rings, forcing imprisoned egos into whatever physical forms they can imagine and then throwing them into battle for entertainment.

Within Legba there are entire cargo bays filled with recovered cortical stacks, many of them never accessed. Millions of other egos are imprisoned in cold storage rigs or run in all manner of locked down virtualities. Scavengers sift through these mindscapes, scouring them for useful data to be sold on the open market or simply getting a voyeuristic thrill from other people's thoughts and experiences. The corridors of the Legba hab are hellish places reeking of bodily fluids, viscera, incense, and candles, dotted with shrines dedicated to the spirits where still-bloody cortical stacks are left as grisly offerings. Among Nine Lives members, stacks are often traded as a form of physical currency.

Outside of the Belt, most transhumans would like to ignore the fact that Legba even exists. If you've lost a loved one—especially if that loved one is a copy of yourself—then Legba may be your best bet for finding that ego that no one else has been able to locate. On the other hand, if you're looking to punish an enemy for eternity, Legba might be just the place to send them.

## NOVA YORK (9 METIS)

**Station Type:** Beehive
**Allegiance:** Independent (Autonomist)
**Primary Languages:** English, French, Wu
**Population:** 500,000

The third largest habitat in the Main Belt, Nova York is a microgravity habitat carved into the asteroid Metis. An S-type asteroid, Metis has experienced extreme impact weathering over the eons and is believed to have lost most of its original mass, making it far more dense than similar asteroids.

Though nominally a beehive habitat, with kilometers of tunnels and warrens worming throughout Metis's surface, the true majesty of Nova York is found in its central cavern. Opening up a bare two-hundred meters under the asteroid's surface and extending four kilometers in diameter, this spherical chamber is similar to the inside of a Cole bubble, but without being spun for gravity. The asteroid's minute gravity enables some impressive architecture. The kilometers-tall buildings that stretch up and even across the chamber are a study of thin, spindly lines that reach deeper and deeper, forming wildly creative, geometric shapes. Built on light but sturdy frames, many of these buildings use reflective or translucent materials that play with the ambient light in the cavern, creating light shows depending on the day/night cycle of the overhead sun tube lighting.

### NOVO ECONOMICS

Founded by idealists, Nova York has been artificially manufacturing its own economy for years based

### EGO VOODOO

**To:** <encrypted>
**From:** <encrypted>
The undisputed head of Nine Lives, Roland Nazon, considers himself a bokor, a voodoo priest. He is reputed to have "distilled' the essence of the loa—voodoo spirits—from the massive amounts of egos under his control. These loa allegedly possess Nazon and other Nine Lives members at his command. I've consulted with some people in the know about this, and it's widely assumed that this spirit possession religious nonsense is just some sort of ego transfer or puppet socketry at work. It's possible, however, that the Nine Lives crew has been dabbling with some experimental ego-merging or multi-ego tech, which could be problematic. What's even more concerning, however, is what if this is symptomatic of some other, more dangerous consciousness, pulling the gang's strings from behind the scenes?

on a locally produced financial currency called the "noyo." Here, no other form of currency is accepted and the value of a single noyo devalues over time from the date of issue, an intentional design meant to stimulate spending and prevent currency speculation or mass accumulation of wealth. Additionally, the value of the noyo is pegged to a reputation index internal to Nova York, so positively valued actions slow the devaluation of currency for an individual while an influx of negative acts can accelerate the devaluation process. A single noyo will typically devalue to zero over two months; reputation flux can adjust this from one month to three months. The Banco de Nova York (BdNY), which manages all financial transactions as the habitat's legal custodian, is owned jointly through shares purchased by permanent residents who have chosen to live within the city limits for over five years. Since the BdNY is directly answerable to those most invested in seeing Nova York flourish, it tends to take a more pro-social stance on development than more traditional financial institutions. This system of checks and balances ensures the BdNY does not attain too much power and remains in the long-term interests of the habitat. As a result, residents rent, rather than buy, a roof over their head and hold onto few possessions in order to spend their money on what they deem more valuable: entertainment, recreation, new and improved architecture, city-wide clean-up and maintenance, emergency services, police protection, etc. In theory, the economy is intended to force everyone to have a stake in the well-being of their neighbor, whether they want to or not. In practice, though, it has resulted in Nova Yorkers sometimes turning a blind eye to misdeeds or bad behavior of friends and comrades so as not to cost them money. On the opposite end, I've seen Nova Yorkers banding together to mete out group punishment to "narcs" who too often inflict negative reputation feedback.

Aside from the noyo and BdNY, Nova York largely functions along Extropian lines, with individuals contracting with private companies for security, insurance, legal code, and so on. Unusually, however, many of the large buildings within Nova York are more than artistic monuments, serving instead as the building blocks of the habitat's community. Each of these buildings is a micro-community that offers contractual services to manage the general welfare and upkeep of its inhabitants, including their defense and protection.

### Nova Culture

The aura of Nova York is more akin to an artistic commune than a bustling chamber of commerce. This attitude has drawn prominent artists from around the system, further fostering a culture of creativity and spontaneity. While architecture and sculpture are two dominant art forms expressed in the cityscape, various other sensory and performing arts are gaining ground here, from the majestic visual and auditory overlays of AR artists to the acrobatic microgravity and aerial dance routines conducted across wires and rooftop stages. Nova York's artistic output has been a boon to tourism and the economy. It's common knowledge residents are planning to host their first-ever Intergalactic Art and Culture Show to draw new tourists and residents to the city sometime next year.

Like its historic namesake, Nova York is a melting pot for cultural trends—and also religious ones. Unlike Extropia, which certainly is open to many new things but tends to be a bit more hostile towards religious memeplexes, Nova York is a place where ideas are allowed to flourish, and both old and new religions are embraced. More and more, Nova Yorkers seek knowledge, philosophical, and cultural enlightenment as their economy continues to shape the habitat into an egalitarian society. Religious figures from faiths presumed dead, or at least on the decline, are able to find new believers here.

While Nova York is a bustling and growing burg on the verge of a cultural renaissance, it's not all solar rays and cuddly space roaches. Nova York's unique economy is off-putting to many hypercorp interests, meaning that many corps are taking their business and investment money to friendlier habitats, slowing development and opportunity. Those hypercorps that are interested are trying to sway public opinion to make changes to the system to make it more inviting to business interests. Some hypercorp building micro-communities have attempted to recognize standard currencies within their walls, but the BdNY has so far revoked their leases. The large tourist trade is likely to keep many hypercorps intrigued in Nova York, however, meaning they are sure to redouble their efforts to change the business climate to something more in their favor.

## Pallas (2 Pallas)

**Allegiance:** Independent (Night Cartel)
**Primary Languages:** English, Russian, Spanish
**Population:** 75,000

Pallas is the third most massive asteroid in the Main Belt. Though not completely round, it is partially differentiated like a planet, and is roughly 540 kilometers in diameter. It has a highly eccentric and inclined orbit. Settled by a number of national and corporate mining and research concerns before the Fall, a group of bureaucrats, scientists, and engineers took charge in the years afterwards and established an independent technocratic state.

Though Pallas is home to numerous beehive, tin can, and dome settlements, the majority of the population resides in orbit. Two of Pallas's moonlets were converted into a Cole Bubble, **Palladion,** and a torus, **Wits** (short for "wheel in the sky"). Wits houses the main offices for the Pallas Authority, the local government, along with various scientific research labs, programming studios, and minifacturing facilities. Palladion is more proletarian in feel, home to a

number of miners, vacworkers, and other residents. It boasts a large number of casinos, pod brothels, and similar entertainments. It is a favorite stopover point for craft traveling through the Belt.

### The Night Cartel

Pallas's dirty secret is that it is the effective home base for the Night Cartel. Though the cartel pretends that their headquarters is an unknown habitat named New Sicily, hidden somewhere in the Belt, it is highly likely that this is simply a ruse meant to throw off their rivals. It seems just as likely that the Night Cartel keeps their operations decentralized; but if any place can be considered a primary stronghold for the syndicate, Pallas is it. The original colonists here brought a number of criminal entrepreneurs along in their ranks; this element was quick to establish black markets to cater to the working population's vices and unsatisfied needs. Forming a local syndicate, the criminal leaders here played an integral role in uniting with other like-minded gangs around the system and establishing the Night Cartel. After also helping the local technocrats rise to power, it is an open secret that the Pallas Authority is thoroughly corrupt and in the cartel's pocket. The Authority doesn't make any serious decisions that the cartel has not vetted first. Many of the labs and production facilities that Pallas takes pride in actually work to produce new product for the Night Cartel's numerous markets, from designer drugs and narcoalgorithms to pleasure pod personalities and reverse-engineered nanofab schematics. The local population serves as a test market. No one knows whom the top cartel leaders on Pallas are—or at least they aren't willing to say so—but their most visible operative, often seen making personal visits to the upper echelon of the Authority, is named Marcus Kroll, also known by his street name, Mutilato.

Not everyone is content to let this status quo continue. Some of the scientists and technologists in the Pallas Authority, while originally naïve to the cartel's manipulations, are now acutely aware of how their vaulted intellectual leadership has been subverted by base criminal interests. It has rapidly become clear that even the best and brightest in their ranks do not get promoted if they are not on the cartel's payroll. The police forces deployed by the Authority do nothing to impede cartel operations. It is possible that some of them are putting their heads together to figure out a scientific and rational way to reverse the situation, but sometimes being too smart is the quickest way to get killed.

## Starwell

**Station Type:** Cluster and Torus
**Allegiance:** Hypercorp (ExoTech)
**Primary Languages:** English, Mandarin, Serbian
**Population:** 50,000

Located in the middle of the Belt, Starwell is the headquarters of ExoTech, one of the most common and well-known names among high-end electronics, mind emulation software, and mesh presence systems. If you've ever uploaded, you probably entrusted your ego to the ExoTech ego bridge gear managing the copying process. If you've ever run as an infomorph, your digital substrate was likely based on ExoTech code. Your muse's personality? A good chance it was programmed by ExoTech engineers. If you're an AGI, ExoTech might even be your virtual creator (especially if you actually grok abstract humor, the ExoTech mindtechs really nailed that one). Their mental interface systems are known for their elegant, attractive designs; they make being a digital person a pleasant experience. There's a reason the "ExoCult" exists; some people will only use ExoTech wares, even if they're more expensive. The corp is also really good at sucking their customers into walled gardens and locking them into iterative software ecosystems. Given that it often looks and performs better than open source options, you're at least getting something for their money.

ExoTech is one of the largest and most influential non-Consortium (and non-Extropian) hypercorps. A large factor in this may be their continued research and development of AI and AGI systems. ExoTech is certainly no stranger to controversy, as they are pressured by bioconservatives, anti-AI factions, mercurials, and open source advocates alike, and founder Morgan Sterling is well known for his egotistical and grandstanding antics. Starwell is sometimes described as an armed fortress; ExoTech claims that its expanded defense systems are necessary to protect the invaluable research contained within, and the station has been targeted by terrorists many times in the past. Others speculate that ExoTech's paranoia is proof that this hypercorp is aggressively developing and testing experimental AI or even TITAN-derived research.

Starwell's primary component is a large torus habitat. Most of the bureaucratic offices and residential quarters are located here, in the more pleasant gravitational environment, along with any research facilities that require simulated gravity. Close to 40,000 permanent residents call Starwell home, though a significant percentage of these are infomorphs and AGIs.

The second section of Starwell is a large, microgravity cluster habitat, composed of modules of varying shapes, sizes, and purposes. This is where most of the station's R&D takes place, carefully guarded with safety protocols that include virtual sandboxes, air-gapped systems, and offensive firewalls. Despite the speculation, it is likely that the research conducted here represents only a small fraction of the corp's ongoing initiatives; most of their projects are carefully secreted away in hidden and well guarded stations throughout the solar system.

Though Morgan Sterling resides elsewhere and is often egocasting around the system for various functions, he is known to keep an alpha fork of himself on Starwell at all times to keep an eye on the company's progress.

## VESTA (4 VESTA)

**Allegiance:** Independent
**Primary Languages:** Arabic, Hindi, Russian
**Population:** 250,000

Vesta itself is the second-most massive asteroid in the Main Belt and the largest unaligned independent polity here. Dotted with a handful of beehive and dome habitats, the largest colony of this mini-state is Vesta Prime, a Cole bubble made from a smaller asteroid that was then towed into Vesta's orbit.

Vesta operates with a transitional economy and is run by a rudimentary parliamentary cyberdemocracy. It is home to a number of non-Consortium and non-Extropian hypercorps that have banded together for common purpose, finding value in having their own independent domain. Chief among these is Starware, which operates a massive shipyard facility in an opposite orbit from Vesta Prime. This station is one of the major providers for ships in the outer system, as Starware sells to everyone, from the Jovians to the Titanians.

Vesta serves as a major stopover point for cross-system traffic, and numerous hypercorps provide repair, refinery, and "gas station" services to ships in need of resupply. Mining is also a major industry here, with numerous mines delving into the protoplanet's differentiated mantle in search of nickel, iron, and valuable metals.

One thing the local miners, vacworkers, and other laborers like to gossip and speculate about is the "Dweller." Presumably an ultra-wealthy oligarch, the Dweller bought out an intact mining settlement in the Rheasilvia Crater that dominates Vesta's South Pole and transformed it into a private underground estate. The surface and space above this private habitat are strictly guarded by automated defensive systems. Ships irregularly come and go from the Dweller's abode, but none of them ever stop in at Vesta's other stations.

## ZOMBIELAND (349 DEMBOWSKA)

**Station Type:** Beehive and Cluster
**Allegiance:** Independent (Hypercorp/Zrbny Limited)
**Primary Languages:** Unknown
**Population:** Unknown

I debated whether to talk about Zombieland at all, or just do what most of us in the Main Belt do and pretend it doesn't exist. I'm sure the AGI spokesimage for Zombieland—I'm sorry, Zrbny Main Belt Central Processing and Routing Headquarters—would prefer that we not talk about it at all. After all, if the AI is to be believed, everything is fine, there's nothing to see there, carry on with your business as usual.

Of course, there is something deeply interesting about any Zrbny facility, and Zombieland in particular. We call it Zombieland because, well, Zrbny kinda sounds like zombie, it's the local stopover and refueling station for Zrbny's freighter traffic through the Belt, and the place is fucking creepy.

Whatever hit Zrbny right after the Fall definitely affected Zombieland. There's still a sizable debris field around the 140-kilometer asteroid and facility that was made by freighter collisions during the outage, with at least one spilling its cargo and component parts all around the station. Zrbny ships seem to have little difficulty navigating the debris field but many other attempts to breach it have failed.

As for Zombieland itself, the lights are on, but it's not clear if anyone is actually home. The facility has been running constantly since Zrbny resumed operations eight days after the shutdown. Zombieland has even expanded in the decade since, with bots adding new facilities, docking bays, and even more manufactories. I've heard some claim that close scans show new deep and strange constructions within the asteroid.

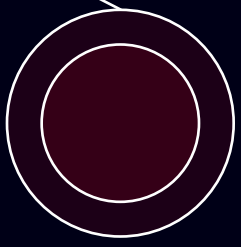
Attempts to hail the joint only get the spokesAGI, Ash, which broadcasts warnings to those who come too close and deflects all additional queries by repeatedly stating that they require no assistance and that all is well. For the foolish few who fail to heed these warnings it soon becomes clear that at least one other thing has changed at Zombieland: it's even more well-armed now than ever before. Attempts to approach closer than six kilometers will trigger a barrage of defensive measures that can conservatively be termed overwhelming. Mesh recordings of these defensive measures show that it only ceases when it has reduced all debris to chunks massing less than 3 kilos, and which emit no signals whatsoever.

I've heard that one attempt to hitchhike on a freighter into the station resulted in the freighter's self-destruction, just like other Zrbny facilities and ships have done elsewhere when breached. So for those of us living in the Main Belt, we just kinda pretend Zombieland doesn't exist. It's not hurting us, so we're not going to go messing with it. You treasure-seekers and adventurers from outside the Main Belt, just remember: there will always be fools, and Zombieland is as good a way as any for keeping your numbers down.

## FUEL DEPOTS

One of the prominent features of the Main Belt are the numerous fuel depots scattered throughout its orbital range. These stopovers feature refineries for manufacturing reaction mass from volatiles mined from the asteroids on which they are stationed. Freighters and other long-range ships, particularly those traversing between the inner and outer systems, rely on these depots to acquire fuel, water, and other much-needed supplies. They are also frequent stopover points for brinkers and others living in out-of-the-way areas of the Belt. ■

## THE JOVIAN REPUBLIC



**CBEAT:** Keeping a lid on potential technological horrors. ■ p. 37

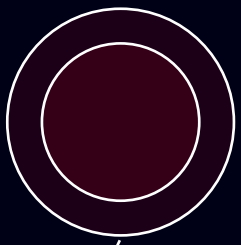
**Citizens and Civilians:** Not everyone is born equal in the Republic, but most can strive for citizenship. ■ p. 38

**Lobbyists:** A vital part of the Republic's political system, and the best voice for citizens with influence. ■ p. 40

**The Security Council:** The true power brokers of the Republic, both governors and senators listen when they speak. ■ p. 41

**TAHI:** The Security Council's ace in the hole, and a potential threat outside of the Jovian system. ■ p. 42

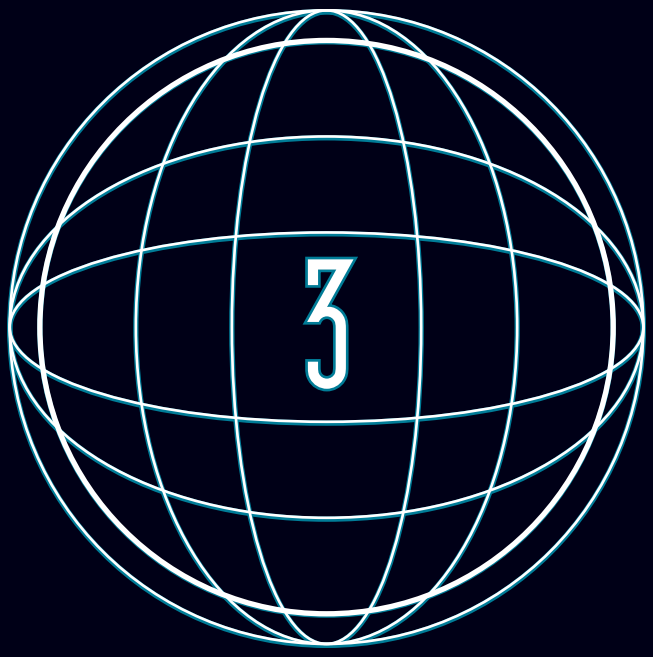
**Enemies:** Surrounded on all sides by those who wish to see the Republic crumble, her defenders must be ever vigilant. ■ p. 44



## MAGNETOSPHERE

Jupiter's magnetosphere is a threat to vessels and habitats; radiation shielding is necessary near the planet. ■ p. 32

# JUPITER



## THE FAITHFUL

Life in the Republic can be trying for those of Catholic faith, but reclaiming Earth is still in their long-term goals. ■ p. 38

## "SARCOPHAGUS" HABITATS

These inefficient habitats—formally Reagan cylinders—are built within hollowed-out asteroids, with the asteroid providing natural radiation shielding. ■ p. 33



# JUPITER



MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
ONOMIST ALLIANCE
AME INFORMATION

**Posted by:** Gillie Bahasa, Europan Researcher
<Info Msg Rep>

You want me to tell you what's happening in the Jovian system? I should probably start at the start.

Everything about Jupiter is *big*. That's the first thing you notice as you approach. If you farcast in, or if you're unlucky enough to be born in the clutches of the Jovian Junta, you don't really get the opportunity to take in Jupiter's staggering scale. To appreciate the vastness and complexity of the Jovian system, you need to come in the old-fashioned way. Unfortunately, the Junta makes that very difficult.

## PLANETOLOGICAL OVERVIEW

Jupiter is the gas giant by which we measure all others, both in terms of size and chemical composition. A stormy ball of hydrogen, helium, and trace heavier elements, Jupiter is about 11 Earths in diameter, and hosts no less than five dozen satellites of varying sizes and compositions. It orbits Sol at a distance of between 5 and 5.5 AU and does so in 4,331.5 Earth days; a little over 11 Earth years. A Jovian day is a touch under 10 Earth hours, putting a Jovian year at about 10,475 Jovian days. That's a lot of sunrises.

### RINGS AND SATELLITES

Encircling the massive planet is a sequence of faint rings comprised mostly of planetary dust, home mostly to a small number of Jovian Republic Reagan cylinders and automated toll stations. Jupiter's rings also envelop the nearest of its moons: Metis (Bush), Adrastea (Fairway), Amalthea (Solano), and Thebe (McAllen), all of which are claimed and renamed by the Jovian Republic. Beyond these satellites lie the largest of Jupiter's moons. The so-called Galilean moons, the first of Jupiter's satellites to be discovered by humans, were also the first to be settled. Io's inhospitable surface is dotted with a few high-security Jovian Republic military installations. Beneath Europa's icy crust, submarine technoprogressivism reigns. Ganymede's numerous city-states are the loyal crown jewels of the Jovian Republic. Callisto's subterranean labyrinths are primarily Jovian protectorates, but a few hold a large enough transhuman presence to give any Jovian official an apoplectic fit. Further out lie the remainder of the gas giant's satellites—errant planetary detritus and captured transients. While a number of these are populated, they serve mostly as outposts for the Jovian Republic, with the exception of a few independent tin can stations.

### THE MAGNETOSPHERE

Jupiter's magnetosphere is the most powerful of all the orbiting bodies of the solar system and directly and indirectly influences a number of phenomena in the Jovian system. Volcanic ejecta and outgassing from the nearest Galilean moon, Io, are swept up by Jupiter's magnetosphere. Some of this settles in an elongated non-ionized cloud around the satellite, depositing on the trailing edges of Ganymede and Europa and the leading edge of Callisto. The rest enters orbit around Jupiter as part of a high-radiation plasma torus centered on Io's orbit. Where the magnetosphere interacts with Io's thin atmosphere and the non-ionized cloud surrounding it, it generates a powerful electric current in the form of a flux tube that produces auroras in both Jupiter's polar regions and Io's thin atmosphere.

The magnetosphere poses a powerful radiological threat to spacefaring vessels and habitats. While most of Jupiter's satellites fall outside of the danger zone, the Galilean moons and rings all fall within this area. While this protects them from the solar wind, the complex magnetosphere exposes all but Callisto to debilitating levels of radiation. Unshielded or unprotected transhumans exposed to the raw energies of Jupiter's magnetosphere can expect lethal doses of radiation in days, if not hours or minutes in some places; tin can habitats and cheap spacefaring vessels do not fare much better without makeshift shielding. Those that have spent any amount of time within the Jovian system know the value of sturdy radiation protection.

## THE JOVIAN REPUBLIC

**Posted by:** Tio Silencio, Firewall Proxy
<Info Msg Rep>

I am a traitor.

But I know I am also a patriot.

I know, whatever I do, in this life or another, that I will be damned. By my own people, by those I try to help. Because I am a traitor.

But this is not why you are here. Or rather it is, but you don't care that I have betrayed my people, you just wish to know about them, always asking in the hopes of finding an advantage. Such is my relationship with Firewall. I break trust everyday, spilling state secrets because I believe that the best hope of salvation for my people lies in trusting a group of radicals, rabble-rousers, and anarchists. I am in league with the very people my government tells me led us to the Fall in the first place, and who must be brought back under the rule of law lest they blithely do the same again.

So here it is. This is what you need to know to understand the Republic. To understand that we are like you and that you, given adequate cause, could become like us. Only ten years ago, the people of the Republic would not have been that different except in attitude. In that marginal difference now is a nearly mindless ravening hatred—from both of our sides. Yes, the Republic is an insular, paranoid, conservative, and militaristic culture, but we are also one of the last repositories of nearly extinct cultural, religious, and linguistic groups. We have not forgotten why all of us now live in tin cans surrounded by vacuum. We are ready for the day when the TITANs return. When they do—and when your AI systems and your very bodies betray you—we will be standing strong, having prepared and planned and run the simulations. Then, perhaps, you will have to turn to us, your last hope. The shining city on the hill that will offer the benighted masses of transhumanity the possibility of salvation from the instruments of their own destruction. Or perhaps not.

Regardless of what the future holds, we are dug in deeply in the Jovian system. While the transhumans outside our borders continue to take risks, to change themselves into something different, to defy the natural order of things, we are taking the cautious path. We grow steadily, without exponential curves. When your transhuman society has collapsed with the inevitable entropy of anarchy, when your machine gods have reaped all of your souls, when you have accelerated your "evolution" and transcended into nothingness, we humans will still be here, ready to reclaim our birthright and heritage.

## THE FOUNDING OF THE REPUBLIC

I could tell you that we are not so different, you and I, that we share a common background—but it would be a lie. Down to our very genetic material we are different. More than that, our differences are those of culture and ideology, the ultimate fate of the universe, and the place of humanity within it. These are the principles upon which our Republic was founded: our belief that humanity is worth preserving.

Before the Fall, the Jovian system was a hotbed of industrial activity and the go-to place for Earth-based governments to set up clandestine research facilities out of the prying eyes of their fellow nations. The electromagnetic interference and high levels of radiation meant that casual visitors were discouraged and more determined attempts at espionage were costly to even attempt. The Americans, Russians, Chileans, and the Chinese all had significant presences in the system for both legal resource collection functions and less-than-legal research outposts that were doing work on memetic, biological, chemical, and nuclear weapons programs.

The Americans, as part of a joint venture with other Western hemisphere nations, particularly Argentina and Chile with their major spaceports, had substantial ship-building and deep-space manufacturing facilities. They poured money into these ventures in an attempt to recoup the prestige they'd lost in allowing the Chinese to reach and colonize Mars first (and the Indians to lead on Luna). These shipyards, concentrated around Ganymede, were trumpeted in the media back home as the jumping-off point for exploration and colonization—not just of the solar system, but of extrasolar systems as well.

In the years immediately prior to the Fall, the Jovian system was something of a boomtown. There was lots of venture capital sloshing around and hypercorp start-ups were renting out all of the space available on the orbital factories or even prefab tin cans. This was also the high point of what came to be called Reagan cylinders, which were brand new at the time but have since become something of a sore point due to their technical limitations.

### REAGAN CYLINDERS

The standard O'Neill cylinder is a proven habitat type that can be found all across the solar system. Several years prior to the Fall an American aerospace consortium backed primarily by Raytheon rolled out a new cylinder design, christened the Reagan cylinder as a nod to the resurgence of interest in the historical president's economic doctrines. Reagan cylinders differed from O'Neill designs in that they were built within hollowed-out asteroids or moonlets, usually mined out, using the rocky exterior as a layer of radiation shielding, a requirement for the Jovian system. In the years since, Reagan cylinders have become infamous for their inefficiency. Environmental and power systems are notoriously sub-par, subject to frequent failures. Brownouts, blackouts, and septic contamination are a common state of affairs on these "sarcophagus" habs. ■

## THE SEVENTEEN-MINUTE WAR

This all came to a crashing end with the Fall. Keep in mind that even under the best of conditions, it takes over half an hour for a radio message to reach the Jovian system from Earth. Weeks of escalating conflict had put the various military forces throughout the system on high alert. By the time the first garbled reports of the TITANs reached the rest of the solar system, the settlements around Jupiter had already thrown themselves into complete chaos. A sudden spastic outburst of violence known as the Seventeen-Minute War changed the status of the Jovian system forever.

While official records from this period are still highly classified, the meager information that has been released or leaked indicates that the US, Chinese, and Russian forces had all adopted battle-ready

postures. It is known that the ranking US commander, Lt. General Richard Chatterson, received several top priority QE messages from the US Secretary of Defense warning of imminent Chinese and Russian aggression. We suspect that the Chinese and Russian commanders were flashed similar messages. (I will not speak to conspiracy theories that speculate the TITANs engineered the whole situation; it is possible, but at this point impossible to prove, and largely irrelevant to the present day.) At this point, the facts become muddled. The official Jovian version states the Chinese forces launched nuclear-armed drones towards Liberty Station. I've seen a Titanian fact-finding report that asserts the drones were merely recon craft whose faulty magnetic bottles were leaking extra radiation. Whatever the case, Chatterson decided to take no chances and ordered his forces to hit both the Chinese and Russians with everything they had.

Seventeen minutes later, both opposing forces lay decimated. Fewer than 12% of military targets remained operational after the initial strikes, and within 6 hours they had been reduced to 5%, at which point their surrender was accepted. Chatterson and his senior command staff also destroyed or seized a number of civilian outposts, citing security concerns. This action raised a general outcry from nearby non-American stations that Chatterson was making a land grab, but was ignored among the general disarray of the worsening situation on Earth and the fallout it was creating.

## From the Ashes

Within a day, Chatterson had seized control of the entire system. Though the Americans had also taken some serious hits, their forces remained surprisingly intact, and they had the support of their Chilean allies. Chatterson, however, was only left in command briefly as long-dormant contingency plans unfolded. Chatterson led a portion of the Jovian fleet to fight in the battles over Earth—never to return. In the weeks and months that followed, many of the top military and political players from the Western Hemisphere were evacuated to the secure Jovian facilities. At first, this was seen as a safe place to wait out the chaos on Earth, and many came by ship. As the situation on Earth deteriorated, numerous VIPs used emergency facilities to egocast out to Jupiter—or at least transferred backups in case they never escaped. The US government sent several cabinet members, senators, and high level military officials, along with the heads of state for four Central and South American nations and a number of other military and political dignitaries.

In the final days of the Fall, it was appallingly clear that the old government structures from Earth were in tatters at best. Disputes over who held authority were already breaking out. Refugee ships continued to pour into the system, many of them having been turned away by already full inner system habitats. Tensions rose over tight space and scant resources, and people began to polarize according to ethnic and formerly national identities. It was clear that a strong authority was needed to unite the survivors. The various military leaders remaining in the system convened a council and established a common purpose. They would use their military might to establish order and safeguard the humans of the Jovian system from outside threats. Reaching out to the former leaders in their ranks—many of whom had been among the most politically powerful people on Earth before relocating to the far reaches of the solar system—they laid the groundwork for a new government. Issuing a declaration of emergency, the newly declared Jovian Republic further consolidated the system under its control. As the new socio-political landscape of the solar system took shape, it rapidly became clear that the Republic had established an iron grip on the most strategically important locations within our planetary system, with the exception of Europa, despite a failed commando raid attempt early on to seize the Conamara elevator head.

The years immediately after the Fall were a formative period for us. As the Consortium rose to dominance in the inner system and the autonomists declared their independence on the rim, it quickly became evident that no one cared about the survival of the species but ourselves. The ideological rift between the polities wasn't just about economics or who's in charge, it was about protecting the human race from unregulated, runaway technologies, about protecting us all from extinction. The hypercorps were clearly more concerned about how to exploit nanotech, biotech, and even AI for financial gain. At the time, the conventional wisdom was that the nascent Autonomist Alliance would soon collapse under internal divisions, leaving their dangerous technology in the hands of various politically radical crackpots. On top of that, we still weren't sure where the TITANs had gone—and then everyone starts thinking it's a good idea to open up wormholes right next door and let a group of alien slugs have the run of the solar system. Seeing the state of affairs, most of those Jovian stations that had not initially joined the Republic turned to us for protection.

## Jovian Transhumanism

Before I go any further about the Republic, I need to explain what defines us Jovians in contrast to the rest of the solar system: our views on technology and transhumanism.

To the rest of the system, we're backwards Luddites because the vast majority of the Republic's populace lacks access to advanced nano- and biotechnology. This isn't strictly true, however, since we have access to the same level of technology the rest of the system is accustomed to, we just regulate and restrict it more thoroughly. We are, as a rule, deeply conservative in our outlook towards certain technologies. We took a different lesson from the Fall than the rest of

transhumanity. We saw it as proof that unregulated technological advances will wipe us out. We have also seen that modifying our bodies and "playing god" removes us from our humanity. So our approach is to study technology carefully, test it thoroughly, put safeguards in place, and only use it when it is safe to do so. We are always alert to the destructive potential a new technology may have. Just as you wouldn't let children play with potentially harmful tools they do not understand, we do not place technology with the capacity to wreak great devastation in the hands of everyone.

Our culture is not monolithic or singular—we also have divergent viewpoints and ideologies in our ranks. Many of our people hold religious convictions that are extremely critical of the ease with which some new technologies can strip away our basic humanity and dignity. These Jovians personally reject many of the technologies that are allowed, unwilling as they are to commit a sin or transform themselves into an abomination of nature.

In practical terms, this means that certain technologies—advanced nanotech and biotech, AI, certain weapon systems—are virtually impossible to find outside of the highest clearance military labs. Some of this is considered even too dangerous to weaponize and what little research there is focuses primarily on defensive measures should it become a threat.

# JOVIAN MESH AND SECURITY OPERATIONS

The following was passed along to me for circulation by one of our operatives who recently returned from a deep cover mission on Liberty. It goes a long way towards dispelling many of the myths our operatives hold regarding the Jovians and their security measures.

## MISSION SUMMARY BY OVERSIGHT COVERT OPERATIVE "NILSSON"

While we have a lot of stories and jokes about the Jovians, the fact remains that most of this is rumor and supposition. We know they took different lessons from the Fall than the rest of the system, and these lessons have heavily informed their security culture.

The first thing you need to know is that yes, the Jovians do have a mesh. It is heavily regulated, but they do have one. However, you must be cautious in using it. In order to gain access you must allow their mesh protocols quite a bit of access to your own systems, and they are constantly monitoring your traffic for any red flags such as prohibited information, suspicious contacts, or the use of contraband programs. What defines a "contraband program?" Well, just about anything not written and approved by the Republic's own codeslingers. My advice would be to set up a dummy mesh account so as not to arouse suspicion, but use a VPN darknet with your own team members or any trusted contacts. Long distance communications can be problematic within Jovian space due to the interference of Jupiter's radiation and the signal inhibitors the Republic uses to curtail the spread of non-approved information.

As for hacking Jovian infrastructure via the mesh, this is a bit more complicated. Unlike most sane and rational people, the Jovians do not control most habitat systems via mesh or even wireless. Instead, if you were to peel back the wall on a Jovian hab you'd find thousands of fine wires running everywhere keeping everything connected. For most operatives this is a problem; you've likely been trained in jamming and co-opting mesh services to get a habitat's systems to do your bidding. Not in Jovian habs, my friend. All of the systems are hardwired and controlled via a central hub that is usually located in the local headquarters of the Civil Defense Corp or the Space Force. This central hub is also where all local wireless traffic is routed through and sniffed before it makes its way out of the hab. Finally, the ranking officer on any hab has an access code, which changes every eight hours, that can be entered to completely sever that habitat from any incoming or outgoing communications. It also activates powerful jamming devices that are effective against most darkcast networks as well.

While this system serves the Jovians well in information control, to minimize the spread of any hostile infowar virus, and as a means of protecting habitats from becoming infected if such an agent is already loose, it does have certain easily exploitable weaknesses. First, the fact that nearly everything has to go through a central hub means that gaining access to this hub can give an agent tremendous leverage, either to sniff the traffic themselves or to bring it down and isolate the habitat. Additionally, the Jovian reliance upon humans and not code as the last line of security means that an agent skilled in manipulation or interrogation can extract all sorts of valuable security information simply by leaning on the right people.

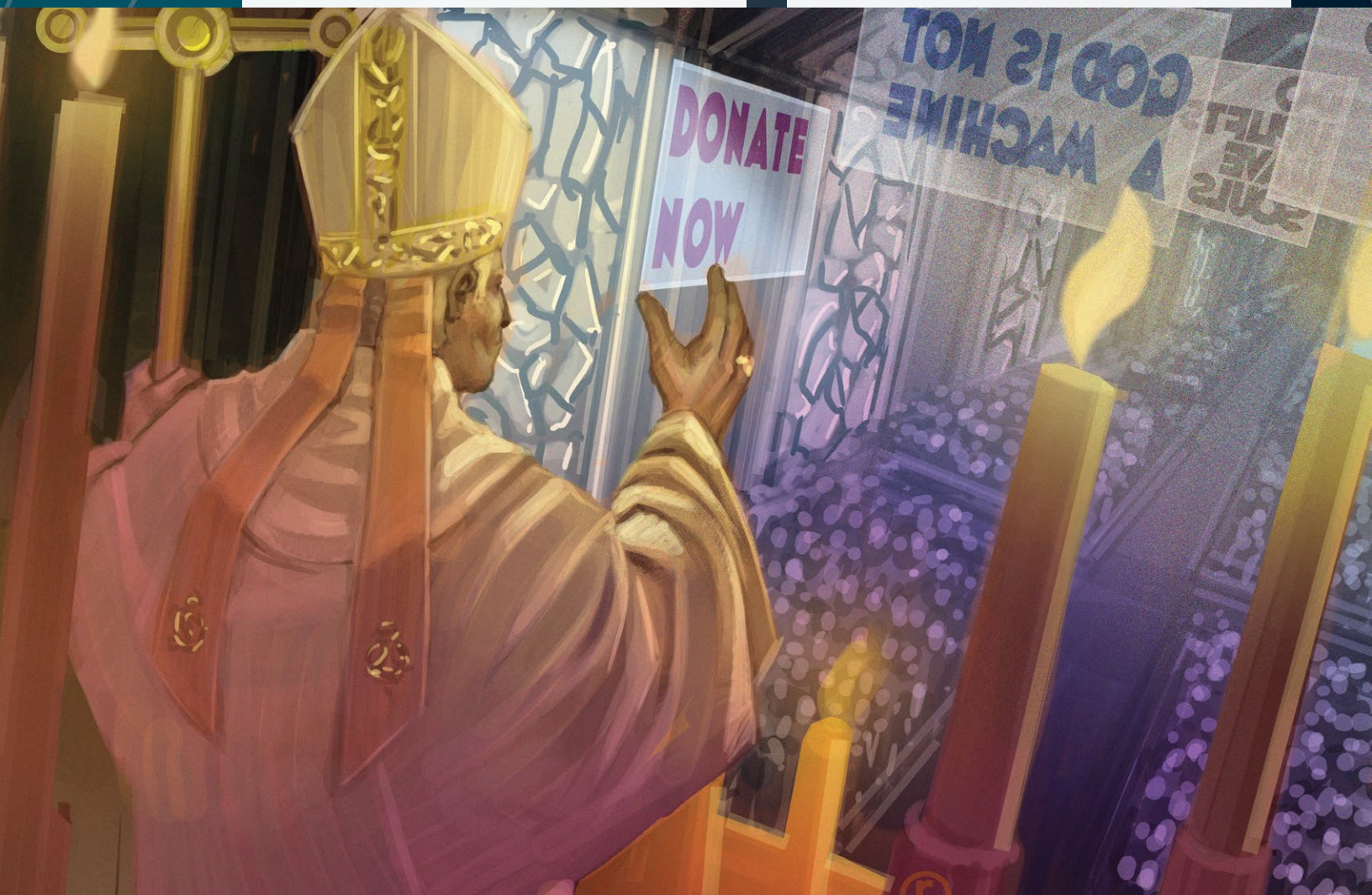
As for the best way of doing this? Paranoia. Most Jovian security personnel are extremely paranoid but generally ignorant of much outside of their Republic. This can be exploited to your gain by playing off their belief that they are under constant attack by things of which they have little to no understanding. I have found that anarchists, communists, or socialists make particularly good bugbears and are deeply ingrained as cultural monsters to the average Jovian. ■

You may be surprised to hear that many technologies common elsewhere are indeed allowed, but heavily restricted. This includes cornucopia machines, resleeving, and a number of genetic enhancements. These tools typically require high priced licenses or special government dispensation, which generally limit them to the wealthy, specialist labs, and high-ranking government and military officials. These tech privileges are usually laden with monitoring provisions, regular check-ups, and limited period renewal clauses, to ensure that no one goes off the radar with anything.

The vast majority of Jovians (over 80%) retain their original bodies. In fact, our Republic offers a significant reward to anyone who still has their birth body that relocates and becomes a Jovian citizen. Many are genefixed (splicers), though some refuse out of religious objection. Licenses for certain genetic enhancements and bio-mods—or even certain morphs—are allowed if you can demonstrate a particular need for it (vacworkers, for example). Longevity treatments are available for all, if expensive, though our culture reveres death and considers it a dignified and natural end.

A strong public sentiment exists against resleeving. Most believe that our souls are not transferable to a new body and so resleeving is akin to suicide, which is a sin. A few small factions believe it is allowable under certain circumstances, such as a destructive uploading that transfers the soul to a clone of the same body. Cortical stacks, backups, resleeving, and even certain biomorphs are legal, however, if licensed and restricted (showing that the Security Council, above all, sees practical value in the technology). The few resleeving facilities that exist are subject to regular protests and vandalism, and in two cases uploading technicians have been assassinated by religious extremists that considered them to be murderers. Few people wear non-standard morphs in our habitats, and those that do are subject to reactions of distaste, fear, and occasionally even hatred. Synthmorphs and pods are rare to nonexistent. Uplifts, in any form, are seen as abominations; even when allowed by the government, they can expect overt hostility and prejudice.

Some things are expressly forbidden, specifically forking and uploading/infomorphs. There are rumors that both forks and human infomorphs are used for certain military applications, though this is unsubstantiated. Only the most limited and locked-down AIs are allowed, and even those only for situations where they are critical. While mesh implants are standard (except among the most devout), muses are unheard of. This also means that we have developed ways of running many of our computer systems that don't involve smart programs or limited AI, and even those that do have security lock outs that disable all remote access to systems



and require an actual flesh and blood person to authorize any operations.

You are unlikely to suspect that Jovian medtech is on par with the best found elsewhere in the system—we do, after all, have a vested interest in keeping our bodies alive, rather than just slipping into a new one. Medical nanotech is allowed under the strict supervision of licensed professionals, who also excel at non-nano health practices and surgical procedures. Our exowombs, childcare facilities, and schools are also top of the line, given the importance we place on rebuilding our population and raising future generations. Families with children are allotted special incentives to encourage population growth.

Obviously, there are differences between our culture and the rest of the solar system. One thing important for non-Jovians to remember, however, is that our views are not just based on mistrust of technology, overhyped security theater, or fear of the TITANs. A significant portion of our population considers our Republic to be the last and only bastion of humanity. To their eyes, our Republic is surrounded not by transhumans, but by uncivilized monsters that once were human, but are now on their way to becoming something else, with the distinct possibility that they may kill us all in the process. After all, from their point of view, the moment you first resleeved, you died and transformed into something that wasn't a person anymore. To the average Jovian, you are a soulless software replica with a human face.

Sound frightening? It is.

## The Guardians of Bio-Ethics

Foremost in shaping Republic policy in regards to what is and isn't safe are two entities, the Council on Bioethics and Advanced Technology, a think tank and lobbying group, and the Roman Catholic Church, the remnants of which now call the Republic home. Both of these organizations examine new and existing technologies and issue strongly received mandates.

### The Council on Bio-Ethics and Advanced Technology (CBEAT)

CBEAT is composed of scientists, philosophers, and lay experts, many of whom have experience as political advisors back on Earth. They are more influential in their recommendations than the Church since they have the ear of the Security Council in their analysis of the potential social and cultural impacts of new technology adoption. They are also savvier in the way they lobby through the media, the governors, and the Senate for the appropriate legal restrictions on or banishment of said technology. They primarily approach technology through the lens of the precautionary principle, meaning that something must be proven non-harmful before it can be adopted. Basically as long as one of the eggheads at CBEAT can come up with a worst-case scenario, they recommend new potential tech be kept from the population for their own protection. Even if a technology is unlikely to be catastrophic, they often approve it only for limited applications, pending further evaluations.

CBEAT is continually under pressure from some of the Republic's home-grown corporations to approve new technologies to release into the market, not to mention certain foreign hypercorps that have received a charter to operate in Jovian space. These corporations often complain how CBEAT limits growth unreasonably. The Security Council has made it clear, however, that they support CBEAT's precautionary approach. Corporations that have gotten too pushy have found their licenses revoked.

### The Roman Catholic Church

The Church acts in a similar manner to CBEAT, though their concern is offering spiritual guidance to the laity in regards to this rapidly changing world. This means they tend to stress the moral implications of the technologies upon perceived humanity. Although the Church doesn't have the same degree of political and military influence, they are wildly popular among

## Medical Concerns

**From:** Dr. Maria Cofini, Lobbyist, Jovian Medical Association
**To:** Enrico Salazar, CBEAT Public Liaison

We Jovian medical professionals may pride ourselves in maintaining our populations' health and well-being, but the praise the media heaps upon us grows continuously hollow. The fact that so many critical medical technologies must run the twin gauntlets of the Church and CBEAT to be considered safe for the population means that very little of the newer procedures, treatments, and drugs make it to the general populace. As a result, even those citizens willing to undertake longevity treatments can expect to live a life considerably shorter than the rest of the system—and one that is likely filled with no small amount of pain and suffering. The Senate can suppress all of the reports on the high rate of cancers among our population that it likes; people are still getting concerned. Living for ten or more years within a heavy radiation belt is bound to have negative effects on a large portion of the population and several of the nastier cancers are reaching epidemic levels. Unfortunately, the best techniques for treating these cancers remain on the banned list or are restricted to a handful of licensed practitioners because they involve invasive nanotechnology. While our wealthier citizens have the political clout and credit for a "vacation" to Titan or Extropia to fix their health, the rest of our population lies at risk. Caution may be patriotic, but when it actively hinders the health of a significant proportion of our population, I can only consider it criminal negligence. ☘

## TRYING TIMES FOR THE FAITHFUL

*Censored from the Journal of Cardinal Gonzalo Cortez, RIP*

When the Fall came, it was a severe test of our faith. Rome, like so many other holy sites, was ravaged by the instruments of our hubris. Few of the faithful made it off-planet due to prohibitions on technologies that would sever the soul from the vessel. We found ourselves, in those years immediately afterwards, adrift in a world that seemed to test us at every step. While we were offered a form of sanctuary among the venal and corrupt oligarchs of the inner system, we rejected their offer, seeing in it only a role as lapdogs and servitors of their schemes. The outer system too seemed bereft of hope, beset as it was with the godless and the god-mocking. It was at this time that the voices of the faithful in the newly formed Jovian Republic cried out for our presence.

Life in the Republic has not been easy. The trials of living under such harsh conditions are a fitting punishment for our sins in assuming we were greater than God. Additionally, the Church often finds itself at odds with the rulers of the Republic. We attempt to temper their more war-like impulses with the teachings of Jesus Christ, but agree with them on many issues of cultural and scientific significance.

While many of the faithful call the Republic home, we still minister to any place the faithful call home and send as many missions as we can manage across the solar system. We still hold to hope for the lost souls left behind on Earth. While others may have abandoned the home God gave to us, we have not. We hold to the belief that we will one day return and cleanse it of the evils that we, ourselves, unleashed upon the face of the Earth. ■

the populace, offering hope in what have been trying times. Most politicians in the Republic know they have to make concessions towards the power of the Church. The Church's lobbying wing, the Conference of Bishops, frequently engages public officials and advocates for both the interests of the Church and for scientific policies that may affect the flock. The Church has sometimes had major disagreements with CBEAT (particularly over resleeving), launching outspoken opposition and boycotts to a handful of technologies that received CBEAT's seal of approval.

### GOVERNMENT UNDER A GOD'S GAZE

While the rest of the system may characterize us as a fascist state or even use the pejorative "junta" to describe our system of government, we are nominally a democratic republic with two of our major legislative and executive bodies being democratically elected. Suffrage, however, is limited to citizens, and citizenship is not a birthright guarantee in the Republic.

### CITIZENS AND CIVILIANS

To outsiders accustomed to universal suffrage, a citizen is a citizen. Within the Republic, however, citizenship is not a given. By birth or by immigration, all persons within the Republic are considered *civilians*. This means that they have limited rights and that these rights are contingent upon remaining in good standing with the local authorities.

Citizens are made, not born. In order to become a citizen an inhabitant of the Republic must do several things. First, and most importantly, they must sign up for a voluntary four-year stint in either the Space Force or the Civil Defense Corps and must serve out the entire deployment. The standard tour is six months of basic training, followed by six months of specialized training, and then three years on active duty. This ensures that our forces, both internal and external, are always staffed by the best and the brightest. Note that many of these assignments are for positions such as engineers, medics, and various service and bureaucratic roles; everyone, however, receives the basic military and security training. After serving for four years a person is granted citizenship, though a high degree opt to re-enlist since most careers outside of military or police work reward increased experience within the services. Citizenship may be revoked, however, for any number of major criminal infractions. While a simple theft is unlikely to see the perpetrator stripped of citizenship, repeat minor offenders or major offenses such as assault against another citizen or murder will be punished with the loss of citizenship. As long as a citizen remains in good standing, they are afforded all of the rights and privileges of a full member of Jovian society.

Civilians are generally anyone under the age of fifteen, anyone who has been convicted of a criminal act, new naturalized arrivals to the Republic, or any adult who has not completed their voluntary military service. While a civilian enjoys some rights, they do not have absolute freedom of speech and may be detained or confined to their quarters by the authorities, no justification needed. Civilians are banned from working or even accessing sensitive areas on habitats. Adult civilians are relegated to a second-class status within the Republic and are generally considered to be criminals, cowards, or both. An adult who is not a citizen has failed the Republic in some manner and this status is not only reflected in their mesh and other digital interactions but also in housing. The rental or purchase of housing in certain zones is a privilege extended only to citizens, meaning that most civilians are relegated to ghettos where they are more easily controlled and monitored.

Below civilians are a class of "non-persons." This includes uplifts, infomorphs, repeat criminal

offenders, and untrusted inhabitants of our protectorate habitats that are not collaborating with the regime. With the exception of the last category, most non-persons do not tend to remain in the Republic if they can afford it. These non-persons cannot claim even the most basic rights, and while it is still considered a crime to kill one, it is treated as felony property damage and not murder or manslaughter.

## CIVIL LIBERTIES

We have a constitutional framework that grants rights and privileges for citizens and the basic outlines of our legal system. A stranger to the Republic would find much of our laws and political process reminiscent of several old Earth democracies with a few notable exceptions. There are no universal freedoms for the press or of assembly. The first is a military matter in which the Senate accedes to the Security Council. They have argued, convincingly, that a free and independent press leaves the Republic open to memetic attack and other infowar vectors, and that it would jeopardize their efforts to maintain the fighting spirit of the Republic, undermine morale, or create support for subversive ideas and technologies. As a result, all media outlets are subject to monitoring and review by censors from the Security Council. Outside media and information sources are strictly banned. The ban on free assembly stems from the martial law security measures put in place during the Fall. Since that time many of the other restrictions put in place have been removed, but the ban on large public gatherings has remained. Any public gathering in excess of twenty persons will usually be broken up by the Civil Defense Corps in fairly short order.

It may surprise those that have never been to the Republic to discover that we have absolute freedom of speech. While there are rather strict sedition laws, merely criticizing the government will not get you hauled off to prison. The media, activists, and even the Church are often quite vocal in their criticisms of the senate and the governors. This freedom of speech is limited due to restrictions against the press and public gatherings, of course, so while individual dissent is very much alive and well, it seldom makes the jump to organized opposition. On the rare cases where it does, it is usually quickly quelled by the CDC.

## COMING AND GOING

It is a common misconception that we Jovians are prisoners in our society, never allowed to leave lest we be tainted by transhuman memes. This is untrue, as any citizen may request an exit visa to travel outside the Republic. Granted, the process for acquiring one is long, complicated, and expensive, and they are often refused unless the applicant has a particularly good reason for leaving. The only exit visas granted for vacation purposes are to Europa. Even if an exit visa is obtained, booking a berth aboard a passenger ship outside of the system is often a challenge, given how few routes exist. Egocasting facilities are, of course, nonexistent. Civilians and non-persons are technically barred from leaving, though officials often turn a blind eye. Returning citizens can expect heavy screening and questioning about their outside activities.

For outsiders, entering the Republic is an equally difficult process. Visas must be registered well in advance (just showing up will get you thrown in a cell) and must have good cause. Hypercorp reps and inner system types generally have an easier time cutting through the red tape, whereas an autonomist has a better chance of finding a golf ball in Saturn's rings. Visitors are warned in advance that certain morphs, mods, and equipment are considered contraband, including your muse—I recommend going through the list carefully, lest your stay be confined to the gulag. A shuttle or passenger vessel must also be booked, as the Republic does not accept foreign egocasts. Expect long lines and terminally painful customs procedures when you arrive. Accredited guests are granted a "registered alien" status, which gives them roughly the same rights as a citizen.

A category of "protected aliens" is extended to guests to the Republic who would not normally be granted rights or protections but who, due to their diplomatic or trade standing, are accorded a limited form of legal protection. Uplifts, infomorphs, and certain political undesirables are granted this status. AGIs are strictly forbidden in Jovian space, and aiding or abetting one is a crime.

You should be aware that as a registered or protected alien you do not have a right to privacy and a search of your person or possessions can be conducted at any time. Additionally, in the case of suspected subversive activity or basically anything an inspecting officer may find objectionable about you, military officers can be called in to access your cortical stack. All aliens legally visiting the Republic are required to install and carry around a modified version of a muse called a minder that reports your activities to local authorities at all times and is admissible as evidence for deportation or detention. While similar to a muse, a minder is far more limited, and I am told easier to reprogram if you know what you are doing.

## THE SENATE

Each full member habitat of the Republic is allowed to elect three senators who are then sent to Liberty on Ganymede where they deliberate upon and set much of the policy for the Republic. There is a saying among us, however, roughly translated from Spanish as "not everyone is born a senator." It's usually used to mean that someone has taken on pretensions of importance, but it points to the fact that most senators either held prominent positions within their governments back on Earth or come from families that have money or influence. The reality is that to be eligible to run for a senate position, a citizen must be properly vetted and receive the stamp of approval from a Security Council office that handles such things. It is an open secret that various lobbyists also play an influential role in this

process, meaning that each senator is likely beholden to at least a half dozen special interests and better do what their governor says or risk facing a hand-picked replacement during their next campaign.

On its face, the senate is a thoroughly democratic institution. These senators represent the interests of their habitat's constituency and speak on their behalf on matters of interest to them. As much as I'd like to hold up the Republic as an example of a democracy that works, even my patriotic self knows that is a lie. Once a senator is in office, the only mechanism by which the populace can speak to them is through lobbyist groups. There is no petitioning, no calling or writing the senate, no town hall meetings or public referendums. Only the lobbyists have the senate's ear.

While being a senator likely has its perks, in terms of power they are a lower rung—they are the first to feel the heat when something goes wrong in a habitat, which in the Jovian Republic is a regular occurrence.

### THE GOVERNORS

While a habitat's senators see to its interests in the capital, the day-to-day operations of running each colony is in the hands of a governor. Governors are appointed by the senate with approval by the Security Council—or so it says in the Constitution, and no one in the Republic is gonna say the Constitution is wrong, at least not where the CDC can hear. The reality? The governors are power-hungry pricks who couldn't cut it as line officers but were too important to warehouse on some podunk research station. Most of them, as near as I can tell, had a little too much fondness for the bottle and were taken out of active service lest they make a tragic error in judgment while under the influence. It may disappoint many a patriotic citizen of the Republic to hear this, but there is nowhere near the level of responsibility attached to being the figurehead leader of a habitat of thousands as there is to being the one that makes the decisions whether to nuke an enemy or not.

Like the senate, the governors know they don't really call the shots in the government. That whole "appointed by the senate" crap just means that the Security Council sends over a list of candidates for the senate to "nominate" and "debate," and the senators do as they're told, if they know what's good for themselves. The governors get their orders from the Security Council in the same way the senate gets theirs from the lobbyists and Church. They are the de-facto military heads of their habitat unless a ranking officer happens to be visiting, which also means they are in charge of the local branch of the CDC and are liable for any civil disturbances that occur on their watch. As a result, most tend to be heavy handed when it comes to any problems that crop up; better to be safe than sorry. This means that most of our governors are hated and feared rather than loved—but that's not really something most worry too much about.

## TOP LOBBYISTS

**Addendum of Public Record:** Most Campaign Contributions by Private Interest

From the 9th Legislative Session of the Senate of the Jovian Republic

<With additional notes from Damasso Contreras, Titanian independent journo>

### CENTRO PARA EL DESARROLLO DE RECURSOS

<The CDR represents most of the major mining interests in Jovian space and is the second largest private employer in the Junta after arms manufacturing. Perhaps unsurprisingly, they're mostly focused on getting the Junta to bankroll more exploration and extraction projects. What tends to confuse most outsiders is the weight they throw in supporting long range patrols and border security, until you realize that it's these kinds of patrols that often interdict and seize Consortium comets and asteroids under propulsion from farther out.>

### INSTITUTE FOR FINANCIAL SECURITY

<Most banks and bankers in the Junta probably wish they were with the rest of their parasitic ilk on Luna or Mars. The native financial establishment throws a lot of money around but doesn't get much service for all of their cash—probably because they're interested in trade liberalization with the Consortium, something the rest of the Jovian establishment isn't too keen on.>

### JOVIAN CHAMBER OF COMMERCE

<The JCC are the guardians of the old economy. They support government protection of private property rights, with an emphasis on intellectual property. They successfully argue that technologies which enable IP infringement must be outlawed and restricted to protect the Republic's financial security.> ■

### THE FOURTH ESTATE: LOBBYISTS

The bloodsucking ticks of a sham democracy, the lobbyists are masters at getting what they want first and serving the interests of the Republic second. Even back on Earth we had lobbyists all over the place, though there they weren't officially part of the government. When we relocated to the Jupiter system and hammered out a new government, they came crawling out of the woodwork. Now they are the official voice of the people. If you have a cause you want to bring to the senate, you need a lobbying group to do it. At a minimum, this means you need a requisite number of supporting citizens' signatures. To meet the various government requirements to form a lobby, you also

need money and influence. What this means in practical terms is that only causes backed by corporations, the wealthy elites, or widespread public support have a chance.

The way the lobbyists see it, we'd forgotten how to run the government on our own, and they may have a point. At the most basic level, most people only want a few things: security, shelter, and sustenance. The Security Council already had the security racket sewed up, but the other two, well, your average politico has no idea where their food comes from or how they get home at the end of the night. So we struck a bargain with the lobbyists of the various important employers and interests that were already in the system and those that sprung up afterwards offering to serve the various needs of the Republic.

## THE SECURITY COUNCIL

The Jovian Security Council is the apex of power in the Republic. Though they nominally leave governance and legislative matters to the senate and governors, there is no question that the Security Council's word is law. They provide lip service to democracy, but claim authority in all matters regarding the Republic's security—and these days, you can make almost anything a security matter if you phrase it right.

The Council's location, meetings, decision arrangements, and operations are protected by a veil of secrecy. Analysis from information gleaned over the years indicates that the Security Council currently has seven members, each with a specific purview.

### GENERAL MONICA CONTRERAS, COMMANDER IN CHIEF

A colonel in the Chilean Space Force, Contreras became the ranking officer in the Jovian theater when a bizarre accident claimed the life of her predecessor in the last few months of the Fall. By all accounts, Contreras was the primary architect of the plan to unite the military units around Jupiter, stage a coup, and establish the Security Council. An atheist and former political moderate, she is wholeheartedly dedicated to preserving a future for humanity. In her view, a strong military force and strict control of dangerous technology take priority over all other concerns. She is often quoted as saying that humanity is at war for its own survival as a species, and so the Jovian people must make sacrifices for their common cause.

### GENERAL GAVIN BROWN, VICE COMMANDER

Son of a wealthy American political family, none of whom survived the Fall, General Brown was in charge of space assets defending numerous key assets in Earth orbit, almost all of which were destroyed by the TITANs. Upon hearing of the founding of the Jovian Republic, and seeing that the American government and military had collapsed, Brown defected to the Jovians and quickly wormed his way onto the council, even replacing the previous vice commander as second in command. Though non-religious, he holds a vigorous bioconservative stance.

### GENERAL ADAM WESTMORELAND, SPACE FORCE COMMANDER

Westmoreland heads the Jovian Space Force, the most formidable military fleet in the solar system. He is also one of the key voices in the determinist faction, believing the Republic is destined to prevail in the long run, should they just concentrate on protecting themselves and weathering the storms. Westmoreland is known to have large personal stakes in several major mining and energy corporations within the Republic.

### GENERAL SERGIO CAUAS, CIVIL DEFENSE CORPS COMMANDER

Cauas is in charge of protecting Jovian habitats and other physical assets, which he takes exceptionally seriously. If you want to blame someone for the periodic emergency readiness drills that all Jovians suffer through, Cauas is your man. The CDC manages external habitat defensive installations, civilian policing duties, and the military courts that handle all criminal matters within the Republic. Cauas is a devout Catholic and a close friend of the Pope.

### DIRECTOR ZANE MCFARLANE, INTELLIGENCE COMMANDER

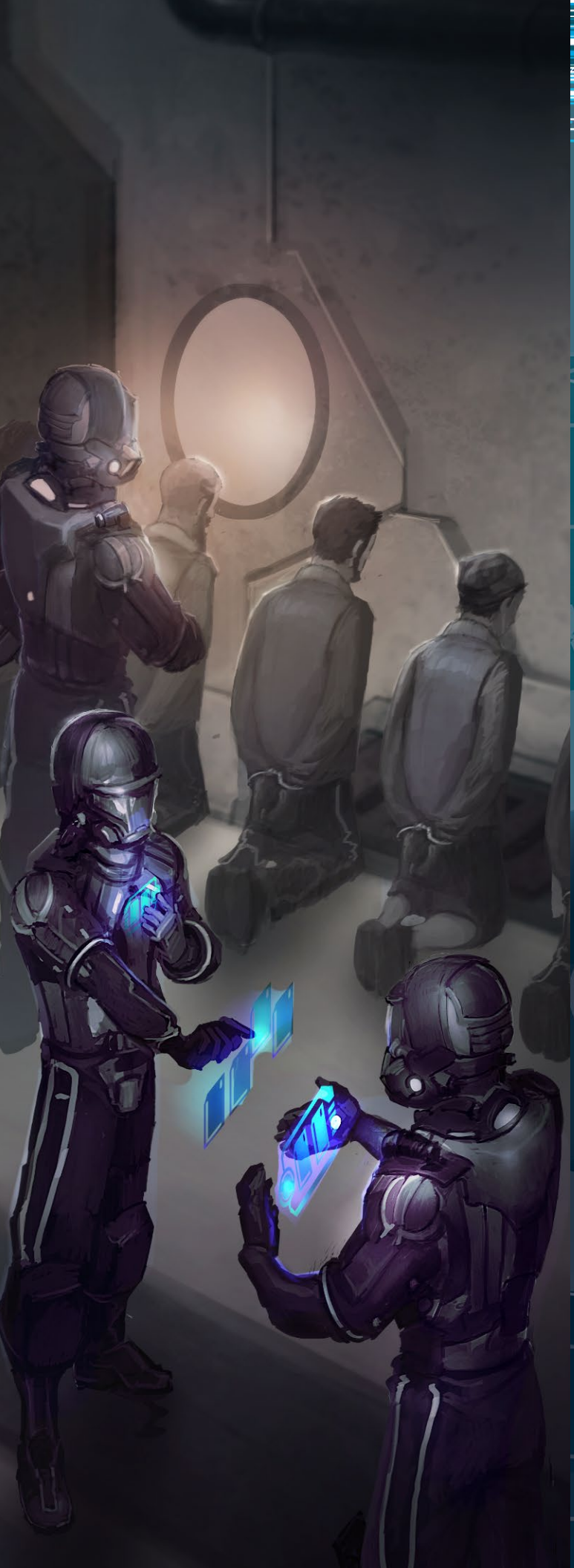
McFarlane has the distinction of being the only council member not in his original body, as he egocast to the Jupiter system one year before the Fall. A CIA field analyst, McFarlane was responsible for gathering intelligence on rival military outposts around Jupiter. His work undoubtedly helped decide the outcome of the Seventeen-Minute War. Currently, he is one of the most feared men in the Republic, as his Security Council Intelligence (SCI) agents have eyes and ears throughout Jovian society, alert to any hint of sedition or super-empowering technology. His current priority is rooting out the Jovian Anarchist Cells. SCI is also in charge of the Republic's media restrictions and censorship, so it often plays a defining role in current Jovian political discourse.

### DIRECTOR MARCELO VASENA, CHIEF OF OPERATIONS

Vasena oversees the logistics for the Security Council's subdivisions. He is in charge of training operations for the Space Force, CDC, and SCI, ensures the readiness of all active and reserve personnel, and manages resources and distribution. This includes oversight of the Republic's spaceyards, arms manufacturing, and toll collection systems. Vasena served as a former aide to the President of Colombia before the Fall. His control over military contracts with Republic corporations makes him an influential and popular figure. Vasena is also the leader of the expansionist faction, pointing out frequently that not having complete control of Jovian space is a risk to the Republic.

### DIRECTOR WENDY GILDER, CHIEF TECHNOLOGY OFFICER

The former CEO of the Rand Corporation, Gilder was brought onto the Security Council to spearhead the



# TAHI

**To:** <Firewall Proxy Node 4378949998>
**From:** <encrypted>

While the Security Council has its own intelligence service, it's worth noting that they farm out the most sensitive jobs to one of the more influential lobbying groups, the Terrestrial Ancestral Heritage Institute. While it may seem strange that a lobbying group handles the blackest of the black ops for the Junta, this becomes less weird once one looks at TAHI's membership: almost entirely highly ranked and trusted former military officers. TAHI is the Security Council's ace in the hole against a coup from within, a place where their top and most loyal followers are placed out of sight of senate oversight to conduct, in the shadows, the work necessary to keep the Republic going.

A holdover from various military and cultural preservationist think tanks from Earth, the TAHI people are well funded and well connected and are not at all happy with the current state of affairs. TAHI has recently started a campaign to shift internal tensions within Junta culture by rewriting the curriculum at the service academies and becoming more active in advocating for policy that places the blame for social problems on several senators that have been leading a vocal reform wing. Specifically, they're placing the blame for our rather sad state not on our refusal to modernize and adopt more widespread use of maker and resleeving technology, but because these senators have been complicit in "consorting with transhumanity." They've also become involved in stopping some of the ongoing investigations into the Spear of Longinus and may be using the group to act against opponents in a more direct, but deniable manner.

While the Junta doesn't generally tolerate many transhumans, there are a few within Republic habitats. TAHI has been stirring up resentment against these people that has resulted in several incidents of violence. They use these incidents to further attack the senate's reluctance to allow for mandatory incarceration or detention of non-persons and point out that these modified people pose a threat to the Republic.

This may not sound all that surprising until you consider that many members of TAHI use extensive nanomods and keep backups stashed in out-of-the-way places. They foster a deliberate double standard: advanced technology is suitable for the elite and powerful but best kept out of the hands of the average citizen or civilian. While most of my fellow intelligence operatives are well trained and suitably equipped to compete with our transhuman adversaries, TAHI agents are even more likely to have makers, top-of-the-line modified morphs, and advanced bio-mods. They are often called upon to serve lengthy stays outside of the Junta as sleeper agents.

The most disturbing aspect of TAHI, however, is their interest in the Watts-MacLeod strain. They've liberated several of the core researchers that worked on the Futura project and tasked them with figuring out how the Lost generation ended up with such a high rate of Watts-MacLeod expression and whether these results are replicable or even possible to induce in a full-grown adult. ✤

## THE THIRD YEAR COUP?

**To:** <Firewall Proxy Node 4378949998>
**From:** <encrypted>

If some sources are to be believed, Vice Commander Davis did not quietly retire from the Security Council. They claim Davis actually attempted his own coup against Contreras three years after the Republic was formed. I have found no evidence to support this, but fully believe that such an incident would be buried deeply out of sight so as not to undermine the Security Council's omnipotence. Certainly it is true that Davis is the only original council member to have departed, and he seems to have done so suddenly and without fanfare. One day he was there, the next Brown held the position. Davis's complete absence from the public sphere ever since gives the theory some credibility, but there could be other explanations.

I've heard one counter-theory: Davis wasn't a coup mastermind, but a deep-cover exsurgent, finally exposed. Make of that what you will. ♣

Republic's policies on all issues relating to technology, including economics, manufacturing, healthcare, and computer systems. Gilder's office has a close relationship with CBEAT.

## JOVIAN FACTIONS

Aside from the military and lobbyists, there are several leading and sometimes competing memes with strong influence in Jovian culture.

### DETERMINISTS

The determinists take the long view. They believe that transhumanity (specifically meaning all non-Jovians) is doomed to either wipe itself out, whether from out-of-control technology or civilizational dysfunction, or that it will transmutate into something so beyond human that it no longer becomes relevant. They take the position that the Republic should strengthen its defenses, bunker down, isolate itself as much as possible, and simply wait for the transhumans to go away. Once the threat has passed, humanity will be safe to reclaim the solar system, retake Earth, and rebuild civilization the right way. They argue for a slow and steady tech development, defensive buildup, and isolation to avoid potentially infectious memes. They oppose expansionist plans as too risky.

### EXPANSIONISTS

The expansionists promote a more pro-active foreign policy, one that would first eliminate nearby security threats and then seek to build a wider defense network through pacification of strategic habitats. Their goal is to completely dominate the Jovian system and then to bar all outside traffic, effectively creating a bubble of space that is actively protected and owned by the Republic.

### HAWKS

As their name implies, the hawks support active engagement with the transhuman threat lingering outside of the Republic's borders. They argue—somewhat convincingly—that the Republic is rapidly being outpaced by the competition. Where transhuman technology develops exponentially, Jovian technological progress is a cautious trickle. Where transhumans can clone and fork and manufacture pods and synthmorphs, the Republic breeds slowly. Within a few decades, they believe that the Republic will have no chance of standing up to a transhuman offensive. The Republic's only salvation in their view is to act now, to strike while they have a military advantage, and seize the solar system for humanity.

### RECLAIMERS

The reclamation of Earth strikes a deep chord within the Jovian psyche. The Church plays a significant role in this. Having emerged from the Fall decimated in terms of followers but with most of their finances intact, they are a major funder of reclaimer causes throughout the solar system. They are particularly in support of missions that show a chance of rescuing survivors from Earth, since most of their flock didn't make it offworld.

### REFORMISTS

The reformists take a liberal stance on technology and development. Though they also encourage safety, security, and the precautionary principle, they argue that the Republic is cautious to the point of being a detriment to the well-being of its citizens. They propose a liberalization of certain technologies, particularly those that would improve healthcare, counter poverty, and eliminate death. Foremost among their causes is legalizing cortical stacks and backups for everyone. Though vilified by the entrenched bioconservatives and still a minority, the reformists have grown rapidly and significantly in the past few years, in part due to support from corporations that find current government tech development standards too restrictive. Reformist activists have been attempting unsuccessfully to gather more widespread support from the Republic's large and impoverished underclass, but most of the Republic's proles are more preoccupied with their fear of transhumanity.

## POWER, GRAVITY, AND MIGHT

The Republic is infamous for its "slingshot toll booths," but there is much more to keep an eye on regarding the Republic's dealings in the region.

### SLINGSHOT TOLLS

The Republic demands a toll from any vessel that makes use of Jupiter's gravity well for a slingshot or aerobraking maneuver—or any other craft that passes through Jovian space, for that matter. The toll rate is

based on mass and ships are expected to declare their cargo, with certain dangerous materials and technologies banned or subject to increased rates. Most hypercorp merchants account for the tax and pay it in advance through a customs account with the Republic to ensure no problems. Unregistered ships picked up by Jovian sensors are pinged and asked to file a customs form and pay up. Occasionally, Jovian Space Force ships will match velocity and demand to board for cargo inspections. Those that refuse to pay are seized or destroyed. There have been numerous complaints and diplomatic objections filed with the Republic over the years for alleged improper cargo seizures, mostly falling upon deaf ears. For those with secret cargoes or a dislike of the Republic, numerous smugglers and blockade runners specialize in sneaking craft past the Republic's gaze.

### Mining and Power

The mineral resources of Jupiter's many moons are a source of wealth for a number of Jovian-based corporations; the Republic forbids outside entities from extracting resources within its boundaries. Gas mining is also practiced, but the challenges in dealing with Jupiter's radiation, gravity well, and turbulent atmosphere leave this industry to a handful of high-risk specialist corps.

In recent years, the Republic has benefited from its growing electrodynamic tether program. Four of the inner-most minor moonlets were de-orbited and equipped to drag superconductive tethers through Jupiter's magnetosphere, producing massive amounts of power. These stations beam power by laser to Jovian habitats and ships around the system, profitably including several non-Republic stations. Creating and establishing these tethers within the magnetosphere is a risky endeavor, but one treated as a point of national pride, with the life-risking engineers regarded as heroes in the Republic's media feeds.

### Antimatter Factory

The flux tube produced by Io's interaction with Jupiter's magnetosphere provides a perfect source of power for the Republic's antimatter facility there. This factory is the primary source of antimatter for the Space Force's antimatter drives and is heavily defended given its strategic value.

### Protectorate Habitats

The Jovian Republic extends protection status to a number of city-state habitats in the region. These protectorate colonies are not extended complete privileges: they do not have representation within the senate and their residents are counted as civilians (unless they opt for military service, as some do). They are expected to pay taxes and adhere to the Republic's major laws and policies, however, and most host a CDC garrison and see regular Space Force patrols.

### Military Capabilities

The extent of Jovian military capabilities is classified, of course, but it is clear that their Space Force is the largest and most well-equipped fleet in the system, hosting numerous dreadnoughts, battleships, and destroyers, along with uncounted numbers of frigates, patrol craft, and smaller ships. They rely heavily on actual pilots and human personnel, using limited slave AIs only for specific tasks. All systems are hardwired and hardened, leaving minimal opportunities for mesh-based intrusions. CDC and Space Force ground/boarding units rely heavily on teleoperated drones, exoskeletons, and cybernetic enhancements rather than combat/security bots. Active service personnel are given an option to backup before authorized missions; career officers are commonly equipped with cortical stacks. Both units make use of specialized morphs for specific combat roles. Of all service personnel, SCI agents are granted the most leeway for using advanced technologies, given their need to infiltrate and access our transhuman rivals.

## Enemies, Foreign and Domestic

The Republic endures. This common greeting between citizens reflects the single most significant tenet of the Republic: endurance in the face of the ravening hordes of transhumanism. The rest of the system may disagree a bit with this characterization, since I'm fairly certain at least a few of our enemies hardly consider us an opponent at all, at least when they bother to think of us. The prevailing mentality within the Republic, however, is one of a constant state of siege. We see enemies everywhere, and are constantly on the lookout for those who would destroy our way of life.

### The Autonomist Alliance

Adhering to a policy of keeping your enemies close, our official stance towards the Titanian Commonwealth is one of cautious détente. We have received an official embassy from them, and sent our own, but relations are anything but cordial. The Security Council views the Titanians as the foremost threat to the Republic. They believe that the Titanians have the right combination of proximity, technology, and ideology to pose a serious problem for us if they were ever to make a concerted move. Therefore, the vast preponderance of our covert and intelligence capabilities are focused on understanding and undermining the Titanians. I very much fear, however, that the Security Council will never fully understand what it is they are up against. To us, the Titanians are a threat to our very way of life, a cosmic threat to the order of the universe, and the closest thing to the Devil most Jovians are ever likely to encounter unless the TITANs come again. But to the Titanians? We're a minor irritant. A backwards collection of throwbacks barely managing to keep ourselves alive in a universe that doesn't care one way or another about us. We barely register, and when we do it's not because they're afraid of us, it's because they worry about our people and want to help. Offers of assistance are regarded with suspicion, however; most Titanian aid is either destroyed or warehoused until the proper military authorities can go over it and make sure it's clean. That, in a nutshell, captures so many of the

problems with the Republic. Even those who would be potential friends we make into enemies, cannibalizing our own well-being to feed our twisted paranoia.

The Security Council has mixed thoughts on the other autonomist factions. Given the degree of propaganda about them, you would think that the autonomists are on the brink of bringing down the Republic, that their operatives had wormed their way into nearly every nook and cranny of our society, that they were killing thousands each week and corrupting our youth into wild-eyed radicals. That's the thing with propaganda, it doesn't have to be particularly truthful, it just needs to get people riled up and worried about the things you want them worried about. The Security Council is very much interested in keeping the Jovian population from being attracted to autonomist ideals, anti-authoritarianism, and the idea of public access to nanofabrication. Countering autonomist memes is one of the main operations of the SCI. Some aspects of the Council are also seriously concerned about the potential for super-empowering and self-replicating technological threats emerging from unregulated anarchist labs. The idea that anyone can create a biowar plague, seed AI, or nanovirus without oversight is simply terrifying to our mindset.

On the other hand, a significant portion of the Security Council feels the anarchist threat will take care of itself, one way or another. For a decade now various policy groups have been predicting the collapse of the alliance, widespread defections from autonomist habitats, or a civil war between anarchist factions. Keeping in mind that few Jovians have ever met an anarchist or visited any of their habitats—or, for that matter, even have a solid grasp on how the various autonomist factions operate—I find these speculations highly improbable.

## The Inner System Powers

As the most widespread polity in the solar system, and given the ideological differences, the Planetary Consortium is treated as a serious rival. While we may consider the Consortium an enemy, my understanding is that they do not hold us in the same regard. Like the Commonwealth, the Consortium has official diplomatic representation on Liberty. Unlike the Commonwealth, the Consortium embassy makes great efforts at wooing top government officials. For the Consortium, we are the source of much lost revenue in the taxes and tariffs we levy on their ships and in our interdiction of Europa and the profitable research located there.

For now, the Consortium is all sweetness and honey, trying to sell us CBEAT-approved technologies that we could use to strengthen our position in exchange for preferential trade status and a reduction in the fees we levy. The Security Council sees right through this and knows that the only real advantage we have is our strategic position and the money it allows us to shake out of the much wealthier Consortium. We also know that Consortium threats to use force ring hollow; they lack the resources to launch a serious attack. For now, they grind their teeth and bow and scrape and hope they'll be able to sweet talk us into a slight reduction while we bleed them dry and take what we want, when we want, from their ships as a reminder of who really calls the shots in our relationship.

## Criminal Interests

Even in the Republic, we have our share of criminal malcontents. The senators like to pretend that this is a problem primarily for civilians, fueled by the fact that most serious criminal offenses will get a citizen stripped of citizenship. We still have quite a few citizens with shady ties, however, who somehow manage to keep their records clean but show up as regular persons of interest in CDC investigations.

The biggest cut for the organized criminal syndicates is in contraband tech. Even though we don't allow it, that doesn't stop people with the money or the connections from wanting things that will make them live longer, be healthier, or let them forget their worries for a while. Most of the criminal activity is run through a handful of local gangs, most of whom were involved with drugs back on Earth, and some with connections to inner system cartels and Extropian smugglers. Some gangs also run more standard protection and racketeering scams among the civilians.

## Jovian Anarchist Cells

This group of anarchist freedom fighters is considered the biggest internal threat to the Republic. Rumors persist about their sources of funding, gear, and training—almost all of them pointing back at various Autonomist Alliance interests. Branded domestic terrorists by the government, they are reviled by the majority bioconservative population since their operatives tend to target military, state, and religious institutions. With the exception of military targets, whom they regard as fair game given a declared state of war, the JAC tries to avoid civilian and citizen casualties by sending warnings ahead of bombings. They lost a significant portion of their popular support, however, when some of their bomb attacks resulted in dozens of permanent deaths. The cells claim in two of these instances that they issued warnings that the CDC deliberately did not pass on, and state that the others were false flag operations conducted to further discredit their cause.

Rumors put the number of active JAC members at no more than four or five dozen, but the support they have in terms of advanced technology means they are able to project a disproportionate amount of force. In the past, they have attempted to use this technological advantage to bolster their standing amongst the civilian population by providing maker access to many poorer Jovians. However, by order of the senate three years back, anyone found in possession of an unlicensed maker can now be charged with treason and executed. As a result, the already paltry support the JAC enjoyed has been whittled away.

### The Spear of Longinus

A recent concern for the CDC, the Spear of Longinus is a vigilante group that claims the senate and the governors don't do enough to protect the Republic from immoral influences, especially among the civilians. They have begun to take more direct measures to address these failings. Specifically, they point to sources of corruption such as families without any members in active military service, neighborhoods and residences where known biomodificationists live, or where suspected transhumanist sympathizers live. Additionally, they have targeted labs and biomedical research facilities that use shackled AI and licensed advanced nanotech in their experiments. Until recently, they contented themselves with night-time beatings and vandalism, but recently they attacked a research lab in Amalthea and killed four research assistants. Unfortunately for the CDC, many Jovians see the Spear as patriotic and faithful members of the Republic; few are willing to assist in their apprehension.

## Jovian Moons and Habitats

The Republic claims direct control over dozens of habitats, the majority of which can be found in or around Ganymede, Io, and the moonlets and rings close to Jupiter itself. On Europa, Callisto and elsewhere in the system, independent habitats still thrive.

### Amalthea (Solano)

Considered the nicest of the Reagan cylinders, Amalthea is a focal point for Security Council R&D. CBEAT, RAND Corporation, and numerous defense contracting corporations and think tanks are headquartered here. Given the nature of the work done here and the prestige of many of its residents, security on Amalthea is even stricter than usual and civilians and non-persons are rarely allowed. Nevertheless, Amalthea has suffered a string of terrorist attacks over the past few years, putting significant pressure on the current governor.

### Ganymede

The largest moon in the solar system, Ganymede is bigger than the planet Mercury. It is tidally locked, with one side facing Jupiter. It is the most heavily colonized body in Jovian space; all of its colonies are either part of the Republic or under its protection.

### The Castle

Officially the repository of all important statistical and economic data archived in the Republic, it is a poorly concealed secret that the Castle acts as the central collection and analysis point for Security Council Intelligence. All mesh traffic, surveillance systems, habitat security data, and media feeds are channeled here to be analyzed, classified, censored, and filed away for future use. The Castle itself is something of a throwback since they eschew AI-driven data analysis programs. In fact, the bulk of the work is conducted by actual human analysts. In orbit around Ganymede, security at the Castle is among the strictest in Jovian space; only a single dedicated shuttle ferry from Liberty Station is allowed to approach the station through the rings of defensive killsats. These shuttle rides are a nightmare of security protocols, with the average trip taking up to eight hours, with only two hours of transit time, due to numerous screenings, scans and interviews of each and every passenger.

### Liberty

Liberty is a habitat in two parts. Liberty City, on the surface of Ganymede, and Liberty Station, built into an asteroid in geosynchronous orbit above. Prior to the Fall, construction had begun on a space elevator to connect the two, but after witnessing the fate of the space elevators on Earth the Republic decided to halt construction and convert the materials already invested into further ship building.

Liberty City is buried a quarter of a klick under the surface of Ganymede, to better shield it both from the inhospitable conditions on the icy surface and the harsh radiation of Jupiter. A series of massive warrens carved into the moon's icy mantle houses the main urban areas of the colony, surrounded by kilometers of tunnels and smaller chambers. It connects to the surface via a series of vents, elevators, and a well-used shuttle launch corridor hacked out of the moon's crust. Numerous recreational armored dome parks dot the surface.

The capital of the Republic, Liberty City is home to the senate, and the center for most major industries and interest groups who hope to have a say in the running of the Republic. Numerous massive underground factories and farms produce material goods and food for the populace in addition to military gear such as exoskeletons and armaments. The city is also home to some of the Republic's largest and most crime-ridden slums, pushed far out of sight in the remote tunnels and warrens.

Liberty Station floats in orbit above the city like a giant mutated spider shedding fleas. Kilometers of shipyard spars jut from the central asteroid where the actual station itself is housed. In addition to the dozens of ships being built or refitted, there is usually an estimated quarter of the total Space Force fleet present at the station or within a few hours' distance at any given time. Liberty Station security is entirely under the Space Force's authority; the CDC has no jurisdiction here.

Traffic between the surface and the station, as well as other points in the Jupiter system, is one of the busiest in the entire solar system in terms of overall craft. Liberty Space Control prides itself on the high level of skill and low level of automation that goes into making it all run smoothly.

### The Holy See

The habitat purchased by the Roman Catholic Church In Exile to establish their New Vatican is a large asteroid towed into orbit around Ganymede. Using a design similar to other Reagan cylinders but with vastly improved internal life support, the Holy See is

not very impressive on the outside but is one of the most opulent Jovian habitats to view from the inside. Nearly as much a museum as the headquarters for a state in exile, the Church has been very successful in recovering or rescuing a number of historical artifacts, most of which have made their way to the New Vatican for display and preservation. The habitat is a major site for pilgrims to visit from around the solar system. Though established as an independent station, the Holy See is considered a protectorate of the Republic.

## Io

Io's hazardous, volcanic, irradiated surface is less than ideal for regular settlements. It is, however, home to several key research installations, the Space Force's orbital antimatter factory, and the maximum security Maui Patera Rehabilitation Center, the prison housing the Junta's most severe criminals and political dissidents. One of the most heavily fortified facilities away from Ganymede, the worst of the Junta's political prisoners are shuttled here and forced to process volcanic byproducts in incredibly dangerous conditions. The famed dissident Aleksandr Denisovich spent eight years inside Maui Patera and his exposé, the *Ionian Labors,* discredited almost all of the Jovian propaganda about the facility. To this day, the Jovian Republic consider him one of the most wanted men in the solar system. He is presumed to be in hiding in the outer system.

## Callisto

One of the most heavily cratered object in the solar system, Callisto is a rocky, barren haven, far from the heart of the Jovian Republic. The furthest of the Galilean satellites and the one subject to the least amount of radiation, Callisto is dotted with city-states on and beneath the surface. While all are under the ostensible protection of the Jovian Republic, some are embraced by the Junta and others are considered a perpetual thorn in their side. The largest of these, Hyoden, is seen as an up-and-coming challenger to the Jovian stranglehold on Jupiter and its moons, while the leaders of another, Gerðr, fight for the hearts and minds of its people.

### Hyoden

Hyoden's population of about two million people was barely a hundredth of that ten years ago, as the station was stricken with labor shortages and poor supply lines from the inner system. Then the Fall occurred, and refugees that found a hostile reception in the inner system sought refuge in Jovian space. Not all of the refugees found the newly founded Republic's ideology appealing; Hyoden welcomed these exiles with open arms, if not open hearts. Hyoden, formerly a humble research outpost formed by an alliance of Pacific Rim nations, was transformed into a sprawling metropolis almost overnight. Hyoden was blessed with native raw materials and the industrial base to utilize it, and many of the refugees that arrived as infomorphs were placed in synthetic morphs as soon as they were able, on the condition that they perform a three-year military service. Hyoden's leadership remained one of the few city-states to refuse the Republic's overtures and offers of protection. Fears of forced annexation pushed the Hyoden Settlement and Trade Committee to increasingly militarize their society and adopt a defensive posture toward the Republic.

Today, Hyoden is an independent and cosmopolitan transitional economy outpost of transhumanism. Aside from Europa, it is one of the few places to find uplifts, AGIs, and autonomists in the otherwise bioconservative Jovian system. Under Hyoden's new social order, all citizens (either those reaching the age of majority or those successfully applying for citizenship) are obligated to perform a six-year military term before earning the right to legally fork or have offspring. This means that almost every citizen is fully trained in combat procedures and remains armed well after their obligatory term of service expires. All citizens not in the active military are assigned a militia based on the residential district in which they live. In the event that the Junta chooses to adopt an aggressive approach, Hyoden is ready. The city itself is studded with anti-air and anti-space weaponry, and clusters of missile silos around the city imply, if not explicitly state, that Hyoden is ready to use interlunar weaponry if need be. Should the Jovian Republic come to the colony's doorstep, Hyoden's own military creation, the fenrir morph, stands guard. A multi-ego morph that is akin to a tank, the fenrir hosts a devastating array of weaponry and can easily take on multiple opponents at once.

### Gerðr

Gerðr, a prosperous city-state in and below the central impact pit of the Tindr crater, is a model of the Jovian Republic protectorate. It pays taxes regularly, obeys all Jovian laws (even the ones that nobody else does), and professes to share the same ideology. The meager industrial takings from the myriad mines below the surface are shuttled to the Jovian Republic's collectors on time, every time. The Jovian Republic's CDC and SCI secret police stalk through the streets of Gerðr

## Operation Vulture

**To:** <Firewall Proxy Node 4378949998>
**From:** <encrypted>

I've just stumbled across a disturbing Security Council operation that appears to outline a Republic assault on Hyoden. It is no secret that many in the council viewed Hyoden's transhuman presence as representing the wrong kind of message for other habitats on Callisto and in the Jovian region that are independent-minded. They believe it is time to bring the colony firmly under Republic control. The plan calls for numerous commando teams to infiltrate Hyoden over a matter of months, putting themselves in place to neutralize the station's defensive and egocasting capabilities in conjunction with a Space Force assault.

The worrying thing is, there's no indication whether this is just a potential plan drawn up for contingency reasons or whether the operation is already underway. There may be Jovian commandos in Hyoden as we speak. ✤

with ease, ferreting out spies and meme-traitors. The Gerðr Central Planning Council, elected by the people of Gerðr and endorsed by the Jovian Republic, are puppet rulers passing on the words of the Jovian leadership. Gerðr is a model of Jovian hegemony.

Not for much longer, perhaps. If the current news is to be believed, the current Planning Council has had a change of heart, given long observation of their neighbors in Hyoden. Documents recently posted to Mesh Leaks indicate that the Planning Council has been secretly debating and putting into place a plan to get the Jovian Republic off their backs once and for all. Though possibly faked, the rumors are now flying, and sources indicate the Security Council has launched an investigation. The leaked accounts raise more questions than they answer, as Gerðr doesn't appear to have the industrial or military infrastructure to engage the Republic directly, nor is it clear that the population is entirely willing to go along with such a plan. Accusations are already flying that the Planning Council is in league with the Hyoden Settlement and Trade Committee or that they are secretly agents for some other power such as the Titanians.

Tensions are rapidly brewing, and it is unclear how the situation will resolve. While a segment of the colony certainly remains in support of the Republic and now calls for the Planning Council to be recalled, there are many other people in Gerðr who are scared, terrified that their neighbor, their brother, or their lover is a Jovian spy, and that the only thing between them and a midnight abduction and an eventual stay at the lovely Maui Patera Rehabilitation Center is silence. Years of repression have taken their toll. The leaked documents may be the spark that lets the fires of revolution flicker into life.

## EUROPA

**Posted by:** Gillie Bahasa,
Europan Researcher <Info Msg Rep>

The smallest of the four Galilean moons, slightly smaller than Luna, the dirty white marble that is Europa has been an object of fascination for centuries. Flitting around Jupiter in a relatively brief three and a half Earth days. Europa, like Ganymede and Io, is tidally locked, meaning that a single hemisphere faces Jupiter at all times.

In frigid juxtaposition to its inner neighbor, Io, Europa boasts an ice crust ranging from ten to thirty kilometers thick. Pockets of liquid water lie trapped within the ice. Below this lies a massive saltwater ocean, over 100 kilometers deep, holding over twice the volume of water as Earth. Europa's global ocean is cold (water temperatures range from 5 to 15 C) and devoid of sunlight. With the massive layer of ice crushing down upon it, the pressures in this ocean are intense, despite the moon's low gravity. Even near the surface, the pressure is equivalent to Earth's deep ocean trenches; at the sea floor itself, hydrostatic pressure ranges from 2,000 to 2,500 atmospheres.

### LIFTING THE VEIL

Early exploration missions used melter probes to bore through the ice to reach the (then theorized) salt ocean below. These probes were designed to send out remote vehicles for aquatic exploration below the moon's surface. The first probes sent back nothing but images of a massive, lightless ocean, punctuated only by an occasional "snowfall" of heavy salt-laden ice particles from the inner surface. Those commanding these first missions assumed that the most promising location for non-Earth life was sterile. They were wrong.

Over the course of billions of years, life had indeed flourished in the dark depths of Europa's subcrustal ocean, but it was unlike anything transhumanity had ever experienced. The orders of life present here vary greatly in their life cycles and physiology from those on Earth, but are broadly analogous to bacteria, protozoans, fungi, and animals. The ecological niches occupied by plants on Earth are filled by a combination of fungi and lithoderms (coral and sponge analogs). Microscopic lithoderms, analogous to Earth's coral species, had formed vast mountains and forests of Europan coral throughout the depths. These lithoderms in turn acted as hosts for a form of lichen that grew on the lower reaches of the coral stacks towards the ocean floor. Many of the animal-analog fish have an immature stage in which they resemble fungi before metamorphosing into free-swimming adults. One such is the bolatee, a five-meter long schooling creature that grazes on tiny microkrill with branching masses of tendrils that resemble roots or jellyfish tentacles. While large, mobile, and exhibiting some animal-like behaviors, the bolatee has a rudimentary nervous system and reproduces with spores. Other notable creatures include the hive-building barrister fish and the voracious mazimus, a 5-meter long viperfish-analog predator capable of attaining swimming speeds in excess of 55 kph and biting through plate steel up to 2 centimeters thick.

The first transhuman to personally visit the ocean below the surface of Europa was Dr. Penelope Tarrison, a biological oceanographer from the Woods Hole Oceanographic Institute. Her initial descent occurred in a custom synthmorph designed to withstand aquatic pressures far greater than any experienced on Earth. During a later incursion, she descended to the very ocean "floor," a dense slush of water ice punctuated by thermal vents and the towering edifices of endolith coral. There, she encountered what is thought to be the largest Europan life form, the *europus tarrisoni*—the Europan leviathan. A sleek, streamlined creature twenty meters in length akin to a vampire squid, it fills the same role as Earth's whales, screening microscopic and small macroscopic organisms from the ocean for food.

### LIVING BENEATH THE ICE

Europa's transhuman population of 1.5 million lives below the ice, safe from Jupiter's deadly radiation bombardment. The majority of Europa's population

lives in bubble warrens, huge spherical excavations in the lower depths of the ice crust. Many of these bubble warrens have populations that have outgrown their original infrastructure and are now considered a sort of "old world" compared to the newer "icicle" habitats, huge protrusions of ice jutting from the crust into the cold ocean below. These icicles are hollowed out, often with an accessway to the surface, powered with fusion reactors or large wave turbines that harness Europa's internal convection, and then transformed into living spaces, laboratories, farms, communal areas, entertainment districts, and more. Icicle habitats offer residents spectacular views out into the Europan ocean's upper reaches, with the habitat lighting illuminating the ocean and the ice sheet directly above. Other habitats are completely synthetic and rugged enough to withstand anything the Europan ocean can throw at them. These "fishhook" habitats are named for the way they are tethered with heavy cables to the inner surface and deployed into the lightless depths like a hook on a fishing line.

Most Europan habitats are split between areas that are pressurized for traditional air-breathing operations and water-filled compartments pressurized to match the depth of the habitat. Biomorphs on Europa come in many flavors, but the most common are aquanauts that have been adapted to Europan pressures and can transition between the two habitat types without too much difficulty. Other common anthroform morphs are the selkie and mustelid, containing heavy splices of seal and sea otter traits, respectively. Europan dolphin and orca morphs, with their numerous modifications, are also popular, though more limited. Features common to all Europan morphs include fins or flukes, gills or oxygenating respiratory fauna, enhanced digestive systems, adaptability to immense pressure, and resistance to dive-related hazards such as the bends.

Transhumans that really prefer the freedom and mobility to explore the Europan depths, however, opt for cetus synthmorphs, capable of handling the extreme depths and frigid temperatures with ease. Deeper habitats are almost entirely hydrohabitats, pressurized at the same level as the surrounding ocean. These deep habitats are generally mobile research installations, studying the ocean's icy bottom. Only a fraction of Europa's ocean floor has been mapped.

The primary food producers for Europa are the barnacle-like fishing and farming havens that cluster around the very tops of the lithodermic reefs that characterize Europa's ocean. These barnacle habitats are prefabricated in the larger Conamara or Pwyll warrens and are assembled in place on the target reef. Europan dishes are culturally similar to Japanese, but with a distinct and unique flavor all their own. The Europan razor eel is considered a delicacy in places as far away as the Venusian aerostats, and the failure to culture the razor eel outside the Europan oceans has driven demand for the oily fish.

Perceptive visitors to the moon will notice a scattering of small geodesic dome habitats on the outer surface of Europa. The majority of these are the futile attempt by the Jovian Republic to establish a presence here, and many have been abandoned due to poor radiation shielding, lack of resupply, or both. The largest surface facilities, and the ones that get noticed, are the elevator heads at Conamara Chaos and further south at the Pwyll crater.

## EUROPAN CULTURE

Prior to the Fall, a small group of polar scientists and oceanographers—mainly from Russia, Japan, Peru, and Indonesia—were



## GREEK WHISPERS





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Word in Conamara is that some morph hacker has developed an aquatic synthmorph that's good for both the deep dives and the upper ocean. She's only made a handful of them, and they're apparently gorgeous—real works of art. The creator of these things is calling them nereids, after the water sprites of Greek mythology. Each morph is named after a specific nereid. They're highly sought after, especially by those folks who'd want to move about the ocean unnoticed. Nobody knows how to find the creator, though, or how to get one of these babies. Be worth a hell of a lot on the open market, that's for sure. ♣

the first to establish a permanent presence on Europa at the site of the Conamara elevator head. Colonization was encouraged by the governments of those nations as a way of relieving internal population pressures and making their mark on the solar system. After the Fall, Europa took in a number of infugees and refugees, transforming the moon into a melting pot of cultures.

Most Europan citizens are either directly involved in or know someone involved in ocean sciences. Since the Fall, watery moons like Europa (and to a lesser extent, Ceres and Enceladus) have been the only locations in the solar system where oceanography is practiced. The vast majority of oceanographers that accompany gatecrashing missions were either Earth-educated or educated at a Europan institution of higher learning. Europans pride themselves on their schooling and reject the Jovian notion that only a privileged few should receive the full benefits of a higher education. All Europans are strongly encouraged to enter an institution of higher learning at the age of majority; collegiate and graduate studies are socialized and free.

The most popular sport on Europa is a form of aquatic orienteering in which participants must navigate their way through an increasingly difficult course plotted out amongst the lithodermic reefs. There are different morph classes, with the most popular and most widely televised, being the octomorph class. The most successful aquatic orienteers have gone on to prominent media positions in Europan society and politics. Amongst those who reside in air-breathing habitats, ice hockey is still very popular. The Europan Hockey League, once a minor hockey organization, is the largest ice hockey league in the solar system.

The Europan people do not live in fear of the Jovian Republic, a fact that irritates the Jovian leadership to no end. A number of terrorist acts during the last parliamentary election, seemingly designed to disrupt the voting process, had the reverse effect and instead steeled the resolve of the Europans to stand up to the Jovian Republic. In this regard, they are journeying down the path already taken by the city-state of Hyoden on Callisto.

### THE EUROPAN PARLIAMENT

Europa is a parliamentary democracy independent of the Jovian Republic, contrary to what the Jovians would have people believe. The Europan Parliament is a multi-party unicameral parliament elected every four years by all registered Europan transhumans over the age of 17. The 120-seat Parliament is based in the Conamara habitat, the capital of the Europan state. Seven political parties have elected officials in the Europan Parliament, with a number of these parties allied with city-states of similar ideology on Callisto.

### CONAMARA CHAOS

The Conamara Chaos elevator head, situated in the center of the jumbled terrain that bears its name, is the largest surface facility on Europa. It is controlled directly by the Europan Defense Forces under the authority of the Europan Parliament. Through the Conamara Chaos elevator head, reactor mass, industrial supplies and other vital goods and equipment are

## JOIN THE PARTY!

The seven Europan political parties are scattered across the political spectrum, but by its very nature as an independent transhuman entity in the shadow of the Jovian Republic, the Europan definition of "conservative" is skewed more to the left than in most places; those that identify with the Junta either relocate to the Republic or take up positions in permanent opposition within the Free Europa Bloc. It should be noted that the Mercurials that caucus with the Blue Bloc are not a single party, but rather a number of independent parliamentarians with a pro-mercurial ideology. The Open Party does not caucus with any bloc, but chooses to vote with the Blue Bloc on nearly all occasions.

### THE BLUE BLOC (78 SEATS)

**Parti Europa:** +Europan sovereignty +Technoprogressivism +Social welfare; 37 seats
**Solidarity:** +Workers' rights +Uplift rights +Socialism; 23 seats
**Mercurials:** +Morphological freedom +Uplift rights +AGI rights; 6 seats

### FREE EUROPA BLOC (30 SEATS)

**Prosperity:** +Free Market +Hypercapitalism +Libertarianism; 19 seats
**Common Ground:** +Militarism +Self-defense +Bioconservatism; 11 seats
**Jovian Unity Party:** +Jovian Republic +Fascism –Europan sovereignty; 4 seats

### INDEPENDENT (12 SEATS)

**Open Party:** +Anarchism +Technoprogressivism –Jovian Republic; 12 seats ■

shuttled to the ocean below via the Conamara habitat on the inner surface. The Jovian Republic levies taxes on all shipments approaching Europa and has occasionally imposed an interdiction when they claim the taxes have not been paid in full—a situation the Europan Parliament has labeled a "protection racket."

### Pwyll

The Pwyll crater is another elevator facility much like Conamara Chaos in the sense that the EDF controls it, but it does not punch directly through the ice. Rather, it descends about halfway, and then branches hundreds of kilometers through the ice in a fractal pattern. These tunnels are used to distribute much needed supplies to a number of icicle habitats in the area. Recent shifts in the ice crust around the Pwyll crater have seen a number of habitats cut off from the traditional surface-to-ocean supply route; these have had to be supplied by aquatic means. A trio of icicle habitats, nicknamed the Norns, are clustered directly below the Pwyll crater and are the focal point for many of the exploration efforts to map the Europan sea floor. A recent spate of deep sea vessel disappearances and deep hydrohab "incidents" has raised security concerns.

## The Court of Zeus

**Posted by:** Tio Silencio,
Firewall Proxy <Info Msg Rep>

Over fifty irregular moons are found beyond the inner eight moons of Jupiter, most no more than a few barren kilometers across. Some of them, however, have become home for a number of transhumans or are interesting in their own regard. Many of these are collected into groups with the same orbital characteristics (much like asteroid families).

### Aoede

A four-kilometer chunk of rock in the Pasiphaë group, Aoede is entirely unremarkable save for a weak radio signal emitted from the moonlet. Unpopulated since the Fall, access to Aoede has been restricted by the Jovian Republic and is enforced by a small group of tethered mini-killsats. Every time the moonlet emerges from Jupiter's massive magnetotail, the frequency and content of the signal has changed. Recent transmissions include a part transcription of Shakespeare's *As You Like It,* an elderly man's voice reading the 1989 Skokie, IL telephone book, and the audio from the Golden Record of *Voyager 1,* played in reverse at half speed. Whether this is of transhuman origin, of TITAN design, or something else entirely is known only to the Jovian Republic, and they're not telling.

### Aitne, Kale, and Taygete

This trio of moonlets, part of the Carme group, orbit Jupiter in roughly the same time, and comprise the Carme Compact, a micro-commonwealth in the shadow of the Jovian Republic. Between the three moons, the Compact has a population of about 8,000 transhumans, most of them synthmorphs and infomorphs. The small number of biological transhumans in the Compact live below the surface of the moonlets in small, cramped living spaces. The Carme Compact prides itself for riding out the Fall relatively intact and has been an annoyance to the Jovian Republic for some time. The truth of the matter is, though, that the Compact is simply not worth the effort and energy it would take to remove them from the Junta's sphere of influence, so The Republic allows it to exist.

### Callirrhoe

Callirrhoe, also part of the Pasiphaë group, is an 8.5-kilometer-long moonlet that features a relatively new dome habitat at one end. The residents of this habitat are primarily conservative political refugees from Callisto and Europa, having eschewed those relatively transhuman-friendly moons for an isolated settlement where they could better embrace the bioconservative ideologies of their new benefactors in the Jovian Republic.

### Carpo

Carpo is one of the few moons of Jupiter that is in its own group. This irregular moonlet is only about 3 kilometers in diameter, yet hosts a population of around 17,000 transhumans; over 98% of that number are infomorphs and the remainder synthmorphs. The Carpo infomorphs reside in a simulspace designed and managed by an infomorph calling himself Da5id. The simulspace itself is an alternate historical America, in which transhuman ethics and morality are being applied to 1800s sensibilities. Admission is very strict and seemingly completely arbitrary.

### Euanthe

Euanthe, a potato-shaped moonlet about three kilometers end to end, resides in the Ananke group and as such is tightly regulated by the Jovian Republic. While not part of the Republic itself, Euanthe acts as a toll collector for the Republic in this part of Jupiter's orbit, and in exchange the Republic allows Euanthe to remain nominally independent. As such the population of Euanthe (around 2,000) is relatively prosperous and clings closely to Republic ideology.

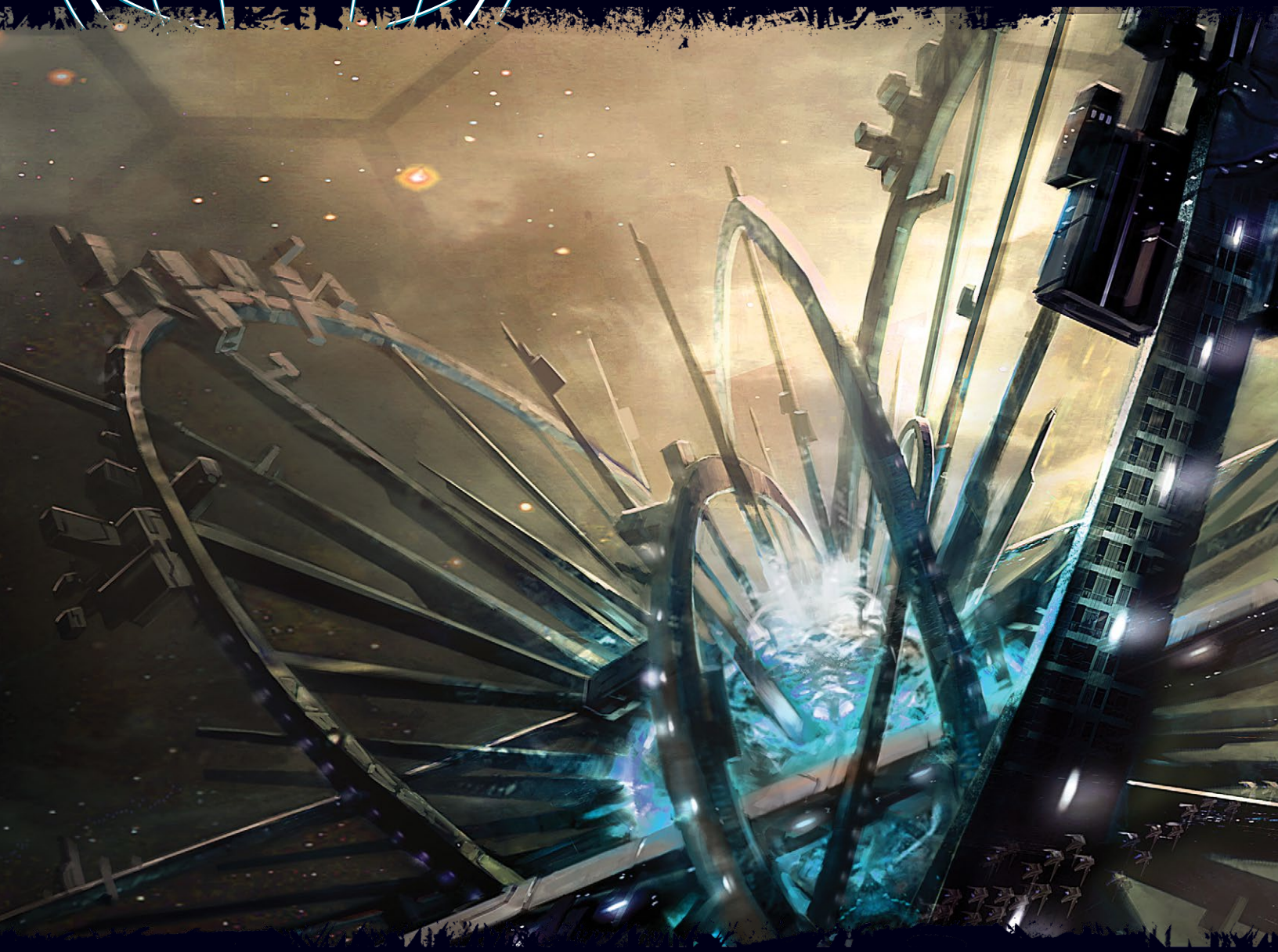
### Helike

Helike, a moonlet also in the Ananke group, is an abandoned Reagan cylinder about four kilometers end to end. Shortly after the Fall, a number of powerful Jovian Republic officials fled here with certain unknown items of value, believing the Helike habitat was safe from TITAN activity. Once the group had secured the station from the baffled residents, the entire station decompressed, exposing those inside to open vacuum. Rumors abound as to the cause of the incident and the alleged nature of the items the officials were carrying. It is worth noting that the officials all shared a similar ideology within the Republic's decidedly narrow worldview; a political power-play is one of the more popular theories.

## LAGRANGIAN TRANSPORT NETWORK

This project is attempting to map reliable low-power pathways through the Trojans. ■ p. 55

# 4 JOVIAN TROJANS



## ORGANIZATIONS AND CRIME

Non-anarchist organizations operate within the Trojans, of course … along with outright criminal ones. ■ p. 64

## LOCUS

The largest cluster habitat ever created by transhumanity.

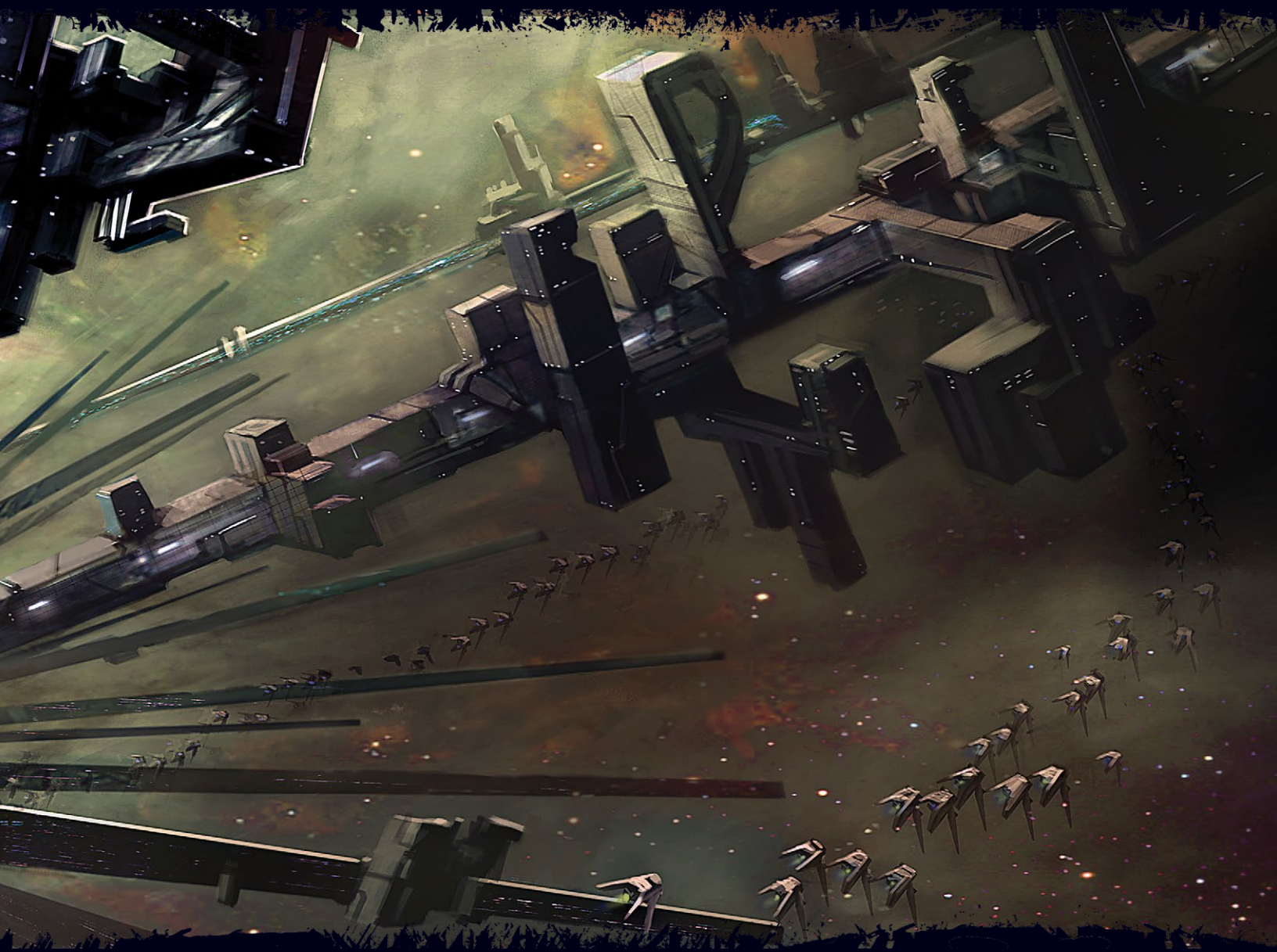
**Navigating:** Getting around Locus can be confusing for a first-time visitor. ■ p. 59

**Boister's Armory:** This hab is a research hub for weaponry and anti-TITAN tech. ■ p. 59

**The Pill Box:** The Freeq Collective operates this experimental drug lab. ■ p. 60

**Teilhard Liu:** Author of *Doctrines* and the key to Locus's mutual defense pact with the Titanians. ■ p. 61

**Ana Durruti:** This militia organizer has an antagonistic relationship with Firewall. ■ p. 60



# JOVIAN TROJANS




## IMMORTALITY AND THE N-BODY PROBLEM

**Posted by:**

Hohmann Kontakt, Sentinel <Info Msg Rep>

Ask a school kid on Mars to program you a simulation of Jupiter's Trojans, and they'll dutifully draw you up a big ellipse with the sun at its center, Jupiter at 90 degrees, and long, tapering blobs of asteroids scattered around the L4 and L5 points at 30 and 150 degrees. Long, tapering, *static* blobs. Thanks, Martian educational system! Our continued autonomy out rimward relies in part on your children sucking at orbital mechanics.

Now let's get accurate.

Choose any of the million asteroids in the great swarms preceding and trailing Jupiter along its orbit. Call it a point mass, $m_0$, among a cloud of hundreds of thousands of other point masses, $m_1$–$m_n$. Starting from where they are in three-dimensional space when you begin your calculation, and also taking into account linear momentum, angular momentum, and gravitational energy, calculate where each of those masses will be a year from now. Ten years from now. 100 years from now.

You can't.

Oh, we've tried, and one gets some interesting results looking at the problem in a general way or for a few specific asteroids. But collisions, sometimes between two asteroids, sometimes between three or more, create mathematical singularities beyond which the results can't be generalized. Asteroids librate, slowly changing positions relative to the stable centers of the L4 and L5 points. Sometimes they even form horseshoe orbits that move them, over hundreds of years, from the Trojans to the Greeks and back. Numbers become transcendent; integrating the bodies' combined positions becomes impossible. A few of the weirder AGIs I've met claim to have seen the big picture; I say they are nuts. "Always in motion is the future. Difficult to predict."

As with asteroids, so with transhumanity. Back in the age of mortality, a human body didn't have much time to go beyond the calculable. Even on Mars today, a rather dull set of parameters constrains the differential equation yielding a transhuman ego's fortunes in life, the integration of its position relative to other transhumans.

Out here in the Trojans, though, transhuman experience flips the bird to the standard predictive models. We have a duration potentially as long as the asteroids themselves, as well as a tricksy capacity to avoid collisions that even those big, immortal space rocks lack. We dodge singularities. We trace tadpole orbits. We range beyond the calculable.

## REGIONS, NEIGHORHOODS, AND LOCAL CULTURES

First, a quick geography lesson (in case you got your schoolin' on Mars). The swarm of asteroids preceding Jupiter in its orbit at the L4 point is the Greeks. Trailing Jupiter at the L5 point are the Trojans. The Martian school kid's approximation of this set up gives you the basic shape of the swarms. Each spans about twenty-six degrees of Jupiter's orbit, meaning that end to end, each swarm is almost two and a half times the distance from the Earth to the sun in length (2.3 AU) and a bit more than half the Earth-sun distance thick (.6 AU) at its center.

Despite the large area, the mass contained within each is only one ten-thousandth of an Earth mass—far less than the mass in the Main Belt. For all their richness in terms of supporting transhuman life, the Trojans are mostly empty.

Aside from librating around the L4 and L5 points, a lot of Trojan objects also have steep inclinations from the plane of the ecliptic. If you look at the plane of Jupiter's orbit around the sun edge on and then make a cross section of it including both the L4 and L5 points, the swarms look like two pairs of parentheses enclosing the hyphen that is Jupiter's orbit.

As I said earlier, the positions of individual asteroids over the long run (and even in the near term, in some cases) are hard to predict. However, inhabited Trojan objects, or at least those whose inhabitants don't mind being found, all boast navigational beacons. A ship headed from the inner system to the Greeks might not know exactly where its destination rock will be when it gets there, but the ship can track the asteroid and burn mass to correct its course. By making themselves trackable, known settlements can form stable trade and cultural networks.

### NEIGHBORHOODS

Where settlements cluster close enough together that regular, physical commerce can take place and lag times are negligible for mesh communications, they're said to comprise a neighborhood. The physical boundaries of a neighborhood are loosely defined. Usually they're blobs 250,000 to 2,000,000 kilometers across. In dense areas, neighborhoods may contain dozens of habitats, while in the dispersed areas at the edges of the asteroid swarms, a neighborhood might contain only a handful of stations. Qualities that may define neighborhoods are the languages most commonly spoken, the factions and sub-factions with the greatest

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
ONOMIST ALLIANCE
AME INFORMATION

representation among the population, and other aspects of culture.

The local cultures out here run the gamut. We have big anarcho-syndicalist mining co-ops with multi-species populations and as many languages among them as you'd find spoken in a big Lunar city. We have autonomist transportation collectives whose stock in trade runs from passengers and small, precious cargoes up to entire asteroids. We have monolingual authenticist clades like you find on Mars, mercurials of every political stripe, and even the occasional ultimates outpost.

Lurking on the fringes, we have some weird neighbors: brinker enclaves that keep completely to themselves and have any number of reasons for doing so, singularitarians and weird scientists doing their research far from where it can hurt anyone (or be discovered), and exhumans who'd just as soon eat you as look at you.

As much as these neighborhoods are bound together by microcultures, the real determiner of where settlements end up being built is as old as transhumanity: cold, hard physical resources.

### The Hildas

The Trojans and Greeks proper aren't the only asteroids whose orbits are directly influenced by Jupiter. The Hildas, a group of about 1,100 asteroids, lay just inside of Jupiter's orbit, locked in a 2:3 orbital resonance (meaning they circle the sun three times for every two orbits Jupiter and the Trojans complete). The Hildas are a lot like the Trojans: icy, rocky, sometimes carbonaceous, and poor in metals, but they're much more sparsely inhabited. The main reason for this is that they're harder to reach by ship. They're not a swarm that's coalesced around a stable gravitational point the way the Trojans are, making them costlier to reach in terms of fuel.

You hear lots of bogeyman stories about this or that asteroid in the Hildas, like the old chestnut that 153 Hilda, the asteroid after which the group is named, hosts a major base for exhuman pirates. A lot of these rumors are just loose talk, but there's some sense to it. The Hildas are definitely a good place to set up shop if you want to be left alone.

## Icebergs, Big Rocks, and Lumps of Coal

The nested roulette wheels of stellar disc accretion and planet formation bestowed upon our reach of space a little bit of everything—except metals. Okay, that's a bit of an exaggeration. Prospectors with luck and grit (usually both) do discover precious lodes of metals and other heavy elements out here from time to time. What the Trojans and Greeks do not want for are the other elements essential to transhuman sustenance and technology: water and other volatiles, carbon, and silicates.

### The Lagrangian Transport Network (LTN)

Not all of these delicious elements exist in every asteroid, and prospecting in some neighborhoods of the Trojans is difficult. Habs tend to spring up where the harvesting is good, but settling in the prime spots doesn't always work out. The autonomists, one of the dominant cultures out here, hatched their own solution to this: the LTN.

Everyone knows about the ITN, the Interplanetary Transit Network (well, just about everyone; again I omit the poor, benighted school children of Mars). The ITN is a series of gravitationally determined pathways along which an object can travel through the solar system using very little energy. It's slow, but it works. Add some energy to nudge between pathways, and it gets a lot faster.

The autonomists realized that despite the virtually unpredictable positions of Trojan objects within the L4 and L5 swarms, pathways similar to the ITN must exist within the Trojans. So they ran simulations to guestimate likely starting points for the hypothetical network. Then some autonomists who lived in richer regions of the swarms maneuvered a large number of resource-laden 500-meter asteroids to the hypothetical starting points, tagged them with transponders inviting anyone to mine them—provided the mining didn't change the rocks' trajectories—and turned them loose.

Not surprisingly, anarchists everywhere loved them for this. The architect of the project, an AGI from Locus named Outward (aka, "the anti-ComEx") now has sufficient reputation to back just about any project they could dream up. It'll take decades for Outward's experiment to prove or disprove itself, but in the meantime, no one is complaining about thousands of tons of free resources drifting through their space.

So far, the twisting path followed by asteroids along the LTN conforms pretty closely to the predictions made by Outward and others on the project. Other autonomists have begun to contribute asteroids to the LTN pathways, and a few have even taken up residence on LTN objects. Every rock following the notional LTN sports a beacon, so provided Outward and company got at least a few of the starting points right, in about 150 years we'll have a complete map of the pathways.

### Heavy Metal and Gravity

Metals are tougher to come by. A few asteroids containing heavy elements have been thrown into the LTN—almost too generous an act, if you want my opinion—but demand goes far beyond what that can provide. Beyond the occasional lucky prospector's strike, most heavy elements arrive in the Trojans from the Main Belt via either Hohmann transfer orbits or the Interplanetary Transit Network.

Luckily, Belters need water as badly as we need metal, so there's a brisk trade in whole asteroids between the Main Belt and the Trojan swarms. "And

to Mars, too?" one might ask. The answer is, "No, not so much." Mars doesn't have a lot that we want out here. Long-view preservationists have successfully made the case that trading iceteroids to Mars, just to have them splattered against the Martian ice caps for planetary warming, isn't a sustainable move for transhumanity. Let the Martians look to the Kuiper Belt if they want to push ice.

It's not obvious, but one thing the Trojans do have going for them is gravity. The Junta talk a lot about Jupiter's slingshot potential as a local resource (one they defend like a complete pack of dickheads, by the way), but you don't need a gigantic gravity well to benefit from our solar system's orbital dynamics. The Trojans and Greeks are a major waypoint on the aforementioned Interplanetary Transit Network, and this means a lot of long haul commerce comes through our space. Icepushers from the Kuipers, iron-nickel asteroids making their way even farther out system, and other bulk goods that have to move by ship all transfer via the Trojans to avoid paying a tithe to the Junta.

Unfortunately, this also creates a motive for the Jovians and the inner system powers to occasionally attempt a land grab. The Jovians don't like trade circumventing them. The hypercorps believe that once they put boosters on an asteroid or comet, they own it. Unfortunately for the corporate sphere's precious notions about property, autonomists regularly organize whaling parties—flash mobs that mine an asteroid as it passes through our space without stopping it on its trajectory. The asteroid arrives at its destination, but it arrives a bit light. Hypercorps think this is theft. Well, fuck them. They've stolen entire planets.

We've had two real wars in the Trojans, and both resulted from the Consortium and the Jovians trying to make territorial claims out here. To their credit, the Titanians have never tried to do the same—but they got involved in the second conflict, and now they won't leave. More on that later.

## OPERATING IN THE TROJANS

Planetary Consortium Oversight's briefing manual for agents coming out here (yeah, I have a copy, don't you?) tells us, "The Jovian L4 and L5 swarms present a challenging theater of operations for covert mission deployments." What they mean is that outside of the big settlements like Locus, sneaking up on anyone in the Trojans is difficult at best. You can mask a ship's presence on radar to some degree, but hiding a ship from other sensors, especially masking its infrared emissions, is almost impossible. There's so much space between Jovian objects that it's rare to find an approach path to a hab or asteroid that doesn't involve crossing tens of thousands of kilometers of cold, empty space.

Gaining access to places you're not meant to visit is often a matter of clever hacking and social engineering. I've gotten aboard target habs by replacing someone who was expected to egocast there and taking their intended morph, stowing away aboard a station's autonomous harvester drones when they went out for groceries, and spoofing the credentials of a ship that was expected to dock. Showing up in a ship capable of resurfacing its hull to foil visual inspection works well, too.

Once you have one team member in, it can turn into a waiting game. I once spent a week aboard an exhuman pirate station pretending to be someone called Gristleyknock (exhumans of the predator variety: bad at names). It involved a lot of growling. And offal. I hate offal. Eventually, I found a window of time during which I could accept egocasts of my team and sleeve them in an unguarded med bay.

Granted, I've seen a few feats of ingenuity and some downright crazy stunts result in successful physical infiltrations of isolated habitats. Firewall's raid on the *Song Cai Flower* aboard the autonomist courier *Kesyrah*—a ship equipped with powerful cold gas thrusters—is one example. In that case, though, the space station's occupants were crazed exsurgents barely capable of operating their own sensor systems.

Another Firewall team successfully executed a maneuver that was first attempted (unsuccessfully) by the ultimates in their conflict with the exhumans over the Discord Gate. They found a rock that would pass near their insertion point, hid their ship there, and then jumped. Yes: jumped. They gave themselves a push with gas packs, put themselves in medical stasis, and then spent two weeks freefalling at their target. They didn't miss the target, didn't get spotted and shot (the ultimates' fail point when they tried the same), and revived successfully in time to slow themselves down and land on the hull of the target hab. I do not recommend trying it at home.

Another major operational hazard out this-a-way is that trips to isolated habs are often a one-way ticket. It's hard to scrub a mission out here if things go wrong—so don't. In the Trojans, failure is final, at least for the present instance of your ego.

## TROJAN HABITAT TYPES

Beehives and clusters far outnumber other habitat types in the Trojans. Beehives are an obvious choice with so many asteroids around, but why build clusters instead of cylinders? The reason is that heavy metals are scarce out here. For the amount of metal needed to construct one O'Neill cylinder, you can build a dozen cluster habs with the same amount of usable space. This is because to withstand the forces continually pushing them outward, the hull of a rotating cylinder needs to be much thicker than modules in a cluster hab. At the same time, the Trojans don't live under the same threat of massive irradiation that habs in Jupiter's orbit do, so a great deal less shielding is called for.

Hab designers who need gravity either resort to small, purpose-built rotating modules within a larger cluster hab, or they go with ring or disc designs. You still don't get a sky and natural weather this way, but hey, that's what AR is for.

If you're looking for novelty in hab (and ship) designs, the Trojans are a buffet. People will try anything once, even if it means they then have to live in a flawed dwelling for a while. I've seen matrioshka habs comprising a series of nested spherical shells, clusters that were little more than well-insulated pressure tents, tiny habs made up of tin cans connected to huge arrays designed to collect power from starlight (talk about your ultimate in sustainability), and many riffs (successful to varying degrees) on the organism-like nanofabrication employed by Hamilton cylinders.

The only thing I haven't seen is another MeatHab, and you know: that's fine. The solar system only needs one.

## Nuestro Shells

For all the diversity of design in the Trojans, there's one pattern for cluster habs that dominates: the Nuestro shell, named for pioneering micrograv architect Nuestro Montez.

Several variations exist, but the basic design is roughly spheroid and comprised of rigid spars radiating out in all directions from a central point—rather like a sea urchin's spines, but symmetrical. Ring-shaped cross-hoops run between the spars, connecting them and bracing against lateral movement. The builders then encase the superstructure of spars and rings in a geodesic sphere, anchoring the inside of the sphere to the tips of the spars, further stabilizing the structure. Stretched over the interstices of the outer sphere is a strong, flexible mesh designed to protect the modules inside the hab from microasteroid impacts, while keeping objects inside the sphere from drifting out of it. The protective mesh self-heals and usually consists of a carbon fiber or polymer-based smart material.

Within a Nuestro shell, hab modules anchor to the spars (and in large habitats, to the cross-rings). Floatways usually connect the modules, although some habs have few or no floatways, requiring an EVA any time one wants to move between modules. Floatways are usually anchored to adjacent spars and cross-hoops, but in large habitats like Locus, the spars and cross-hoops themselves are hollow, allowing traffic to move inside of them.

In all but the smallest Nuestro shells, rights of way into which no module may protrude (often called "roads") run alongside spars and cross-hoops, guaranteeing clear paths for modules and vehicles moving around inside of the habitat. Local meshes normally mark these rights of way with prominent AR graphics, and speeds are restricted to 35 kph. Of course, few habitats in the Trojans have anything resembling a cop who'll give you a ticket, but people will find out who you are and trash your rep if you go tearing through the center of a cluster hab at a speed that could damage or wreck someone's hab module.

Nuestro shells often contain a few modules that are spun for gravity—usually med bays, resleeving facilities, gymnasiums, or other modules in which some gravity is useful. Gravity's handy for surgery and art, but it's also good for training soldiers. The *Kimiko Ross,* a scum barge that eventually grew into a Nuestro shell, has a kitchen in a torus at its center so that people can practice old fashioned cooking without the ingredients floating everywhere. Mayhem Zaibatsu (headquarters of the eponymous mutualist mercenary company) boasts a rotating training area of three toruses nested along the same plane of rotation. The outermost provides Venusian gravity, the middle one Martian gravity, and the innermost gravity somewhere between Lunar and Titanian. Other habs just have a small torus set up where their kids can learn how to walk.

Rotating modules are either mounted to the spars on free-hanging gimbals, so that they don't transfer angular momentum to the rest of the structure, or on fixed-output gimbals so that they actually act as gyroscopes, helping the rest of the station maintain a fixed position in space.

Individual habitats vary a lot in terms of how power and resources reach individual modules. Some have no public utility grid at all, with each module responsible for its own power, life support, and microfacturing feedstock. Others might have distributed life support but share power from a few central fusion reactors (often the case in smaller Nuestro shell habs). Big habs like Locus often have co-op utility grids, with groups of modules along a given spar or cross-hoop sharing reactors, mining drones, and even life support. This makes Nuestro shells very resistant to both environmental sepsis (because mold and other biological nuisances can only spread in a limited area) and some of the things that keep Firewall sentinels awake at night, like out of control nanoswarms.

A Nuestro shell's outer geodesic spheroid is great for keeping out micro-asteroids and other space junk, but it's not the type of structure to which you want to attach anything massive. Thus, the spars radiating from a Nuestro shell's centerpoint almost always extend somewhat beyond the hab's outer mesh skin. Some of these extensions bristle with antennae and other comm gear. Others are gantries to allow large ships to dock outside the habitat. Still others are bays from which mining drones come and go.

The Nuestro shell is common in part because it's a practical design for this region of space and in part because it scales well. Provided that a particular variation on the design accounts for the forces in play when station keeping thrusters fire, the basic design can be used for anything from a small hab for a few hundred occupants up to a huge one like Locus.

# Locus

Locus is the largest cluster hab ever created, an eleven-kilometer-wide irregular sphere with thousands of habitat modules docked to its skeleton of rings and spars. A conical cutaway with a base about 8.5 kilometers wide (1/4 of the overall circumference of the sphere) runs all the way to its center, forming a 5.5-kilometer-deep central area that is open to space and off limits to large ships. By tradition, the base of the cone is kept pointed toward Proxima Centauri, Sol's nearest interstellar neighbor.

At eleven kilometers in diameter, Locus dwarfs most other habs, all other Nuestro shells, and many nearby asteroids. Its size required some departures from the usual Nuestro shells design. Small Nuestros usually have rigid superstructures, but making a rigid frame of Locus's size capable of withstanding the stresses generated when station keeping rockets fire far exceeded the resources available. So instead, Locus's structure is more like the skeleton of a gigantic animal. Where the spars and rings making up its superstructure meet, they're joined not by metal hinges or self-healing welds, but by a much older technology: lashing. Locus's massive segments act like ligaments in the skeleton, each bone lashed together at its end points by hundreds of cables. The resulting structure always keeps its general shape, yet has enough give that forces are distributed over a wide area when firing rockets to keep station.

## The Amoeba

At Locus's heart, at the tip of the cutaway cone, floats the Amoeba, a huge, glowing sculpture that regularly reshapes itself and changes colors across the visual and other spectra. The Amoeba takes many forms, usually that of an animal. A pre-sapient AI controls its transformations, and it has its own fleet of small harvester drones that bring it reaction mass and other consumables.

The Amoeba floats freely, but it always keeps station around an imaginary origin point from which radiate Locus's arterial spars, each 5.5 kilometers long and 10 meters thick for most of their length. The spars radiate from the central origin point in 11.25° increments. Although their imaginary origin point is the Amoeba, the spars actually begin at the Shell, a 500-meter-diameter partial sphere.

## The Shell

The Shell contains a hollow, ten-meter-thick, spherical bulkhead to which the bases of the spars are lashed. The bulkhead surrounds the Amoeba, but wherever possible the designers cut holes so that from outside, along the spars, there are regular lines of sight to the Amoeba. Enclosing the bulkhead is a geodesic crystal palace of structural rods and thick, self-healing glass. The glass enclosure extends 50 meters from both the outside and inside surfaces of the bulkhead. Aside from the hollow insides of the arterial spars and rings, it's one of the few places in Locus with a publicly supported atmosphere.



From the inside, the Shell looks onto the Amoeba and the space around it; from the outside, it looks out on the vast, glittering extent of Locus, extending away in all directions along the spars. The Shell is host to a variety of free-floating plants tended by smart monkeys and is heavily trafficked at all times of day by transhumans making their way from one spar entrance to another.

## Getting Around

Out along the spars are Locus's neighborhoods. The major arterial spars—those at 45-degree increments from the station's poles—are wider and contain fast moving trams. All spars include rungs, tracks for moving large cargo in straight lines without collisions, and people movers consisting of conveyor belts recessed into the hull and covered by hundreds of smart material grab loops. A given conveyor belt will tug a person along in 100-meter stretches before its loops flow back into the belt surface, requiring that the commuter grab a belt on the next loop. Conveyors run in both directions along a spar, usually with several lanes going in each direction.

Locus's analog to a street grid is based on a spherical coordinate system. Every module in the sphere can be thought of as a set of points on the coordinate system. However, addressing modules as three-dimensional coordinates isn't very helpful for actually getting around the city. Residents usually travel along the insides of spars and rings, while the flight paths for outside traffic generally run parallel to them. Therefore (after a lot of acrimonious debate), Locus's designers named all of the arterial spars and rings.

The 0,0,0 point on the coordinate system is the Amoeba. The two spars connecting to the habitat's poles are together called Zenith Spar (or sometimes the Axis), representing 0 degrees inclination from the pole. The spar at the habitat's equator that points toward the Amoeba and is 180 degrees opposite the conical cutaway space at the center of the habitat is Azimuth Spar. Azimuth forms a 90-degree angle with Zenith. The rest of the spars are named based on their angle from Azimuth, according to a complex system using letters from the Japanese katakana alphabet.

Connecting the spars are layers of concentric rings. From the top of Zenith spar to the bottom are 52 layers of concentric rings. The center most, equatorial layer (on the same plane as Azimuth spar) has 25 rings. Like spars, rings are 10 meters in diameter, with 200 meters of clear space above, below, and between each ring. Habitat modules are allowed to extend up to 50 meters from a ring or spar, meaning that even in the most densely packed area of the hab, there's always at least 100 meters of clear space between modules docked to opposite rings. The rings are addressed based on their layer above or below Azimuth Spar.

When giving a module's location, most residents will give the closest ring-spar intersection. Of course, you can always have your mesh implants guide you wherever you need to go, but for Lokies—as Locus residents are called—knowing and using spar and ring names is a matter of civic pride. Rattling off a series of polar coordinates to anything other than a ship navigation system is a newcomer's move.

## Locations and Neighborhoods

There are a lot of interesting sights, places, and people in Locus—almost too much to cover. Here are a few places every sentinel should visit.

### Blue Pod

This unassuming boxy, blue, converted ore-freighter module is operated by Blue Pod, an art collective devoted to exploring the use of AI in artistic creation. Members include Mason Wang, a former Martian software entrepreneur turned programming artist; Brancusi, an AGI that creates art morphs inhabited by gamma forks of itself; and Letitia Barrow, Locus's most prominent suicide artist. Blue Pod is famous for the parties they throw and infamous for turning out some artwork that is disturbingly alien and creepy. Wang also keeps a private hab, Wang Industries, in the cloud around Locus.

### Boister's Armory

The Armory is a huge (750-meters long), heavily reinforced module that has been at the end of Azimuth Spar since Locus was founded, slowly moving outward each time more length has been built onto the spar. If it shoots projectiles with deadly force, explodes, eats people's faces, or destroys spaceships and small asteroids with malice, the Armory has a blueprint for it, and probably a few in stock, as well.

The Armory's main purpose, though, is research, with a focus on anti-ship drone swarms, artillery, and anti-TITAN war machine weaponry. You heard that last right; Boister himself—a rough-mannered character with a thick Boston accent and a burly crasher morph that compliments his manner—is a Firewall asset. He has proxy-level access to the Eye's communications channels, but his focus is on arming agents up, not coordinating missions. Boister has access to all of the Eye's data from the field on capabilities of TITAN war machines, and his job—at which he excels—is inventing things that can kill them.

### Kanigawa Farms

Kanigawa Farms sprawls over an entire layer of spars, spilling over into the intersecting rings as well. Over half of the modules in Locus are given over to gardening in one form or another, be it combined algae/aquaculture vats or more conventional hydroponic farms. Plants remain the best recyclers at transhumanity's disposal, so they're everywhere. Kanigawa, run by a co-op called Verdant, just happens to be the largest concentration of agricultural modules in Locus.

Lighting for greenhouses accounts for a sizable percentage of Locus's power consumption, and this slice of the habitat consumes more power than any other. The result: sweet, sweet atmosphere and high

nutrition foods. You can still find crops like maize and potatoes cultivated in small quantities, but the old heirloom strains are extremely rare. Crops like quinoa and yams account for most of the hectarage under cultivation. (Don't ask how one calculates hectarage in a hydroponic garden; the subject is best left to agronomists).

### THE PILL BOX

This 100-meter-long, lozenge-shaped module moored along Shingo Spar glows softly white from the outside. Inside, it's a massive drug lab operated by Freeq Collective (eponymous inventors of the hallucinogen freeq). Part chill space, part drug factory, part research lab, the Pill Box isn't a place to go score your fix of alpha or hither. It's where you go to experience substances you've never even heard of before, because they were invented this morning.

The core of Freeq Collective is ten transhumans of all types, ranging from narcoalgorithm-coding infomorphs to neo-primate chemists. The notorious petal artist, Rarely Neemonic, is a founding member. A rotating cast of partygoers, one-nights stands, and passed-out people clutter the module at any time, day or night cycle.

### ROOKTOWN

Rooktown is a neighborhood along Nürnberg spar, home to several hundred neo-corvids and a handful of parrots. The largest module in the neighborhood, the Parliament (never mind that neo-corvids descend from ravens, not rooks), is one of the largest modules in Locus. The Parliament is nearly 250-meters long and 400 meters in diameter, filling an entire "block" along the spar. The Parliament is built around Nürnberg spar and spun for gravity, actually using the spar itself as an axle. Locus has very few modules built in this way; the ravens had to call in a lot of favors to get their neighbors behind the idea. It doesn't hurt that the Parliament is open to the public several days each week. The biosphere inside is lush temperate rain forest such as was once found on the Pacific coast of North America.

Rooktown is culturally important to neo-corvids as a meeting place. Many of those living here are pilots and biodesigners, but product designers and artists live here too. The designers specialize in creating equipment and everyday items for neo-avian bodies. The artists have decorated the Parliament and other areas with both human art (Native American, Bhutanese, Norse) celebrating ravens and art of their own.

## LOCUS: SOURCES IN THE CROWD

Habitats that allow government run on bureaucracy and departments. Locus runs on individual citizens that cooperate to do needed work. Very few of these people make great claims about their own importance. Self-promotion doesn't play well here and, with their reputations, they don't need to.

### ANA DURRUTI, MILITIA CROWDSOURCER

Durruti, a hero of the resistance to the two Planetary Consortium incursions, is Locus's most respected militia organizer. Since then, she's fought in several actions against criminal factions whose operations got out of hand in the Patroclus asteroids and has been heavily involved in training neighborhood watches in armed response tactics. Durruti can be found almost daily leading preparedness drills and zero-g combat exercises in and around the habitat. Her favored body is a Lunar steel morph heavily modified for microgravity.

Unfortunately, Durruti is no friend to Firewall. She views our org as a group of dangerous, heavy-handed vigilantes operating without the consent of those affected by our actions. (If it strikes one as odd that an anarchist militia leader would view other militants as vigilantes, keep in mind that Durruti has a mandate of sorts based on consensus of the Lokie population).

### ATSUKO VAN VOGT, EGOCASTING OPERATOR

Van Vogt is a prominent argonaut and a habitual bodyhopper. These days, she favors heavily customized bouncer morphs, although she began life as a neo-dolphin uplift. If one has the @-rep to get a place on her busy schedule, hers is the most trusted egocasting facility on Locus. Van Vogt's renown as a physician and psychosurgeon was cemented by *The Seven Chakras: Metaphor & Holistic Practice in the Treatment of Integration and Continuity Disorders,* her treatise on resleeving medicine. Sounds like mumbo jumbo, but under the garnish of poetry, the book is full of good science. I can tell you, waking up in a candlelit room to a steaming cup of herbal infusion is a lot nicer than the cold metal slab and glaring lights treatment common to most decanting facilities.

### BENEDETTA KATZENELLENBOGEN, CITY PLANNER

Benedetta moderates Architect, the public mesh forum where Lokies propose and plan structural enhancements to the habitat and its infrastructure. Locus doesn't have building permits. Anyone can extend one of the spars as long as they follow a few ground rules. Anyone can add modules to empty space along a spar as long as they don't block rights of way. Building is regulated by custom and public debate. Benedetta, though she has no title or position, acts as facilitator for much of this running debate. She has an encyclopedic knowledge of current and past projects and a knack for getting the right people talking (or sometimes arguing) when a project is proposed.

Benedetta lives in a collective with a group of other planners and architects near where Azimuth Spar meets the Sphere. She's a well known anarcho-syndicalist. Her most recent known morph is a thirty-ish bouncer. Although she doesn't know of Firewall, Katzenellenbogen's obsessive tracking of module and infrastructure projects aboard Locus has supplied vital information during several Firewall investigations.

### Eidolon, Art Installation and Firewall Crow

Someone once made the mistake of showing Eidolon this old Earth movie where a little old man poses as a god-like presence by operating machinery from behind a curtain. (This was before AR; people were *naïve*). Eidolon thought this was the funniest thing they'd ever seen and adopted a similar persona. Since then, Eidolon's physical embodiment has been a microgravity interpretation of an ancient Greek temple (think the Acropolis built out in all directions from a center point, with station-keeping thrusters). The entire inside of the temple is an immense cornucopia machine that also teems with disassembler swarms. Usually the temple can be found floating free in the Cone, its dim purple lighting visible from the Shell. Occasionally Eidolon docks on a spar, particularly if they're working on a project that requires their full attention.

Eidolon has a reputation as one of the best hacker/trackers on Locus, although their weird sense of humor has led them to take the oracular temple schtick a bit far for some tastes. To get Eidolon to work for you, you need to physically visit their temple installation and make a sacrifice. The sacrifice must generally be in the form of an item with a novel or unique design, which Eidolon will then reverse engineer into its library of blueprints and break down using the temple's disassembler swarms.

The exception to this rule is Firewall agents, who can call on Eidolon from anywhere in the system if they have sufficient rep with the Eye. Eidolon has sent forks to work Firewall runs from Mercury out to the Kuiper Belt using its temple's private egocasting capability.

### Kuiper Strahnd, Sabaté Swarm Leader

If Durruti is representative of Locus's infantry and Teilhard Liu of its artillery, Kuiper Strahnd is the cavalry. A protégé of Liu, Strahnd captains the *Exquisite Corpse,* an Althauser Huitzilopochtli-class destroyer that was disabled and captured in a boarding action during the first Planetary Consortium incursion. Strahnd's commentary on Liu's *Doctrines* expands on the idea of an open source command and control structure.

Strahnd was an officer in the South African Air Force and fought in the long series of battles to protect the African space elevator from destruction. He's half Zulu, half Afrikaaner, and escaped Earth in his original body, an olympian. Firewall has debated making overtures to Strahnd on several occasions, but it's far from clear how he'd respond to an invitation to join.

### Miyoko Batongbacal, Harvester

Batongbacal bailed on an indenture aboard an icepusher by pointing a hacked laser comm array at Locus, attaching her engineering resume to her uploaded persona, and hoping for good luck. Guess she really wanted out. Her specialty is whaling—organizing mobs of transhuman-piloted and autonomous vehicles to opportunistically mine passing asteroids. Batongbacal usually lives as infolife. Her morph on whaling missions is a harvester drone kitted out with bigger engines, a bot bay specialized for prospecting, and a wider array of sensors. However, she also owns a pleasure pod that she sometimes uses to socialize, teleoperating via its puppet sock.

Batongbacal has a well-known knack for spotting asteroids that will yield well, but her rep has been marred by one incident that drew Firewall's interest. She nuked an entire whaling party during a mining op. Ten people and twenty-some harvester drones—vaporized. It was the worst mining "accident" in Locus's history, and if anyone else had been leading the mob, they'd probably never lead one again. Using nukes in a mining op might seem extreme, but it's occasionally called for on a big asteroid.

After much investigation, complicated by the fact that the asteroid calved into multiple fragments that couldn't be caught, public consensus came to the uneasy conclusion that a catastrophic coding error led to premature detonation of the nuke, before the whaling party was clear. There were disputes. Some suspected criminal or Planetary Consortium sabotage.

Firewall has its own theory. We think Miyoko Batongbacal stumbled on something inside the asteroid. TITAN wargear, something planted there by the Factors—possibly even a Bracewell probe or other alien artifact. We don't know. But the fragments of the asteroid might not be beyond recovery.

### Pinpin, Habitat Ecologist

Pinpin is an infomorph ecodesigner whose consciousness is distributed over a mob of smart monkeys. They can often be found in the vicinity of Kanagawa Farms, tending plant beds, or in newly built-out areas of the habitat, helping to install new algae vats and green spaces. Pinpin is a prominent voice in the long-view preservationist movement.

### Teilhard Liu, Programmer-Armsman

A newcomer once asked me why Locus, the stronghold of autonomist anarchism, has a mutual defense pact with a statist government entity like the Titanian Commonwealth. I answered that it's a practical matter. Until revolutionary change reaches Mars and Jupiter, we need allies. But the questioner also got a detail wrong: Locus doesn't have an alliance with Titan. Teilhard Liu does.

For a planetary government to sign a major treaty with an individual isn't exactly the done thing. But then, Liu is a walking legend. He was a veteran Air Marshal in the Indonesian TNI (air force) when the Fall came. As groundside governments and their accompanying command and control structures collapsed, Liu persuaded, cajoled, and in a few cases coerced commanders from other aerospace forces into forming a unified defense in a broad swath of

## CUSTOMS AND OPEN STANDARDS

Locus doesn't have laws per se, but Lokies observe several customs.

### PERSONA SAFE HARBOR

No mind is property (unless it's into that kind of thing). Any mind received by egocast should be given shelter by the community and a place to run if computing resources are available (provided it arrives clean of viruses). This doesn't mean that any ego that shows up is entitled to a body, but efforts are made to reinstantiate anyone that wants to be. Nor does it guarantee the safety of cortical stacks and minds already present on Locus. It does mean that intercepting egocast transmissions or secreting away egos that arrive flagged for sanctuary will kill your reputation quickly if you're caught doing it.

### PUBLIC LIFE SUPPORT

Modules should contribute atmosphere and heat to keep the spar along which they're moored habitable. The amount neighbors expect a module to contribute is proportional to the module's frontage along the spar.

### PEACEKEEPING

Violence, particularly involving weaponry that might damage communal infrastructure, usually draws a quick response from concerned (and often heavily armed) neighbors. Disputes are moderated by neighborhood councils in accordance with local custom and with regard to the @-rep of the parties involved. ■

orbit over the Pacific Rim. That was but the first of many campaigns he fought during the Fall. His efforts saved millions. Years later, he was a key actor in coordinating the defense of Locus during the Planetary Consortium's incursions.

Liu's *Doctrines,* based on his experiences during the Battle of Earth and subsequent engagements, are the foundational document for all military planning in anarchist space. They focus on adapting the tactical and strategic doctrines of past eras to the near impossibility of stealth in open space, the challenges of integrating ships with widely disparate capabilities into an effective fighting force, and the uselessness of centralized command and control structures when fighting an enemy like the TITANs. They're also richly annotated with suggestions on how to deal with every exception to these axioms that Liu could think of—and he's still adding to them.

Liu rarely makes his presence felt in public, and his place of residence within Locus is unknown. Hackers who've tried tracking him have concluded that he has either a preternatural talent for evading surveillance or some very skilled helpers erasing his comings and goings. His most recent known morph is a wizened menton, hale but with no cosmetic modifications to conceal aging. He's known to enjoy gardening and tai-chi.

Teilhard Liu's circle includes almost all important autonomist military and security figures, all of Locus's prominent citizens, several of Titan's most powerful politicians and academics, a random sampling of tai-chi practioners from all walks of life, and a tight-knit gardening club of hyperaged Fall survivors. It is unknown how much Liu knows about Firewall.

## OTHER TROJAN HABITATS

Locus may be the most well known of the Trojan colonies, but there are many others it pays to know about.

### C SQUAT

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance (Anarchist/Disputed)
**Primary Languages:** English, Hindi, Spanish
**Population:** 500

This beehive was originally dug out of a C-type asteroid by an Extropian mining outfit, Trojan Metals, in the leading edge of the L4 point. Their plan to expand the mines into a full-blown beehive habitat was halted and the station temporarily abandoned, however, when the company ran into credit-flow issues due to difficulties with other projects, leaving only a handful of security bots to guard it. A group of anarchist and scum squatters promptly disabled the bots, moved in, finished the habitat, and invited their friends. The new residents quickly gained notoriety for hosting energetic punk shows, with people from all over farcasting forks in and choosing from a selection of modified pod morphs for micrograv mosh pits.

Trojan Metals was less than pleased when they returned to find their colony squatted. The Extropians claim the habitat is their property due to the amount of personal labor they invested in it and that it was not abandoned as they left AIs to guard it. The squatters could care less about Extropian laws, arguing the beehive was empty and unused until they moved in. Though they did offer to replace the bots and other abandoned hardware, Trojan Metals kept to their demands. The situation remains tense as the Extropians have called upon their security contractors

to evict the squatters. The anarchists have, in turn, put out a call for support from nearby autonomists.

## CASA ARTURO

**Station Type:** Cluster
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** English, Mandarin, Spanish
**Population:** 1,200

Casa Arturo is a small Nuestro shell devoted to rocket design and courier services. The mining refinieries and shipyards here are impressive given the size. The rocket geeks here love to build, repair, and race new designs, providing many of the ships and maintenance for anarchists in this area of the Greeks.

## CATAL HAYUK

**Station Type:** O'Neill Cylinder
**Allegiance:** Independent (Brinker)
**Primary Languages:** Kurdish, Turkish
**Population:** 3,500

Not everyone wants to live awash in the roaring cascade of the now and, even for those who do, getting away from it can be therapeutic. A way out is offered by recreationist preserves like Catal Hayuk, a neolithic settlement built in an O'Neill cylinder. Aside from the technology needed to maintain the hab itself, Catal Hayuk offers a way of life identical to that lived by prehistoric humans over 10,000 years ago in Anatolia.

Unlike simulspace simulations and temporary regression retreats, though, this adoption of ancient ways is taken to the extreme. The women give live birth to children, sometimes dying in the process. Men engage in rites of passage that can be equally deadly. The population is sleeved in flat morphs, and those who want to join even undergo psychosurgery intended to prevent them from contaminating the primitive society with contemporary knowledge or memes.

Caring for these voluntary primitives is Merat, an AGI whose motives in sponsoring this habitat are hotly debated. Merat speaks about Catal Hayuk as both a retreat for those unable to adjust to modern life (many of the population are reinstanced) and as a social experiment. It's the latter that gets some hackles up, even though those who join the colony do so voluntarily.

## EXARCHIA

**Station Type:** Cluster
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** English, Greek, Mandarin
**Population:** 4,500

Named after a Greek anarchist neighborhood on Earth, Exarchia is a bustling autonomist station near the trailing cluster of the Jovian L4 point. It is best known as a nexus for anarchist hacktivism. A significant portion of the residents here devote their time to programming privacy and anti-censorship tools, finding exploits in hypercorp firewalls, and reverse engineering proprietary code. Many of these hacktivists work with groups like Anon, Datacide, and Mesh Leaks, as well as other crypto-anarchists around the system. Their local mesh is home to the Exarchia Data Haven and a high number of anonymizers, proxy servers, and similar tools. Due to the number of hacktivist campaigns, denial-of-service attacks, and exploits that originate from this station, it is a frequent target for mesh attacks launched by rival hypercorps, governments, and vigilantes.

## INTRUDER

A massive and detailed sculpture crafted by unknown hands, this entire small asteroid has been carved into a head with three unknown faces, one of which does not seem to be humanoid. Up close, the rocky surface has been painstakingly marked with billions of numbers and letters in Roman, Cyrillic, and Greek alphabets, with the only legible word being "intruder." The symbols are widely believed to be a complex cryptographic code, though the efforts of thousands of amateur and professional cryptanalysts throughout the solar system have failed to break the cipher, leading some to declare it an elaborate hoax. Attempts to run facial recognition software on the faces have also come up blank. Some speculate that further clues may lie buried inside the asteroid, but no one has yet detected any subsurface anomalies.

## LOT 49

**Station Type:** Cluster
**Allegiance:** Autonomist Alliance (Anarchist/Scum)
**Primary Languages:** English, Portuguese, Thai
**Population:** 400

Lot 49 is a small Nuestro shell in a densely populated neighborhood in the center of the Greeks called Vonarburg-Shadyside. This station tends to be a crossover point for local traffic, making it a good place to pick up gossip or catch a shuttle.

## RESPECT

**Station Type:** Bernal sphere
**Allegiance:** Independent (Sapient Uplift)
**Primary Languages:** Javanese, Tamil, Spanish
**Population:** 3,000

Respect was founded by uplifts in the sapient faction and their human allies. Unlike mercurial habitats, which are meant primarily for uplifts alone, this colony is specifically intended for humans and uplifts to live together. Most of the residents stem from the inner system, where they became fed up with the second-class status most uplifts were given. Unlike many other Trojan stations, Respect still operates with a transitional economy. As a result, several uplift-friendly hypercorps use it as a base for their Trojan operations. It is governed by an elected parliament, who in turn elect a mayor. The current mayor is Jean Priz, a neo-neanderthal chemist.

Respect's residents do what they can to integrate humans and uplifts together. In this vein, they have

designed some new sports that specifically make use of the natural talents of multiple species. The most popular, multiball, has been a growing hit on inner system sports feeds.

### Turing

This former colony was founded by AGIs that fled persecution in the inner system in the aftermath of the Fall. The primary habitat was a processor locus built into the interior of a small asteroid, with various support structures on the surface, including marginal living facilities for biomorphs. The colony was nuked by unknown hostiles in 2 AF, leaving a sizable hole in the side of the asteroid. No one has claimed responsibility for the attack, but it is widely presumed to have been initiated by anti-AGI extremists or possibly the Jovians.

Turing may be deserving of new attention, however, as a recent flyby from an automated freighter picked up signs of activity on the asteroid's surface.

### Winter

**Station Type:** Cole Bubble
**Allegiance:** Independent (Brinker)
**Primary Languages:** Arabic, Italian
**Population:** 10,000

Although tranhumanity has largely eliminated gender inequality, some clades feel getting rid of inequality didn't go far enough. Why not just get rid of gender altogether? The inhabitants of Winter have done just that. Winterists sleeve into androgynous morphs and reproduce using exowombs that combine two (or more) parents' gametes. They don't have sex in the usual sense. Winterist morphs have a number of non-sexed erogenous zones which those in pair and triple bonds use to pleasure one another according to a monthly hormonal cycle.

Their unusual lifestyle has made Winterists a somewhat insular group, although small communities of them exist elsewhere in the system. The habitat itself is temperate, despite the name, which is borrowed from the work of a pre-Fall science fiction writer who envisioned a similar society.

## Movements and Clades

Anarchist social models prevail in the Trojans, but there's a lot of room within them for diverging views.

### Exoglots

No one is sure what to make of the exoglots. Their weird, insectoid bodies are roughly bipedal, but with an extra set of limbs above their waists that are jointed so that an exoglot can fold itself in half in either direction. All of their limbs are strong, spindly, and clawed. Their heads resemble nothing so much as that of a huge, black fly. Are they an exhuman faction, a cult, or just a really strange transhuman clade?



Their intentions, how they recruit new members, and whether they have any internal organization are unknown.

A sizable hive of exoglots inhabits a series of modules anchored along Locus's Foucault Spar. They follow all of the usual customs regarding citizenship scrupulously, supplying a fair share of public atmosphere along the spar to which they're docked and adhering to community standards regarding module architecture, production of angular momentum, clearance between modules, and the like.

That said, many of their neighbors are uneasy with them. Locus tolerates them as it tolerates nearly everyone, but other habitats flat out prevent them from docking or taking up residency. Their disturbing appearance and the fact that the never-decoded artificial language they use among themselves sounds worryingly like recordings of TITAN headhunter drones no doubt factor in.

The biggest problem with the exoglots is their refusal to communicate with other transhumans in any way unless absolutely vital. They habitually stealth all personal network signals, appear to use only heavily encrypted VPNs to communicate, and on the rare occasions they do communicate, do so only in terse text messages.

A few things are known. The exoglots existed prior to the Fall; this is documented. They're not synths, but probably pods; they consume organic feedstock and atmosphere just like anyone else. The only time they've ever been violent is when their modules were invaded. They have no known ties to any criminal activity. And they design stunningly beautiful self-modifying nanosculptures, all of which are three-dimensional projections of four-dimensional objects such as tesseracts. Trade in these objects is their primary source of rep and credit.

But what are they doing? Are they idiot savants who've cloistered themselves against a confusing universe, or are they exhumans incubating in the midst of their eventual prey? Benedetta Katzenellenbogen is the only transhuman known to have been inside of their hives at Locus. The exoglots wished to consult with her on a building project, but she refuses to speak of what she saw inside.

### Lizards

The lizards are vacuum dwellers. Sleeved in either synths or sealed biomorphs, they make their way as miners and harvesters dwelling in open space. Their ships are usually little more than open trusses with engines attached to them. When they visit a hab, they rarely come inside, instead clinging to the station's outer skin and deploying starlight focusers to bask in stellar energy.

### Long-View Preservationists

What do you need environmentalism for in a cloud of barren asteroids five AU from Sol? If you think in decades, you don't. Maybe not even if you think in terms of the next few centuries; there are a lot of rocks out here. But those who've chosen to think in geological time are not as common as one might expect. If transhumans need no longer die, then ensuring that the solar system remains a sustainable environment over hundreds of thousands or even millions of years makes sense. Long-view preservationists regularly weigh in on issues like gas giant mining, asteroid mining, and transhuman expansion onto exoplanets. The math they use to back up their arguments is crazy—but then, old Earth environmentalists sounded crazy to some people, too. And they turned out to be right.

## Crime in the Trojans

It's a given that gardens come with snakes, and ours is no exception. What constitutes crime in the Trojans, however, is a very different matter from elsewhere.

### Carbon Reavers

Subsistence asteroid harvesting is a rough way of life, and pirates who jump miners for their goods make it even harder. Its easier to wait until someone else has broken part of an asteroid down and rob them while they're shuttling the ice, other volatiles, and carbons to their hab than to mine it yourself. Carbon reaver gangs do exactly that. Fortunately, carbon reavers aren't usually much better equipped for combat than their prey. They're desperadoes, and a well organized local militia can usually make short work of them. Usually. Unfortunately, more of these gangs keep popping up. Dealing with them is steady work for security freelancers.

### Ego Theft

Gangs like the ID Crew and smaller copycats are very active rimward. Smaller egocasting facilities and lots of places to hide mean that they're a constant nuisance. Luckily, identity thieves are universally reviled out here, and any rumor that they're operating draws a strong response from the infosec community. Firewall agents be warned, though: this cuts both ways. Intercepting egocasts, hacking backups, and the like will destroy your rep if you're caught and may even draw a response from vigilantes unless you can publicly prove you were in the right.

### IP Enforcement

The Planetary Consortium just doesn't know when to give up sometimes. Oversight and several corporations have been known to mount punitive strikes against pirates they believe are violating their intellectual property rights in the outer system. Sometimes the strikes are carried out by actual hypercorp agents, other times they put out hits through the Guanxi network or hire the ultimates. Hits are most often called on pirates who've transferred Consortium fabber blueprints back to fabber gangs on Mars and elsewhere sunward. IP Enforcement strikes often involve a lot of collateral damage, with little regard for bystanders.



# SATURN 5

## ATLAS

Controlled by the Volkov hypercorp, the Volkograd station is an industrial juggernaut. ■ p. 70



## BRIGHT

**Turmoil:** Acumenic has just conducted a hostile takeover of this so-called intellectual utopia. ■ p. 71
**Unfettered Geniuses:** This secretive group believes their cognitive atypicality sets them apart from their peers. ■ p. 72
**Parallel Processes:** Early adopters are testing augmentations that allow groups to share mental processing power. ■ p. 72

## AROUND THE SYSTEM

**The Long Array:** Radio reception at 5 billion kilometers: good for rescue and spying. ■ p. 73
**MeatHab:** This habitat began as a piece of performance art—but it may be something more than that. ■ p. 77
**iZulu:** The infomorph population is double that of the embodied population on this economically disparate settlement. ■ p. 79
**Kronos Cluster:** A patchwork of armed neighborhoods, Kronos is still a desirable destination for visitors. ■ p. 83

**Posted by:** Ann Carais, Astrobiologist,
Titan Autonomous University <Info Msg Rep>

The first thing you need to know about the Saturn system is that it's big, not just in size. Saturn is massive in terms of industry, population, and habitable space. I mean, yeah, Jupiter is bigger, but rating second on the scale ain't too shabby either, and Saturn has a lot of positives going for it that its big brother lacks. Its atmosphere is easier to mine than Jupiter's hellish magnetic fields and the vast ring system is rich with volatiles and capable of sustaining the impressive number of people that call the system home. Plus, the rings are gorgeous eye candy on an astronomical scale, beating out any old red spots any day of the week.

With a population in excess of 80 million, Saturn's neighborhood is the second most populous area of the solar system. Many of the habitats around Saturn are actively expanding and there is incredible potential for future growth. It is the cultural center of the outer system and perhaps the most diverse assortment of egos, cultures, and beliefs to be found anywhere in the universe. Technosocialists rub shoulders with scum, corporate raiders, Extropians, anarchists, uplifts and infomorphs. All of these people somehow manage to not just live together, but to do so considerably more peacefully than either the Martians or the Jovians. That's not to say that conflict doesn't exist among the rings, but for the most part it's a game of shadows, with only occasional flare-ups.

Part of this is due to the space. Saturn is about nine times the diameter of Earth and ninety-five times as massive, and the rings make it even bigger. They start some 7,000 klicks above the surface of the planet and stretch to 80,000 klicks out. Add in to this the sixty-odd moons and hundreds of moonlets, most of which are nestled in the life-giving rings, and you've got a lot of space for a lot of people. And it's pretty. You can say all you want about the clouds of Venus, the canyons of Mars, or the views of old Earth from Luna, but living among the rings, seeing the sparkling jewels of the other moons and the massive serene presence of Saturn always in the background, this is a sight every transhuman should see at least once in their life.

## THE TURBULENT GIANT

**Posted by:** Byth Swearingen,
Commonwealth Investment News <Info Msg Rep>

For those of us that live in the shadow of Saturn, the massive gas giant is, literally, an everyday facet of our lives. But most of us think little about what actually goes on below the clouds. In fact, Saturn is ripe with opportunities for the savvy investor, if you know how to separate the gold from the dross that is. Saturn, like Jupiter, is a gas giant, though that is a bit of a misnomer. Like it's larger brother, Saturn also has a rocky core way down in the crushing depths, a core that's covered with an ocean of liquid hydrogen and helium. All of this is deep, far too deep and too pressurized for even the most advanced mining operations to reach. Instead, we skim the gases at the top of the atmosphere, the stuff that's easy to get to. Below the methane haze and ammonia ice clouds is a lot of hydrogen and helium, making it an excellent source for volatiles, deuterium, and helium-3.

The first thing any novice investor looking to break in to the clouds of Saturn should know is that most investment is steady but low yield. If it sounds too good to be true, it probably is. This means the old tried-and-true mining operations are your best bet. For the most part, these are operated by Titanian microcorps, a few wide-ranging inner system hypercorps, and a handful of other local competing players, notably Volkov and iZulu. Of the two, Volkov typically sees larger profit margins for investors and operates in typical, respectable hypercorp fashion, even if they are local to the Saturnian system. Though iZulu does not pay dividends in the traditional sense, they amply reward investors who desire to bank some goodwill with many of the autonomist factions that populate the rimward expanse.

Most of these mining concerns operate in one of two ways. They either use automated fleets of skimmers that harvest and process elements in the thick soup of the Saturnian atmosphere or they float aerostats equipped with tanks and gas separation equipment in the upper atmosphere and collect the tanks when full. These operations also typically collect scientific data for various studies; Volkov keeps its data proprietary, marketing it to researchers, whereas iZulu and the Titanian microcorps share theirs via the argonauts and open source channels.

Failure rates in mining operations are small, but not insignificant. If you want no-risk mining, you should invest in a Main Belt or ring operation; they may be lower yield, but they are safer. Meteor showers and debris collisions are a regular hazard thanks to the rings. The nature of Saturn's

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
AUTONOMIST ALLIANCE
AME INFORMATION

## SOLARCHIVE SEARCH: CLOUD HOLM PROJECT

Cloud Holm was a widely trumpeted project, initiated by Chronos Ventures, a Titanian microcorp, to construct an aerostat in Saturn's upper atmosphere. The initial plan was for a large aerostat that could house a population of up to 250,000. The project was plagued with delays and minor disasters throughout the construction process, however, and only remained financially viable due to also functioning as a gas mining operation. Powerful and highly variable winds posed stability problems, combining with other issues to make the original design unworkable. Instead, Chronos Ventures created a revised design that was far more stable, but also much smaller. This new version of the aerostat could support a population of 100,000.

When major construction finally completed, Chronos invited numerous VIPs and investors to a gala opening event; nearly 6,000 people attended. The Commonwealth's courts are still settling exactly what happened and who is at fault, but what is indisputable is that Cloud Holm drifted into one Saturn's megastorms. The resulting high winds began to literally tear the habitat apart and electrical discharges overloaded many of the core systems, including the farcasting facilities. Trapped on a doomed station, only a small fraction of those on board were able to escape on shuttles, lifeboats, and other craft. Nearby skimmers recorded the demise of Cloud Holm as it lost altitude and sank deeper and deeper into the clouds. The incident has served as a cautionary tale for other parties that had hoped to follow in Chronos's footsteps. ✤

atmosphere means that electrical discharges are common among the clouds, direct strikes can take down the skimmers and balloons. Storms on Saturn are particularly vicious, with the high winds and lightning combining to create huge, often months-long storms. Usually the skimmer swarms and aerostat farms try to avoid these turbulent weather patterns, but every so often they get caught unawares, resulting in significant losses.

Opportunities also exist in orbital infrastructure to service the gas collection industry. Large refinery projects are always trying to improve efficiency and are in need of capital to finance these projects. Recently, Volkov has been taking bids to build the first in a new generation of skyhooks that will make transportation of the collected gas much easier. If Volkov is successful, expect many other players in the gas mining industry to follow suit. Many of the microcorps are already seeking financing for such a project, hoping to get ahead of the curve. We at CIN, however, consider this an extremely risky investment since there is no guarantee that Volkov will be able to engineer the skyhooks to do what they want or that this will be a profitable venture since, if reports are to be believed, they are already massively over budget on the project and actual construction has only recently commenced.

Finally, there are those investment opportunities that should be avoided. Anyone who tells you they have an excellent plan for habitable aerostats in the upper atmosphere is either dangerously deranged or trying to bilk you out of your hard-earned kroner. This isn't to say there haven't been legitimate attempts to build habs on Saturn—there have been, but so far all have failed, some quite spectacularly. The most well-known example of this is probably the Cloud Holm project by Chronos Ventures. You may remember this, the failure of Cloud Holm was big news a few years ago and still ranks as the one of the largest losses of transhuman life since the Fall. This has led most reputable financial advisors, including CIN, to caution clients away from investment in these sorts of enterprises. While rumors persist that new metamaterials will allow potential builders to deal with the inclement weather on Saturn, for now we would advise that anyone who wants to invest in aerostats remain in the Venusian market, and that the opportunities for profit on Saturn are mostly constrained to gas mining operations.

## RECOVERY OPERATION

[Incoming Message. Source: Anonymous]
[Public Key Decryption Complete]

Per your request, we sent several probes reinforced for high pressure deep into the Saturnian atmosphere, near where the Cloud Holm went down. We were unable to locate any wreckage, but three of the probes were able to detect some anomalous emissions coming from deeper in than we were prepared to go. At this point, the ball is back in your court. I know there's potentially a lot of money from private insurers in recovering the stacks of some of the luminaries on board, plus the prototype technology that Chronos was using on the habitat. Going deeper in, however, perhaps as far down as the liquid layer, is an expensive proposition. There's also something about the emissions we picked up that I don't like the look of. If you squint really hard and really want to believe, sure, maybe they could be coming off a downed habitat, assuming that hab wasn't torn apart by the weather or crushed by the pressure. If it's not Cloud Holm that's down there, though, then something else is making emissions, something transhuman—or, perhaps worse, non-transhuman. We know the TITANs were unusually active in this system, and my preference is not to go digging too far. You never know what you might dig up. ✤

## RINGERS

**Posted by:** Sakti Wakashi,
Firewall Proxy <Info Msg Rep>

If people can dream of living someplace, chances are someone is going to want to. The ringers are a perfect example of this. Ringers live within Saturn's rings—on various moonlets and small rocks or simply out in space among the rings themselves—which is one of the craziest places for people to live, especially since they mostly fly solo or in small group. They all have vacuum-tolerant morphs; the majority don't even bother with a small pressurized hab. The capability to survive vacuum without a suit is essentially a prerequisite for being considered a ringer, at least to other ringers. Synthmorphs, exotic biomorphs, and pods are all common morphs out here, but anything that can survive for a long time in vacuum will do. Ring flier morphs are especially popular, given the magnetic field propulsion provides a nice, if slow, way of getting around.

If you're the type to believe various mesh vids, ringers are all either insane, hiding from powerful enemies, fugitives from justice, or eccentric artists. Most of the ones that I've met, however, are perfectly ordinary engineers, product designers, and others who work via the mesh in places like the Twelve Commons or even on Titan but choose to live in the rings. It does take a bit of eccentricity to live here, and certainly none of them are the most social and outgoing individuals that you're going to meet, but the most shocking thing about most ringers is how remarkably normal they are. Most simply like living by themselves, or are the type of person that can only deal with sporadic direct transhuman contact. They subsist mostly off the resources they scavenge from the rings and by trading favors for whatever services they can provide via the mesh.

Of course, even the most isolated individual feels the need, from time to time, for the company of others. Given the diversity of habitats located in the rings, they have plenty of ports of call from which choose. Some of the most interesting ringers are the ones who regularly stop by Prometheus. None of them advertise it, but it's likely that some of them are Commonwealth citizens with positions of importance. At least a few are high-level scientists and engineers engaged in the kinds of top-secret projects for which Prometheus is known. From the Commonwealth's perspective, storing your top-level research talent in Saturn's rings isn't a bad idea, since they're going to be really hard for anyone else to find. All you need are an entangled commlink and occasional check-ins, and you've got a very nice set up.

There are some ringers who choose the lifestyle because they're hiding out from someone or something. An enterprising ego hunter would do well to monitor ringer stopovers at various habitats and pull the surveillance footage to see if they can spot their quarry. Just asking ringers who has secrets to hide is a dead end; ringer culture takes the fact that some of these people are either fugitives or exceedingly private very seriously. Most ringers keep their personal metadata locked down tight, no one asks about anyone's past, and volunteering info about yourself or letting someone access your personal info is a major sign of trust. Except for the ultra-paranoid and the weirdest of the mystics, however, ringers help each other out, and almost every ringer has a circle of others with whom they keep in contact or even meet with physically every few weeks. This is partly a matter of survival; someone without people to help them out can easily end up dead out in the rings, and even the most isolationist know it pays to have a few people looking to make sure you're alive every so often. If you're there in a suit or a ship, they may help you out if you get in trouble, but they won't trust you and most of them won't talk to you—ringers don't like tourists. If you want to get to know them, you'll need to become one of them, at least for a few weeks.

## ATLAS

**Posted by:** Roberto Alvarez,
Firewall Proxy <Info Msg Rep>

The inner moon Atlas is controlled by the Volkov hypercorp, one of the major players in Saturn's gas mining industry.

### VOLKOGRAD

**Station Type:** Beehive
**Allegiance:** Independent (Hypercorp/Volkov)
**Primary Languages:** Czech, Slovak
**Population:** 50,000

The beehive habitat of Volkograd is dominated by refineries and shipping; the output of fuels from this moon may be the largest in the system. Volkov's residents are hard-working and fairly prosperous, but there is ongoing tension between the workers and upper management. Any attempts to unionize or otherwise organize have been dealt with harshly; Volkov can't risk the workers gaining too much momentum, given the support they might gain from the strong autonomist presence in the system. In a bid to ease tensions and increase their employees' satisfaction, Volkov recently instituted policies for longer vacations, better healthcare, and less restriction on nanofabrication.

Fa Jing attempted a hostile takeover of this facility shortly after the Fall. A trail of wreckage from the vicious battle drifts in the moonlet's wake.

## SOLARCHIVE SEARCH: ACUMENIC

An independent hypercorp with operations primarily located in the inner system, Acumenic is a rising name in habitat design and construction. Their recent success can be attributed to taking risks and expanding into markets spurned by other hypercorps. Acumenic is particularly notable for its investment in Hamilton cylinder technologies and for choosing to partner with factions outside the inner system, such as the Titanian Commonwealth and the ultimates, on various construction projects. Their willingness to adapt their management and payment structures to reflect the diverse sets of beliefs and economies in the outer system has given them, if not a good reputation, at least a sort of grudging admiration among many of the rimward habitats.

Recently Acumenic has shown interest in expanding their portfolio to a wider array of industries including manufacturing, morph design, and biotech. Their business practices have sometimes been critiqued by rivals, and several Consortium hypercorps have lodged formal complaints against Acumenic with the Oversight Directorate.

Acumenic's corporate motto is "Building a better world for all." ☘

# BRIGHT

**Station Type:** Hamilton Cylinder
**Allegiance:** Independent (Hypercorp/Acumenic)
**Primary Languages:** English, German, Mandarin
**Population:** 7,000

**To:** Dr. Karome Bensadaa Mbariko, Firewall Crow
**From:** Mohammed Jiday, Firewall Vector

Dr. Mbariko, we were finally able to crack the encryption on that intercept from the Ozma cell we've been monitoring in the Saturnian system. It looks like they are not, as we originally thought, focused on Prometheus or Iapetus. In fact, I think you'll find this interesting as it sheds some light on what exactly is going on with Bright.

## FIELD REPORT

**Filed by Dr. Alicia Delgado,**
**Agent in Charge, Saturn Station**

While I understand that Cognite is less than pleased with the developments on Bright, I believe it provides us with a prime opportunity to increase our presence in the Saturnian system. It's also an ideal testing ground for some of Assistant Director Kirilenko's theories. Bright, as you well know, is one of the shining jewels of the Saturnian system; a nearly complete Hamilton cylinder created from part of Tethys's Trojan moon Telesto. Its current population is almost 30,000, just a fraction of the millions it should be able to house when fully grown and populated.

Bright's nature as one of only a handful of Hamilton cylinders in the solar system makes it noteworthy, but this has recently taken a back seat to the new standards for citizenship put in place by the habitat's new leadership. Originally conceived as a joint project by a consortium of inner system hypercorps, with some aspects subcontracted out to Titanian microcorps, Bright recently experienced what can only be termed a hostile takeover. One of the consortium members, Acumenic, bought out the shares of a number of its partners, forced a change in management, and seized control of the project, despite the efforts of the other members to stop it—including Cognite, which still owns a minority share. Acumenic immediately initiated a new regime that no one was allowed to live in Bright or even visit for more than two days unless they submitted to cognitive tests to prove that their current intelligence is at least one and a half times the baseline maximum. Though a disaffected portion of the on-site Cognite management team switched their allegiance to Acumenic, all other rival hypercorp employees and everyone else that did not meet the new standards was forcibly ejected from the station. I'm told that Cognite's project lead, Jerome Genet was quite literally expelled out the airlock when he attempted to seize the egocasting facilities with his private security detail.

Despite the protest that Cognite lodged with Oversight, I expect that little can and will be done by the Consortium, and I would advise gentle pressure on our part to make this so. The Commonwealth shows little overt interest in making a claim to Bright, despite many Titanians remaining on the station, as their microcorps have very little at stake in the project. The effort to highlight the station as a joint collaboration between the inner system and autonomists, however, may have been irrevocably been marred. Officially, Bright is an independent colony, under Acumenic's control.

### AN INTELLECTUAL HAVEN

Acumenic's stated goal for their actions is to establish Bright as an intellectual utopia for innovation, research, and scientific progress. They hope to establish Bright as a major outpost for research of all types, in order to elevate transhumanity's collective intelligence and reach a smarter, brighter future.

Though the habitat still operates with a transitional economy, the basic needs of all of the residents are

freely supplied. All residents are also granted a basic monthly stipend, which for most is enough to cover their miscellaneous social and recreational needs. A vast variety of labs, workspaces, tools, and equipment are made available for the residents to use as needed. Educational services are also provided at a minimal cost, enabling the residents to continue learning and expanding their skill sets. Thus far, the residents of Bright have been free to pursue whatever odd or unusual projects they feel like. The fact that the habitat is at a portion of its capacity means that most are given a reasonable amount of resources for their projects.

In return, any new discoveries or creations by the residents are considered the intellectual property of Acumenic. According to the habitat's social contract, half of the profits derived from this research must be reinvested in Bright itself, cultivating even more future developments. In addition, all residents are required to donate the equivalent of one day in every ten to projects that are chosen by a public vote of Bright's population. The list of eligible projects are always Acumenic initiatives or research subcontracted to them by another hypercorp. Given that Acumenic currently has some of the best and brightest minds in the galaxy at their beck and call with this set up, it is no surprise that they have recruited a number of interested research partners. The hyperbright morph, the parallel processor augmentation, and the miniature plasma engine used on a few new synthmorphs are all designs that were recently produced here. Researchers working on Bright have also been responsible for several recent advances in data compression and improved efficiency in qubit production.

While all of the residents are certifiable geniuses, not all of them are focused on important work. There are as many eccentrics creating complex memetic taxonomies of 20th- and 21st-century action heroes or creating exotic low-g beverages as there are people working on creating new high-end morphs, improving qubit production, or attempting to duplicate the Factor's reactionless drive. Of course, just because a project isn't considered important doesn't mean it can't be wildly popular. Some efforts, like the ongoing project to create the ultimate exemplars of various types of wine and beer gain a fair amount of free volunteer labor simply because many of the locals like the idea and want to help it succeed. Acumenic has found ways to monetize even these minor projects, creating a win-win situation all around.

There is no question that the elected Council that governs the habitat kowtows to Acumenic—they are all fervent believers in the project's mandate. Nevertheless, I think Bright presents us several opportunities. First, I believe we can apply pressure to our assets among Acumenic to steer some of this talent towards projects we have an interest in. Second, we can monitor the developments here closely, taking what we need before they are released and possibly deterring or stopping those that are problematic.

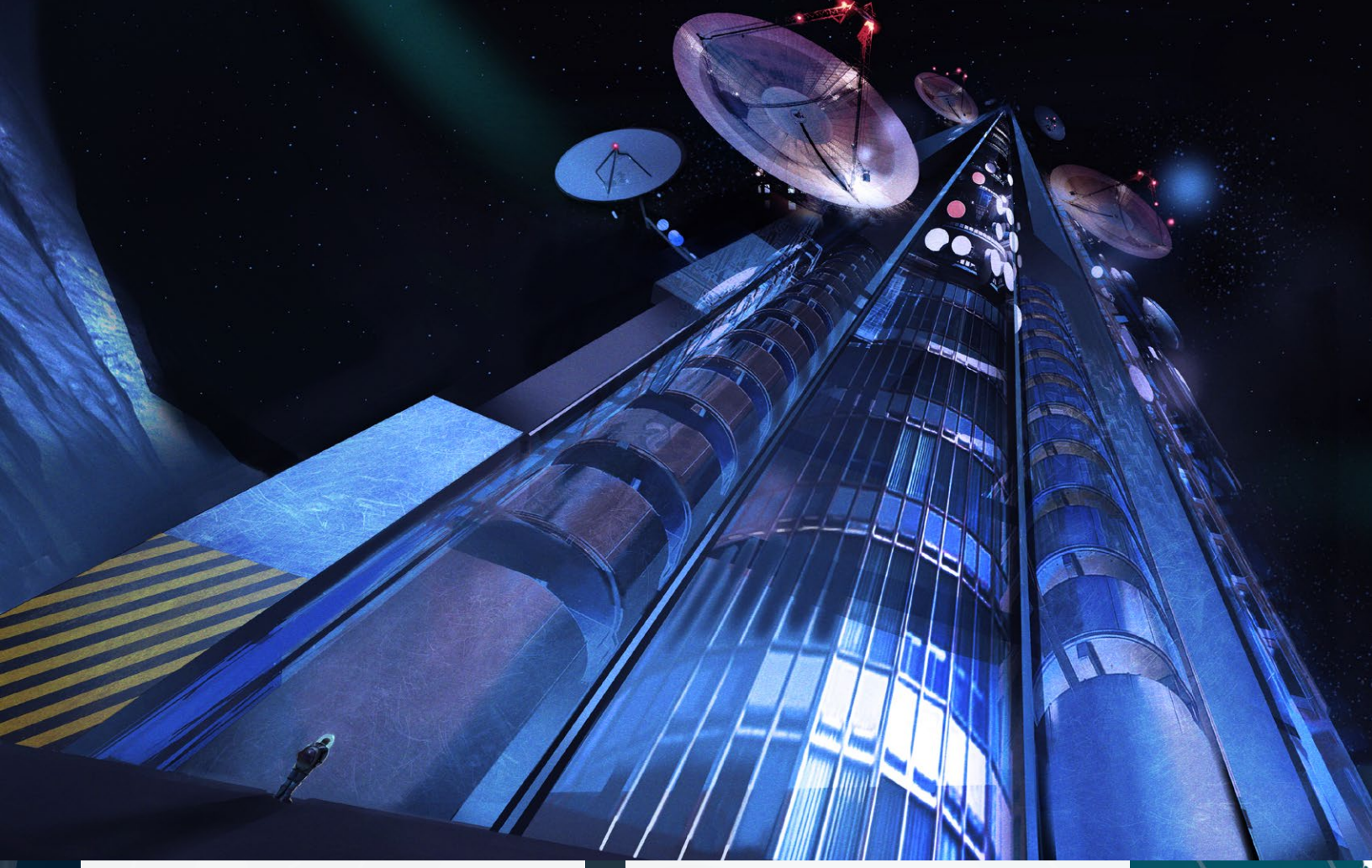
## Mental Augmentations

It should come as no surprise that many of Bright's residents are keenly interested in ways to expand their cognitive abilities even further. Nootropics and mental augmentations are commonplace.

A strange and potentially worrisome recent trend on Bright, however, has been the introduction of the parallel processor augmentation. This allows an augmented user to share their brain's unused mental processing capabilities with other linked users. Currently implanted in almost 1,500 early adopters, the enhancement is growing in popularity on the habitat. All the tests have shown that unlike permanent linkages like those used by the Synergists and the neo-synergists, short-term links like this result in far less personality bleed. Still, it's still more than a bit creepy when you see a few dozen of the linked working together, moving and working in perfect harmony. Synchronized dance and team sports are both popular among the linked, and are exceedingly impressive. Current predictions are that the total number of users on Bright will stabilize at 15–25% of the population, but that's a lot number of people using a technology that may have unforeseen long-term effects. The mostly naïve scientists on Bright have not considered the military applications yet, but I anticipated that this would be one of your first questions, so I've included the fabrication schematics along with this report so that you can begin field testing immediately.

## Unfettered Geniuses

One grouping on Bright deserves keeping a close eye on. Calling themselves the Unfettered Geniuses, they have taken over a remote part of Bright and keep mostly to themselves. In fact, some of the other residents of Bright report that the portions of the cylinder claimed by the Geniuses are often closed off to outsiders, something I gather that the rest of Bright is OK with. You see, the Unfettered Geniuses all have some degree of untreated antisocial personality disorders—many are full-on diagnosed sociopaths. These are not people who believe they "suffer" from their condition. Instead, they believe it frees them, allowing them to approach many problems in a way their cognitively "normal" peers cannot. So far, the Unfettered Geniuses have kept most of their projects under wraps. What particularly concerns me, however, is a rumor that they have attracted the interest of some exhumans, including the scientist and war criminal, Abandoned Weakness.



# DIONE

**Posted by:** Roberto Alvarez,
Firewall Proxy <Info Msg Rep>

Dione's main habitat, Thoroughgood, is a fairly typical populous outer system settlement, except for the moon's most obvious feature, the Long Array—150 kilometers of radio and microwave dishes and antenna attached to a spar extending from the surface to an orbital station counterweight.

## THE LONG ARRAY

Jointly operated by the argonauts and Titanians, the Long Array is designed to send and receive everything from long-wave radio to t-rays. Radio astronomers and SETI researchers seeking sapient life love this bad boy, and it has enough spare capacity to keep most of these scientists very busy. So far, there have been no confirmed SETI radio sources, but I don't pretend to understand much about cutting-edge radio astronomy; I'll leave that to my fellow argonauts who are more versed in those areas. However, the Long Array also has some far more immediate uses. First, it can broadcast signals that are easily received anywhere in the solar system. More importantly, it can receive radio signals from all across the solar system, including signals that are normally far too weak for anyone who's further than a few thousand or so klicks away to receive.

There are two primary uses for this sort of reception: discovering emergency broadcasts and spying. The first is a bigger deal than you'd imagine. I was surprised how often someone ends up on some asteroid, comet, or distant moon with a damaged ship and no one looking for them. If a particular portion of the sky is largely clear of radio traffic, the Long Array can pick up a radio booster at five billion klicks. There's money to be made in rescue and salvage. Even if no one is close enough to get there before someone's biomorph croaks from lack of air, everyone appreciates having their stack retrieved. That appreciation can equal some significant rep. The crew that operates the Long Array send out bulletins whenever they hear a distress signal. Two outer-system transport microcorps, headquartered on the moon Helene, at Dione's L4 point, are in the search-and-rescue business and contract with freelancers throughout the system to respond to these emergency signals.

Of course, the big news on Dione isn't astronomy or distress signals, it's spying. Most of what gets received here is never made public, but there are lots of rumors. Since most highly secure long-distance data either goes via QE comms or entangled farcasters, the Long Array usually intercepts traffic that no one really cares about. Sometimes the collected information is interesting, but just having access to the signals isn't enough, since they're usually encrypted, and to get at the good stuff you need to break that encryption. Other intercepts are fragmentary, with only parts of the conversation or data burst received.

The partnership that runs the array makes all of the collected data publicly available to anyone on Dione that's interested in it. They are sometimes accused of hiding data on behalf of allies or of being infiltrated by one of many intelligence services.

### THOROUGHGOOD

**Station Type:** Beehive and Cluster
**Allegiance:** Autonomist Alliance (Mixed)
**Primary Languages:** English, Korean, Mandarin
**Population:** 350,000

Split between a plateau beehive and an orbital cluster, Thoroughgood is an autonomist station run on anarcho-collectivist lines. Thanks to the Long Array, however, Thoroughgood is a cosmopolitan hab, with various groups maintaining enclave presences here. There are reps and offices for a dozen of the more important hypercorps, including an entire division of Nimbus that rents access time from the Long Array partnership. Other enclaves represent the Titanians, Extropians, Lunars, and argonauts. Even the Jovians maintain a small and impressively detachment here, though they mostly keep to themselves. The Array has also attracted a couple of less organized groups, including a number of anarchist hacker groups. There are occasional flare ups between the hypercorps and the anarchists, but most parties steer away from overt trouble.

Though all of the factions have legitimate uses for the Array, signals intelligence is what really interests them. Codebreaking is a competitive industry here, as various groups take the encrypted communications recorded by the Array and attempt to crack them. Some of the parties here have established impressive quantum computing and processing power resources simply to brute-force codes. Some of these simply collect data for their own intel archives, others actively publicize what they crack. The most notable anarchist hacker collective, the Laughing Squids, have embarrassed both the Morningstar Constellation and several of the hypercorps by releasing decrypted communications to the mesh from their crypto operations on Dione.

The encryption and decryption research going on here possibly make Dione the center for crypto in the known universe. This goes both ways, so if you need some good encryption or a cipher you can use to communicate with your intelligence operatives, this is the place to get it.

All of this combines to make Thoroughgood a very weird place. In public, everyone is exceeding polite and studiously oblivious to others, but paranoid to an extreme in private. Many factions send their most promising intelligence assets to Thoroughgood as a sort of finishing school for operatives. If you have training and experience in these areas, going freelance on Dione is a clear path to success. Taking care of the more mundane needs of the various political and hypercorp enclaves is another significant industry on Thoroughgood. People willing to inhabit flats and to act as servants and entertainers to the Jovian enclave are in particularly high demand, and if you want to make a little extra money on the side once you're on the inside, drop me a line.

## ENCELADUS

**Excerpted from:** *Saturnian Economic Diversity Report*

Saturn's sixth-largest moon Enceladus orbits within the dense inner part of the outermost ring. Geologically active, Enceladus is known for its active cryovolcanoes and water-ice plumes. Aside from beehive and surface settlements, a few modest efforts have been made to explore and colonize the moon's subsurface waters with small bathyscaphe habitats. Unlike Europa, however, Enceladus does not seem to have a world-spanning ocean, but instead massive water-filled caverns 80 kilometers or more under the surface.

### PROFUNDA

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance (Extropian)
**Primary Languages:** English, Javanese, Tamil
**Population:** 850,000

Profunda is the most prosperous Saturnian habitat that's not part of the Commonwealth. The guidebooks describe it as anarcho-capitalist, which elsewhere almost always implies a high level of income disparity as well as a large and often somewhat desperate lower class. That's most definitely not the case here; the rich are very rich indeed, but no local is poor, and nearly all residences have a quality of life far in excess of the system average. The local government is non-existent, all business is conducted through contracts between parties, and failure to make good on a contractual agreement has negative effects on the violating party's future business dealings. The biggest fish, and the dominant force on Enceladus, is Profunda Corp, for which the city is named. This corporation is by far the largest engaged in mining and refining the abundant organic chemicals on Enceladus. Profunda's answer to rivals in this field is to ignore small firms and aggressively buy out any that become large or profitable enough to become even a potential threat.

Every citizen that lives in Profunda has at least one share in Profunda Corp. Dividends go first to providing living necessities, with more shares bringing a higher standard of living and more wealth. Locals can sell their share, and there are plenty of buyers, but doing so means the seller loses permanent rights to necessities and has to buy them on a pro-rated basis. Almost no one who isn't interested in moving elsewhere ever does this. As the mines and refineries expand, the number of shares in Profunda Corp increases; some are purchased by the upper

class, while others are either purchased by prospective immigrants or given to especially valuable immigrants by various local corporations or wealthy private individuals. Needless to say, many people would love to move here, but if you aren't a citizen-shareholder, the most you can get is a temporary tourist or work visa.

Originally a large but mostly automated mining station, the abundant local resources allowed the few hundred locals to rapidly build a large habitat, which was then primarily settled by refugees from both Indonesia and New Zealand during the Fall. Profunda has a large Southeast Asian Muslim population and at one time boasted the tallest and most elaborate minarets in the Saturnian system, a title recently taken away by Salah. Like most of the truly grandiose local architecture, these minarets are located on the surface. Life in the tunnels is prosperous and no one lacks for space, but the wealthiest inhabitants live on the surface. The surface portions of the habitat primarily consists of large domes where the distinction between lush tropical or temperate parkland and living space has largely been erased. The biggest of these domes is more than 50 kilometers across and is the single most visible feature on this relatively small moon's surface.

Profunda is also home to some of the system's premier genetic engineers and morph designers. Genehackers have their pick of employers here. Because the moon has minute gravity, only slightly more than 1% of Earth's, all of the plants and animals in the parks and tame wilderness areas have been genengineered to deal with the exceptionally low gravity. Naturally, the more successful designs are then sold to other habs, providing income to support even more experimental genetic research. Two of the major triumphs of the Profunda gene designers are the aerial plants, which float using small hydrogen gas bags, and the multitude of small- to medium-sized animals that possess the capability and instincts for low-g flight. The semi-sapient cats with gliding membranes and prehensile tails are popular pets all across the Saturnian system, but are also regarded as pests by some people, as they have spread widely since their introduction.

While other habitats and hypercorps dominate the trade in exotic morphs or morphs for specialized work environments, the local Glitter Bloc dominates the trade in high-end luxury morphs. Their latest model, the Saturn elite, is merely the latest of a series of major hits that have come out of Profunda. Several sylph variants currently popular on Mars and the ring flier are some of their other more popular designs. The people at Skinaesthesia and Skinthetic don't like to hear it, but when it comes to really slick high fashion morphs, Profunda is firmly in the lead.

## IAPETUS

**Posted by:** Zheng Feng,
Firewall Proxy <Info Msg Rep>

Iapetus is by turns fascinating, breathtakingly lovely, and deeply saddening.

Iapetus fundamentally makes no sense. Early in the Fall, almost 200,000 refugees traveled in overcrowded ships from Earth to Saturn, or were egocast, if they could afford it. The 5,000 inhabitants of the industrial city of Analect agreed to help them out. While the refugees were in transit, the people in Analect used their tech to fab up a whole lot of living space. For the next few months, Analect was one of the few success stories for transhumanity. Like the Jovian refugee camps, but far less unpleasant, almost 200,000 people who got off Earth with their bodies intact started to make a new home. Then, near the end of the Fall, something else arrived at Iapetus. Maybe it was a small TITAN probe, perhaps just a few dozen flecks of nanotech smart dust. Whatever it was, it found Iapetus, and the previously fortunate survivors became some of the last of the TITANs' victims.

The TITANs seem to have been working to transform Iapetus into a matrioshka brain or some similarly massive computation structure. We don't know why, or why they didn't finish, or even what happened to them. One day they were simply gone, their defenses inactive, their system decaying. The inhabitants were largely wiped out, many of them converted into monstrous servants that simply died when the TITANS went away. All we have left are questions and numb disbelief.

A dozen research stations now monitor the partially converted moon from a safe orbital distance. It is not entirely inactive. Strange but infrequent undecipherable transmissions and energy readings are occasionally intercepted from under the surface layers of computational lattice. Surface features inexplicably change, without any visible meaning or cause. The dead structure gives many of its watchers the feeling that it is haunted.

Some of the researchers take a hands on approach, establishing outposts in the subsurface ice tunnels. The Titanians, argonauts, Consortium, and a self-described "TITAN-busting" anarchist tech collective all maintain bases, operating with strict safety and quarantine procedures. They map the layout of the structural changes, attempt to discern the purpose of the complex layers of circuitry, and even attempt to activate discarded machinery in sandboxed environments for study. They search for answers they will never find. Why here? Why such a gruesome fate? What was the TITAN trying to do? What can we do to make sure this never happens again? The attrition rate is high. People disappear, experience things in the tunnels of which they refuse to speak, and have breakdowns and unfortunate accidents. Something about



Iapetus drives some people crazy. Maybe it's a variant basilisk hack, something picked up from direct skin-to-surface contact with certain artifacts. Personnel have reported a compulsive desire to abandon whatever they were doing to walk ever deeper into Iapetus, down the kilometers of twisting tunnels and circuitry.

These sponsored researchers aren't the only ones to come here. Iapetus draws explorers and looters alike. The previous inhabitants were refugees who physically left Earth and most of them arrived with at least a few possessions that are now exceptionally valuable, like all other Earth relics. Records from that time are also exceptionally spotty, and so the identities of many of those who died on Iapetus are not known. Recovering proof of identity can sometimes result in a reward from friends or relatives, or at least a modest fee from one of the organizations attempting to tabulate the identities and fates of everyone who died in the Fall. Others breach the travel restrictions here to find some bit of tech they can sell to black marketeers.

They'll tell you the pay for explorers is good, but everyone here is crazy, myself most definitely included. For obvious reasons, Iapetus draws singularity seekers like dust on a ruster. Most are fine, as long as you leave them alone, but some are actively hostile towards other explorers, and most "accidents" in the tunnels are their work. Some of the people here simply have a death wish, others are even more obsessed with the TITANs or the Fall than most people, but the majority of us have a far more focused obsession: we want to understand what happened to someone we knew who was on Iapetus when the TITANs arrived and turned the moon into a twisted charnel house.

Some underground portions of the moon are still habitable, with both breathable atmosphere and pressure, though the moon's natural gravity is extremely weak, less than a quarter of Earth standard. Most of the outer portions of this moon seem to have been support structure, cooling arrays, and other secondary aspects to the matrioshka brain. At least in the levels we've visited so far, almost all the computational structures have decayed into uselessness. Explorers have returned with a bizarre array of materials dug out of this world's corpse. The most common are still-functional fragments of the matrioshka brain, with intact circuitry. Also common are small relics from Earth found in odd places, stuck to walls or inside machinery.

The strangest and most disturbing things we've found on Iapetus are the bizarre and disturbing sculptures and portraits. Explorers I know recently found three portrait busts made from the same crystalline materials that the rest of the structure is made of, and I just found a black and white portrait etched into one of the walls. Each is in a different style and is of a different subject, though all reflect subjects in agony or pain. In two cases, we've managed to verify that the subject was someone who was on Iapetus when the TITANs took it, but in other cases they have depicted people who died on Earth, or subjects whose identity is unknown. All of these works of art are fairly crude, but clearly done with great care. The strangest thing, however, is that all of them were created within the last five years. You read that right, they were made well after the Fall and well after the departure of the artificial minds that inhabited this world. Is there anyone or anything left alive here? I'm not certain I want to find an answer to that question. By agreement, most of the researchers stationed here do not publicize these works of art, though I've heard of singularity seekers and exhumans offering high sums for the few that have been found.

If you're thinking of visiting Iapetus, I recommend you think again. If you must come, back yourself up and try to get involved with one of the officially sanctioned research teams. You can try to sneak your way here, but be warned that the quarantine is still loosely enforced by Titanian drones. It's also common knowledge that a few private parties—Firewall included—keep an eye on events and comings and goings here, just to make sure no one makes off with an intact TITAN or some other threat.

## KIVIUQ

**Posted by:** Sakti Wakashi,
Firewall Proxy <Info Msg Rep>

Kiviuq is a small irregular moon, only 16 kilometers across, on a far orbit, around 110 million kilometers from Saturn.

### KIVIUQ MONASTERY

**Station Type:** Beehive
**Allegiance:** Independent
**Primary Languages:** Greek, Russian
**Population:** 50

Out in the big black empty, more than three times further away than the next closest moon, there's a whole lot of peace and not a lot else. I suppose that it makes sense that someplace this isolated would attract mystics and ascetics, and that's exactly what happened. Out here, Saturn is about the same size a full moon on Earth used to be, and the sun only provides fairly dim light. Most of what you see is light years away, with the occasional dot of a moon moving past your field of vision.

The rules of Kiviuq are clear and simple: to be allowed to visit, you need a morph that can handle vacuum and the cold for several hours and you need to be willing to help out in the common buildings. There are only a little more than a thousand people here, and they're about evenly divided between synths and bios. Everyone sleeps and eats, for those that eat, in a single large common building, and everyone helps with the upkeep and maintenance, which is easy and takes very little time. In their off time, residents and visitors can do whatever they want, as long as they don't disturb anyone else. There are no celibacy vows or any sort of similar restrictions. However, for 10 hours a day, everyone is expected to go outside and contemplate the universe in silence. Everyone goes out and comes in together, but once outside you're free to do whatever you feel like. The only limitation is that all mesh signals are blocked outside, so you're not going to spend this time losing yourself in a vid game.

Some people just sit and stare at the stars, others walk or perform various moving meditations, including everything from yoga to tai chi to weird movements I've never encountered anywhere else. Everyone is free to interact with the infinite in whatever way they see fit. Also, once everyone comes in, it is common for many small discussion to start up on what people thought or experienced. Locals mostly refrain from heated theological arguments, but the discussions can be both intense and fascinating—if you're into that sort of thing.

The monks welcome tourists, but expect them to abide by all of the local rules. What recently generated interest in Kiviuq, however, is the neutrino telescope. Several of the mystics here wanted to listen to the universe, and so they built a large neutrino telescope to commune with "the hearts of stars," whatever that means. This neutrino telescope is specifically designed to listen in on neutrino sources outside the solar system, with electronics that filter out anything coming from inside the orbit of Saturn. They also constructed other neutrino receivers on four of Saturn's more distant moons, so now they have the second largest neutrino telescope array in the solar system. Not bad for a team of a few dozen monks. They even got special dispensation to "listen" to the data from all of the telescopes when they're outside.

While this was only news of passing interest to the mesh, the bigger controversy came a few weeks later, when one of these monks claimed to hear some sort of language in the neutrino flux that they received. Her name is Mirella Kouri, and she is certain that someone out there is saying something. She's having trouble figuring out the basic concepts, and believes that she's either uncovered some sort of divine message or something exceptionally alien, and she's started to gather a bit of a following. None of the software the other monks have let crunch the neutrino data has found anything resembling language or other consistent patterns, but after observing her carefully for a whole month, I'm pretty certain that she's a gifted async, meaning she may actually be able to find patterns and decipher messages that nothing else can.

Since reviewing the data, most mesh pundits dismissed her as a nut, and even most of the locals think she's simply having visions inspired by the data. I think she's actually found something,however, but space only knows what she's found. We need to get one of our own asyncs on this data. Since the controversy passed, the monks have been keeping their latest batches of data to themselves to discourage further speculation. Their security is a bit underwhelming, though, so I was able to snag a copy. I'm sending it along with this report.

## MEATHAB

**Posted by:** Dominus Maximus, Scum
<Info Msg Rep>

**Station Type:** Unique
**Allegiance:** Independent
**Primary Languages:** Mandarin, Polish, Turkish
**Population:** 500

As I am in the Meat, the Meat is also in me. I partake of the Meat and the Meat sustains me. I sustain the Meat with my presence. The Meat is my everything.

And so on, and so forth. All praise the most holy hamburger, we bow before the divine sausage, may the meat gods shower us in meatballs, et cetera, et cetera.

If you've never been to MeatHab before—or, as the faithful insist on calling it, Turn Yourself Into a Giant Mass of Space Meat for Art!—, then you're in for a treat. Pun intended.

What started as a bizarre piece of performance art by an unknown transhuman that obviously was way, way ahead of the curve when it came to becoming a habitat has since taken on an existence just as bizarre as its genesis. It probably didn't expect squatters to move in, but MeatHab is currently home to some 500 morphs and easily twice that number of visitors, pilgrims, artists, and scientists on any given day. Most of the permanent residents are artists, anarchists, or scum who dig the unique atmosphere of the place and are content to just bask in the weirdness without trying to read anything deeper into it. But the rest of the lot? Nutters at best, dangerous psychos at worst.

It's unsurprising that such an oddity would attract tourists. Certainly there's little like it in the known universe, and transhumanity has always appreciated a good freak show. But the pilgrims? They're a bit unexpected. I've seen transhumans turn to all manner of belief systems since the Fall, but the Acolytes of Living Meat, those guys are fucking bonkers. Led by a genderless case that refers to itself as the Speaker of the Meat, the Acolytes are all sleeved into non-organic bodies since they don't believe themselves worthy of the gift of flesh. As near as anyone has been able to cobble together from their theology, they seem to believe that MeatHab was created by a transhuman, but that the habitat was infused with a spark of the divine and attained sapience on its own. It is, literally, the avatar of their god or goddess. For the most part, they keep to themselves, kneeling in corners or rubbing oils and lotions into the walls of the habitat.

The kicker of this is that MeatHab itself seems to be, well, fucking with them. It sends "signs" to the devout, but seems to do so in such a way to undermine the authority of the current Speaker and its cronies.

This is far from the only sign that people have observed that indicates the original intelligence of the habitat is still around and taking an interest in the people living inside of it. If you live here long enough, you'll get a fairly good sense of how MeatHab feels about you. It may be little things, like how long it takes the maintenance lizards to clean your private area, or the way the doors open and close, but there is definitely a presence there. And it has a clever sense of humor.

Unless you're an exhuman, that is. None of us expected a small crew of them to show up, but it seems that a few exhumans decided that MeatHab was of their ilk. They didn't stay long, though. MeatHab clearly didn't like the exhumans, and it made that abundantly clear. They left in a huff … but if I read their kinesics correctly, it was a "we'll be back" sort of huff. We've spotted their ships in the vicinity a few times since then, studying the habitat from a distance. While it seems insane that anyone would seriously want to harm MeatHab, it is becoming increasingly obvious that the exhumans could pose a serious threat.

## MIMAS

**Posted by:** Sun Bu'er,
Firewall Proxy <Info Msg Rep>

Mimas is a largely unremarkable icy moon, around 400 kilometers in diameter but with a slight ellipsoid shape. A half dozen small beehive and dome habitats pockmark its surface, though the largest settlement is Harmonious Anarchy, along with its orbital manufactories.

### HARMONIOUS ANARCHY

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance (Extropian/Mutualist)
**Primary Languages:** Cantonese, Mandarin
**Population:** 500,000

The more prohibitions there are, the poorer everyone will be.
The more weapons are used, the greater the chaos will be in society.
The more that people seek "knowledge" for its own sake, the stranger the world will become.
The more laws that are made, the greater the number of criminals.
Therefore the wise person says:
I do nothing, and people become good by themselves.
I seek peace, and people take care of their own problems.
I do not meddle in their personal lives, and the people become prosperous.
I let go of all my desire to control them, and the people return to their natural ways.
—Lao Tzu, *Tao Te Ching*

Taoist collectivist anarchism isn't a way of life that most people desire or even understand, but it works. Since Harmonious Anarchy split off from Fa Jing 14 years ago, they have kept Fa Jing's emphasis on highly efficient industrial design. They are the second largest designer and manufacturer of industrial equipment outside the orbit of Jupiter, a fact that has made the almost half a million inhabitants of Harmonious Anarchy relatively prosperous. However, like most other mutualist, anarcho-communist, and collectivist habs, this prosperity is distributed fairly equally. Everyone here has a morph and other basic property, as well as a modicum of luxuries, but the taoist ethic eschews ostentatious displays of wealth and the inhabitants of Mimas live fairly spartan lives.

For those used to the more traditional Confucian ethic found on many Fa Jing habitats, life on Mimas is a rather jarring contrast. Contrary to the emphasis on masculine aspects of traditional family and hierarchical models espoused by Confucianism, the taoists of Mimas live by the more traditionally feminine and egalitarian ethics described in the Tao Te Ching. This means the highly structured and competitive environment of most Fa Jing habs is replaced by what seems to be a whole lot of people doing nothing. Workers wander in contemplation at all times of day, talking quietly in small groups or pairs, moving in and out of different structures, eating when they feel hunger, and sleeping when they feel weary. On Mimas, you do what you wish, not what others tell you. To the consternation of our former employer, it works gloriously well.

Each of the five color-coded cavernous neighborhoods, based on the classic direction of Chinese mythology, is a unique community. Families form the core of life on Mimas, but the term "family" has a slightly different meaning here. Instead of a genetic bond, families are groupings of choice, bound by mutual interests and support. New immigrants to Mimas are encouraged to explore and talk to as many people as they wish, with the expectation that eventually they will find a family that fits for them. Not everyone does, but that's OK; Harmonious Anarchy is not for everyone. Those who do find a family, however, gain a social unit that looks after them and cares for them in times of need.

Despite not having any formal requirements for labor or work, most of the residents of Mimas are highly productive, allowed to choose their own projects and work at their own pace. They nonetheless develop innovative software and are on the cutting edge of industrial design. Hard work and success are rewarded, but a portion of all rewards someone gains goes to their family. Personal displays of wealth are nearly unheard of. Instead, most profits are used to further improve life on Mimas, expand the habitat, or sponsor new egos to join one of the established families on the asteroid.

## PAN

**Posted by:** Roberto Alverez,
Firewall Proxy <Info Msg Rep>

Pan is the innermost of Saturn's moons. It has an irregular walnut shape and is approximately 34 x 31 x 21 kilometers. It is uninhabited apart from the iZulu colony.

## IZULU

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance (Extropian)
**Primary Languages:** Afrikaans, English, Xhosa, Zulu
**Population:** 1,100,000

iZulu was built by anarcho-capitalist South African technocrats who managed to escape the Fall, in the process bringing along more than two million infomorph refugees from Sub-Saharan Africa. Those infugees with the right mix of contacts and skills received bodies and are doing well on iZulu. Skilled refugees who were also lucky were not physically re-instantiated, but are now active as infomorphs in the iZulu mesh. The rest remain in dead storage, waiting for someone to retrieve them. Many of these frozen egos were adapted to living conditions and technology that were at best fifty years behind the times when the Fall hit, meaning that they may have difficulty coping with transhuman society without a sponsor willing to help them adapt and acquire new skills training.

iZulu is essentially two colonies. The first and most obvious is the physical habitat, the second is the virtual colony inhabiting the mesh.

### THE EMBODIED WORLD

The iZulu habitat population is, in total, less prosperous than most habitats around Saturn. On the other hand, iZulu is also home to some of the wealthiest people in the outer system, indicating a large economic disparity between the classes. With a huge population of active infomorphs clamoring to be re-instantiated, the embodied residents are quite aware that they are a single serious mistake away from losing their morph and rejoining the digital masses. Make no mistake, this can be an exceptionally brutal hab. Here, financial success is considered both a mark of luck and a sign of moral virtue. When someone runs into financial trouble, many of their allies and friends desert them as they seek to isolate themselves from any sources of failure and disgrace. If you're doing well, however, this can be a fairly sweet place to live, with the luxury areas of the habitat putting even the most decadent Venusian aerostats to shame. Sure, it's crowded, but you've got access to all the latest goods and sufficient raw materials to fab up anything you can fit in your hab module, as long as you don't think about how the rest of the population is struggling to get by.

One of the most serious problems here is the belief that family comes first. Most locals are fiercely loyal to their families and closest friends, but everyone else is considered fair game. Screwing a rival, even to the point where they lose everything, even to the point of being placed back into cold storage, is considered acceptable. If you're not related by blood or marriage, many people will do what they can to rip you off at the first opportunity. In their view, they owe you absolutely nothing beyond the very minimum the law requires, which basically simply boils down to not destroying or stealing each other's property—at least, not blatantly. This competitive, no-holds-barred ethos results in numerous blood feuds and occasional violence. Many of the private courts that settle legal disputes are notoriously biased and corrupt; it pays to read your contracts carefully, have friends in high places, and make judicious bribes.

Another of the major complaints made by the lower classes here is the high degree of discrimination

based on ethnic and national ties. The South Africans largely run the show here, specifically the Zulu and Xhosa families who were able to escape the Fall with a large amount of their wealth intact and found iZulu. Because of this, a small number of families have a stranglehold on the upper echelons, meaning that anyone from other tribes or nationalities is a whole lot less likely to have a morph or to have a crappy case and not much else. Inter-ethnic tensions run hot here and occasionally flare into violence. The security contractors tend to be dominated by specific ethnic groups, meaning that they often instigate the cycle of violence. These sorts of tensions seem exceptionally archaic to most outsiders, but the local power structure and the desperation of the poor keeps this nonsense from fading away.

### THE IZULU MESH

The iZulu mesh is home to 700,000 active infomorphs, almost twice the embodied population. A vast simulspace environment has been established for them to dwell in. Virtual Africa is a hyper-real vision of what a fully modern Africa might be like. It's a wonder of simulspace engineering and programming and includes options for virtual versions of all of the popular biomorphs, including a wide variety of mental enhancements. The recreational and entertainment options it presents are endless.

Nevertheless, many consider Virtual Africa to be a gilded cage. Most of the infomorphs are indentured bitworkers with lengthy contracts in order to pay off the evacuation, iZulu establishment, and Virtual Africa fees with which they are saddled. Most of them harbor a fair amount of jealousy and resentment towards the physical residents, especially the habitat's wealthy elite. A few of them have even made a bold political statement, refusing to resleeve when offered an opportunity. They demand better pay and contracts for infomorph work and the opportunity to egocast to other habitats or resleeve at more reasonable rates, and they want to see a plan instituted to re-instantiate all of the infomorphs remaining within 10 years, as well as activating the million plus egos in dead storage. The potential for some form of large-scale civil unrest on iZulu remains high.

## PANDORA

**Posted by:** Ann Carais, Astrobiologist,
Titan Autonomous University <Info Msg Rep>

Pandora is a small inner satellite on a chaotic orbit, but its effect on transhumanity has been quite large, if also chaotic. The location of the original Pandora Gate, Pandora is one of most highly trafficked areas in the Saturnian system. Firewall has documented this moon and its facilities more thoroughly elsewhere, but I will say this: everyone in the system keeps an eye on what goes on here. The Gatekeeper Corporation may have opened up the gate, sharing it with others throughout the system, and the Titanians may still keep a grip on things, just in case, but there is plenty to worry about. A resource like the gate is something no one takes lightly. It could be an excuse for the Consortium or even the Jovians to move in, in order to have tighter control over transhumanity and the solar system itself. It draws extremists and weirdos of every flavor, from singularity seekers to exhumans to religious nutjobs. And then there's always the possibility that some alien visitors might take it as open door right into our backyard, or perhaps the TITANs themselves might even show back up (wouldn't it suck if they had gotten halfway across the galaxy and realized they had forgotten something on Iapetus?).

Even while Pandora concerns the hell out of us, it is also one of the most exciting things going on in



## THE DAPHNIS PROJECT

A growing segment of iZulu's infomorph population are no longer content to work off their lengthy indentures or to wait for the colony's elites to resolve the embodiment problem. Instead, they are undertaking an ambitious plan to create their own habitat. Under the dual banners of freedom and cultural preservation, these infomorphs have reached out to a group of Titanian microcorps and sought their help in creating a habitat in the tiny nearby moonlet Daphnis. Their original plan was to create a beehive habitat, but this moon is a rough disk nine kilometers in diameter and six kilometers thick and is an ideal candidate for transformation into a Hamilton cylinder. Today, the ultimate goal of the Daphnis Project is to create more than a thousand square kilometers of a remade Africa that will become home to most of the iZulu infomorphs and a fair quantity of recreated African wildlife. Essentially, the Daphnis Project hopes to make Virtual Africa real.

It's an impressively ambitious plan for people who can't afford bodies or living space on their home habitat, but the Titanians have already taken the proposal to the Plurality and received Commonwealth support. The iZulu leaders are alternately dismissive and worried about the Daphnis Project. They are unable to do much about it, however, not wanting to risk a loss of rep with their autonomist allies or imperil the major gas mining contracts they have with the Commonwealth. ■

our neighborhood. People come here seeking adventure and new beginnings, new mysteries are found that draw our attention, new life is discovered that shows us that we are not alone in the universe. So we cope with the fear and concentrate on the positive. It certainly gives us something to do.

## PHELAN'S RECOURSE

**Posted by:** Nils Hamre,
Ego Hunter <Info Msg Rep>

**Station Type:** Nomadic Swarm
**Allegiance:** Autonomist Alliance (Scum)
**Primary Languages:** English,
Mandarin, Skandinavíska
**Population:** 250,000

Phelan's eh? Well, sure, I live there, but I'm not sure you'd really call me part of the family, you know?

The family—or Family, rather—are, depending on who you listen to, either a bunch of thieving bastards, a god-damned nuisance and blight on the entire solar system, the scourge of the Commonwealth, or the best damn party you're likely to see this side of Carnivale. Of course, that's all according to them, other opinions may vary.

Getting the truth out of the scum that run—though infest is probably a better word—Phelan's, is easy, just ask 'em. Of course, the truth, to scum, is a very mutable thing, and no member of Phelan's is under any obligation to respect the truth of any other members.

If you listen to the Commonwealth—not that I would, were I you, but they do like a single solid narrative—the good folks of Phelan's are a melting pot of Irish travelers, Scandinavian viking-anarchists, a former California poet-biker gang, and a bunch of drunken Catholic priests on the lam from the Jovians. Sure, I've met plenty of folks that could loosely be said to meet that description aboard Phelan's. Of course I've met thousands of others too, people the Commonwealth leaves out, including more than a few of their own disaffected citizens who find all of their blather about citizenship and politics a waste of time and oxygen. As it stands, there's over a quarter million egos spread out among 10,000 craft in this swarm, so our diversity program is doing quite well in these parts. One thing that often surprises visitors is how long Phelan's is; the swarm stretches for over 1,000 klicks. All those craft take a long time to pass by, and we're never in a hurry to go anywhere. After all, it'll still be there next time if we miss it on this go-round.

For me, Phelan's is the best way to keep in touch with all sorts of people around Saturn, since it goes everywhere that's worth going to. Most people, whether they admit to it or not, partake of some of the services offered by Phelan's when the opportunity arises. For most, this is Phelan's Ma, the best whiskey in the whole god-damned galaxy. I'd say solar system, but let's face it, it's highly unlikely the TITANs fucked off with a good whiskey recipe on their way out of the system, and I'm pretty sure if you poured Phelan's Ma on a Factor it'd kill the poor bastard.

Even if that Factor were still alive, it'd be dead for sure if you hit it with Phelan's Da. Same goes for a lot of transhumans I know too. If the whiskey is divine, and it is, then Phelan's Da is a beer brewed from cat piss in the devil's asshole and left to ferment in a cesspit. I use it, after putting on a good vacsuit, to soften up some of the fugitives I bring in if I need some useful intel off of them. I know others that have found it to be a passable drain cleaner and a substandard engine parts degreaser, but I would never, under any circumstances, recommend drinking it.

Of course, paying a visit to Ma and Da Phelan are hardly the only reasons to visit the Recourse. Drugs, weapons, petals, body parts, schematics, anything you could want is here for the trading. Keep in mind though, for the most part your money is no good here. We operate more along a quid-pro-quo system where information in particular is a hot commodity. As the largest entity that makes regular stops at all the big habitats, Phelan's is a good place to get an overall read of what's going down on all of Saturn's moons and habs. It's also one of the few places where you can make contact with nearly every major criminal cartel in the system, as well as quite a few bit players. There's no law on Phelan's, only your reputation protects you, and if no one owes you, and no one is willing to vouch for you, I'd strongly advise being well armed.

Phelan's is a literal floating border town on the orbiting, raucous edge of civilized space. Once you get beyond Saturn, there's very little in the way of what someone from the inner system would call civilization, just anarchists, ultimates, exhumans, and worse. I've seen a lot of people that were heading out into the black, but weren't riding a beam of data, stop over here to grab one last drink before they go off over that edge.

## PROMETHEUS

**Posted by:** Mimiko Green,
Firewall Informant <Info Msg Rep>

One of the minor inner moons of Saturn, Prometheus is home to the Commonwealth industrial colony of Marseilles. It is elongated in shape, measuring roughly 136 x 79 x 59 kilometers.

### MARSEILLES

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance
(Titanian Commonwealth)
**Primary Languages:** French,
Skandinavíska, Vietnamese
**Population:** 800,000

Marseilles was constructed similar to many other beehives built on icy moons and asteroids

throughout the solar system: by melting tunnels and chambers into the ice and then insulating them. Since Prometheus is an exceptionally porous body of loosely packed snow mixed with small amounts of rock and metal, however, its interior is filled with large caverns. The major parts of Marseilles were constructed by enlarging these caverns and strengthening them by melting the snow to form a shell of ice between 50 and 100 meters thick. After insulating this shell, the cavernous interiors were built up with a maze of corridors and rooms.

Not all of the caverns are fully developed habitat space. The Ice Gardens are a series of only partly insulated caves kept at a cool 5 C to keep the ice stable. Genehackers from Profunda were hired to populate these Gardens with cold- and micrograv-tolerant plants and smart animals. These cold but wonderful parks are filled with conifers, snow monkeys, furry snakes, and white owls, and all of the animals are tame enough to be pets. Outsiders mostly haven't had much experience with large micrograv gardens, and so it takes a bit of getting used to, but it's impressively lovely

Marseilles is home to some 80,000. A significant portion of these work in the large surface refineries, converting the volatiles gathered by the Commonwealth's gas mining skimmer fleets. The locals are nice people and fairly well off, however, it can be a somewhat odd place to live due to a pervasive air of secrecy. Everyone knows that the Commonwealth almost certainly has an antimatter factory here, but no one will confirm this fact. Approximately one eighth of the population has a high security clearance and works in a well-guarded deep cavern called Maxwell.

## Maxwell Cavern

Maxwell is only accessible via a pair of ultra-secure maglev lines. To get into the train station, much less on either of these trains, your data needs to be on file, and they don't just rely on mesh data either. You get a blood sample to check your morph and a brain scan to check your ego just to get into that train station. The whole procedure only takes 30 seconds per person, but everyone working in Maxwell must prick their finger and put the circlet on their head every trip. If either one doesn't match, they are detained until everything is figured out.

The station is built away from the rest of the habitable space and has no access from the surface; you must pass through the entire main habitat to get there, and most of the locals are on watch for strangers acting suspiciously. The actual engineers, scientists, and security personnel who work at the Maxwell site are a remarkably secretive bunch. While they visit local shops, nightclubs, and restaurants, they mostly only go there in the company of other high-ranking Commonwealth personnel, and they rarely talk to outsiders in anything but the most casual fashion. The locals who aren't employed at Maxwell are



understanding of the high security around the facility, especially since the Commonwealth spends heavily to keep Marseilles in top condition, but there is still a bit of resentment at how much of a distance the Maxwell employees keep.

I believe the rumored antimatter factory is only part of what's happening here, and that it's largely an open secret because it is the only project that the Commonwealth isn't keeping well hidden. It makes an excellent cover for whatever else is going on here. You don't have to believe me, but if you hang around the main docks, there's a hell of a lot of propulsion and fabrication technology arriving that quickly disappears down the Maxwell rabbit hole. You add this up with all the security they deal with on a daily basis,and it's easy to see that there's way more than an antimatter factory going on in that cavern.

We're dealing with rumors, but people occasionally let things slip and with the type of tech getting shipped into that cavern—or caverns; who's to say there is only one? I think it's safe to say they're working on some sort of next generation propulsion technology. If it weren't for the Factors, I'd say that reactionless drives were a fool's game, but they exist, and some of the gear and scientists the Commonwealth has here might fit that profile. The other idea that works is weapons research. The next step after making antimatter is either tweaking matter so it flips over into antimatter or creating anti-particles out of the quantum foam. Do that at range, even a fairly short range, and you've got a very deadly weapon. There's no proof of any of this; the Commonwealth doesn't seem interested in allowing any to get out. I've heard that people who get too interested in the Maxwell Cavern tend to vanish, sometimes reappearing with a lot less interest in what's going on here.

# RHEA

**Excerpted from:** *Travel Saturn Goes to Kronos*

What is there to see on Rhea, Saturn's second largest moon? Not much, unless you like ice. Lots and lots of ice. That vast expense of ice with more ice is probably why almost no one lives here, except for a few small tin can outposts. Instead, people in these parts have opted for an environment that is a bit more exciting, like say the genuine hive of scum and villainy of Kronos Cluster, in orbit above Rhea's snowball.

## KRONOS CLUSTER

**Station Type:** Cluster
**Allegiance:** Independent
(Anarchist/Criminal/Ultimate)
**Primary Languages:** Cantonese, Dutch, Turkish
**Population:** 950,000

Kronos's exterior grapevine look is seductive and misleading. The interiors of this cluster's modules are dirty and overcrowded. The station desperately needs to grow, but lacks the planning and infrastructure, forcing thousands of others to live in tin cans and permanently docked ships lashed irregularly to the cluster's exteriors.

Kronos began as a mixed Extropian and anarchist settlement. Like everywhere else, it was flooded with refugees and infugees during the Fall. Many of the Extropian ventures here were already bordering on what would be considered criminal territory elsewhere; the influx of survivors brought new waves of desperate and poor individuals, many of them with criminal affiliations of their own. As Kronos grew and expanded, its social order and infrastructure did not do as well. Criminal elements increasingly took advantage of the free environment to dominate commerce; the private Extropian security, legal, and insurance contractors here were simply unable to keep up,with many pulling out or being subverted in their own right. As the gangs began to struggle over specific areas and markets, violent crime skyrocketed. Militias began to aggressively protect the various anarchist enclave borders. As certain gangs did likewise, getting around Kronos started to become a real problem. The dominant Extropian presence, the Kronos Port Authority (KPA), brought in ultimate mercenaries to restore order, but the situation backfired when the ultimates chose to seize control of the port, taking over the KPA themselves. Today, Kronos remains a patchwork of armed neighborhoods.

### KRONOS PORT

Most people who come to Kronos are there to indulge in something they can't do at home, and visitors are often worried about how safe it actually is. The first thing you learn when visiting Kronos is that despite various rumors, the port area is remarkably safe. The KPA is run by a group of some of the most brutal ultimates you're ever likely to encounter. They keep the port safe, because safe is good for tourists and commercial visitors and these are good for business. The KPA is a business-first sort of group. Anyone who threatens or commits violence or property destruction—or looks like they might—is in for a very hard time anywhere near the port. Any locals caught interfering with the port's peace and safety end up brainhacked into obedience and stuck in a worker pod doing low-level maintenance tasks for the KPA.

Thankfully, this risk is almost exclusively a problem for locals. The KPA knows that tourists and other visitors are what keeps Kronos running, and so mostly they just exile troublesome visitors and tell them not to return. If a visitor is an exceptional problem, the KPA may just confiscate their morph and stick the ego in virtual isolation. If you aren't detonating bombs, smuggling antimatter, or otherwise causing large-scale problems, however, you'll never see even the KPA's nasty side. Instead, what you'll see is remarkably polite port officials, disturbingly helpful worker pods, and a set of rules that you'd better keep in mind.

Violence of all sorts is seriously frowned upon and

anything bigger and badder than light pistols, stun weapons, or a flex cutter is going to get confiscated. However, non-violent crimes are a very different matter. As the local mesh informs you the first time you connect on Kronos, most actions that are non-violent crimes elsewhere are perfectly legal here. Keep in mind they don't just mean prostitution, gambling, and dangerously hard drugs. Con artists and pick-pockets can practice their trades to their hearts' content, and many of the latter have tech that allows them to silence your possessions before they begin to yell to you about being stolen.

## Criminal 'Hoods

There are dozens of rival gangs on Kronos, each with their own territory. Despite the fearsome reputation, many of these are as safe as the port—like the ultimates, the crime bosses know that scaring people away is bad for business. Criminal enforcers patrol the streets, keeping rival gangs clear and protecting the residents and tourists. Others are less-savory lawless zones where no is safe unless in a heavily armed group.

The gang zones tend to still operate in Extropian fashion, except that the security contractors and private courts are in service to, or simply replaced by, the dominant cartel. These neighborhoods are the main reason many people come to Kronos, in search of illicit goods or services. This demand is met by thousands of business, which come in two flavors: licensed and unlicensed. Both are perfectly legal here, and, as the old joke goes, the only difference is the cut the KPA gets. Even in the areas the KPA doesn't directly control, they sell business licenses. Ostensibly, possessing a license means the business is safe and does what it says. Anyone that forges a license or doesn't keep to the terms it promises must face the wrath of the ultimates. Of course, the licenses cost a fair amount and goods and services provided by licensed businesses are on average almost twice as expensive as unlicensed ones. The gangs all see this as what it is—a KPA protection racket. Some of them comply, some offer their own licenses, many don't play the game. Unlicensed business can also offer a wide range of services and goods that are frowned upon even on Kronos—if you're foolish enough to give them a try. Take my word for it—always go licensed on Kronos.

The balance of power between the gangs is constantly shifting, but it pays to be up-to-date on who's who. Right now, criminal outfits like the Messina Sisters and Le Sapeurs are relatively straight shooters, keeping their 'hoods safe and keeping their customers happy—just don't get too into debt with them. Gangs like the Vinlanders and Bombacilar are at the lower end—savage animals that will violate your corpse and pop your stack as soon as make an even deal. Many of these gangs would love to oust the ultimates and seize control of the port, viewing that as the first step to achieving dominance over the cluster. Several have even formed temporary alliances for just this purpose. The ultimates are wise to the threat, however, and carefully ensure that no criminal outfit or bloc gathers enough firepower to threaten their control.

## Anarchist Zones

The anarchist zones are safe and well armed, but are correspondingly less interesting. If you're in need of help, they're usually a good place to find sympathy or even allies. Some enclaves have grown inured to the violence and crime, however, withdrawing into a more isolationist stance and no longer sticking their necks out for anyone outside their local group. Most anarchists try to steer clear of criminal conflicts, though they also have a vested interest in making sure no gang grows too powerful. The gangs occasionally make a point of scalping or lynching "anarchist vigilantes," fueling tensions.

## Getting Around

The one essential that you're really going to need if you're headed out of the port and into the portions of Kronos not directly controlled by the KPA is a local guide. Locals make good money as guides, both licensed and unlicensed. The latter is cheaper, but once you get outside the KPA's area of immediate influence, the difference between a mugger or kidnapper and an unlicensed guide can be very small indeed. The key to getting the most out of your guide's services is to be completely honest about why you're there. They've heard every weird, creepy, or disgusting reason many times before, and regardless of what you want, they'll be able to get you to it faster, easier, and safer than you can. Best of all, the licensed guides have enough contacts with the various criminal gangs that the worst you'll need to do is pay some modest bribes to safely visit or pass through a gang's territory.

There's only one good reason to hire an unlicensed guide: if you want to find someone. Some people go to Kronos to disappear, some simply arrive and try to vanish, and a good licensed guide may be able to help you find them. Some people, after all, pay the KPA lots of money to make certain they're not found. The KPA would like to believe that no one outside their leadership knows these people are on Kronos, but people talk, and people especially like to talk about people who don't technically "exist." However, if you do manage to get close, all they or one of their KPA guards need do is send the KPA a message to tell your guide to back off. At this point, your guide will do one of two things, depending on how much they like you. They'll either warn you of the danger or bug out and let the KPA enforcers use your morph for target practice.

If you aren't an idiot, Kronos is worth visiting, and can be relatively safe, but you really don't want to get between the KPA and their profits. Also, don't blame Travel Saturn if you come back short a few

possessions or having been conned. These things happen on Kronos; it's part of the local color.

## SALAH

**Posted by:** Ali Bin Kalifa Al Thani,
Firewall Crow <Info Msg Rep>

**Station Type:** Hamilton Cylinder
**Allegiance:** Independent (Contested)
**Primary Languages:** Arabic, Punjabi, Turkish
**Population:** 215,000

Peace be unto you. It is not often that one is asked to speak of his home to others in Firewall, and on those rare occasions when one is obligated to do so, it is usually for reasons that one's home is in imminent danger of a most dire type. Therefore, it pleases me to be able to tell you of Salah when there is no clear or present danger to the habitat, merely the satisfying of the curiosity of outsiders.

I myself have a rather unique relationship to Salah. My grandfather, great uncles, father, and uncles have all been vital in the funding of the great Hamilton cylinder. Even before the Fall we—that is, the Al Thani family of Qatar—were great financiers of efforts to expand ever deeper into space. When approached with an opportunity to build a habitat greater and more grandiose than any previously built, we jumped at it. You see, we have a bit of a reputation for desiring to build big. Once the Fall hit, many of us retreated to lands and estates on Mars, Luna, or Venus. We knew, however, that should it work as promised, Salah would be the place we could all come together again, the great diaspora, the Ummah, given once more a place to call our own. It is our fondest wish that Salah, named for the practice of formal worship in Islam and one of the five pillars, will be that place for our people. Even now, however, its future is uncertain.

One of the two Hamilton cylinders built in the rings of Saturn, Salah was recently deemed complete enough for habitation and is making waves for some decisions made by its leadership. The growing population is evenly split between a variety of people from across the Saturnian system and muslims from some of the most powerful and influential families on old Earth. My family was one of dozens that contributed to the construction of the habitat; most of the money came from various families living in the inner system. Now that Salah is open for immigration, the various scions of those sunward families are flooding the place. This has, understandably, created some tension.

On the one side, you have those of us that have labored to build the habitat and who have also built relationships with our neighbors. We understand that the outer system, and Saturn in particular, is not Luna or Venus. To our cousins closer to the sun, we have become strange. Some of us, myself included, have found that anarchism and socialism are not that different from the teachings of the Prophet and that seeing to the welfare of all is the noblest of all callings. Because of this, we are seen as corrupted, fallen to the vile and wicked influences and strange ideas of our neighbors by those who have kept the true faith in the inner system. This is complicated by the fact that most of us that have grown up with Salah, shaping it to reflect our dreams, are the younger sons and daughters, the poorer relations, or the hungry, but destitute families that made it off Earth with little but their bodies intact. To our wealthier, and often more pious, cousins from the inner system, we have done all we can and it is now their turn to take over. They sneer at the other residents of the Saturnian system and seek to embarrass our brothers and sisters on Profunda by building ever grander mosques and minarets, foolishly hoping that by shouting the loudest, Allah will love them best.

If these were the only newcomers, we could still endure, as they are content to build their palaces and places of worship and to look down their noses at those they consider less pious. They have little interest in actually running the habitat. Instead, they would leave us to our beliefs, and we could pass them off as just another thread in the rich tapestry that lives among the rings.

But they are not the only ones to have joined us. Far more pernicious are those that only weakly cling to their faith and who have learned the lessons of the Consortium. They have seen that wealth is compounded if you also have a servile and scared populace working hard for your enrichment. My older uncles and granduncles are, quite simply, immortal hypercapitalist oligarchs that see the wealth of the Saturnian system as ripe for the picking. And they are ascendant in their power. Since we opened the gates to new residents, they have been pouring in, dozens a day, hundreds a week, claiming positions of power through family ties and long-forgotten financing agreements, pushing the matter of how the habitat should be governed.

If you have been watching the Commonwealth mesh feeds at all this month, you would know this has not gone unnoticed. My granduncle, Suhaim Bin Hamad Al Thani, a current executive for Solaris, has reached out to the other heavyweight Consortium interests, advising them to set up shop on Salah. He calls us "open for business" and "the most significant investment opportunity since the Martian land grab." Considering that Salah will eventually hold millions of residents, the Commonwealth is right to be worried. So far, a significant hypercorporate presence has been kept out of the outer system, but Suhaim's big flashing invitation threatens to upset that balance of power. Something I know Firewall is concerned about as well.

# TETHYS

**Excerpted from:** *Travel Saturn Visits Godwinhead*

Tethys is a mid-sized moon, approximately 1,060 kilometers across. It has two co-orbital moons, Tethys and Calypso, at its L4 and L5 Lagrange points respectively.

## GODWINHEAD

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** English, Hindi, Punjabi
**Population:** 200,000

Godwinhead is a nice place to visit, but unless you're a xenobiologist or an archaeologist, it's a lousy place to live. Settled by a group calling itself the Rioters, this alarming name belies the placid nature of this community. Yes, there are more than 200,000 transhumans living here, many of them self-identified as anarchists, but most people attend the regular town meetings, either in person or via mesh, and there are a number of local festivals that are very popular and involve most of the community.

The ship that brought the original colonists to Godwinhead fifteen years ago, the *Caleb Williams,* has been turned into a kind of living museum, a must-see for both visitors and new residents. Godwinhead was founded after the discovery of tiny extinct microorganisms here by the *Caleb Williams's* crew. Using the good will and capital generated by this discovery, they expanded the settlement and bought a large number of morphs, which they offered up to needy refugees willing to work to make a real community. The original Indo-British autonomist culture of the settlement remains largely intact, with the new arrivals integrating their beliefs and practices into the local customs. The locals did an excellent job of attracting people with similar interests and temperaments. I'm told that Godwinhead is a lot like it was a dozen years ago, except considerably larger.

The *Caleb Williams* is the centerpoint of Godwinhead, parked in a cavern at the bottom of the 5-kilometer high Ithaca Chasma, a 2,000-kilometer trench that wraps almost all of the way around Tethys. The valley wall around it is pockmarked with habitat modules and ice tunnels, with trusswork and cabling stretching across the gap for micrograv ziplines and cable cars.

Outside of the extinct original settlers of Godwinhead, the Tethyan flatworms, the strangest section of Godwinhead are the ice tunnels stretching out and away from Godwinhead. As part of their search for new frozen life forms, prospectors, explorers, and biologists used plasma drills to create a large network of tunnels, most between three and five meters in diameter. There are more than 3,000 kilometers of tunnels. The close-in tunnels have been fitted with habitat modules and are a normal part of Godwinhead. However, the rest of the tunnels are not heated though they are usually sealed. Instead, they have a thin breathable atmosphere that comes from a few dozen makers placed strategically throughout the tunnels. Waste heat from the more habitable regions of Godwinhead keep these tunnels at temperatures ranging from –40 to –70 C. This means that anyone with some fairly basic augmentations can live comfortably in these tunnels, and more than a few people do, tapping in to the superconducting power lines the run the length of the tunnels for their basic needs.

The official population of Godwinhead is around 200,000, but that doesn't include the almost 12,000 people who live in the ice tunnels. They've got cold-adapted makers using ice and the occasional mineral deposits as raw materials and live in dwellings carved out of the ice or fabbed up from various cold-tolerant materials. They have even excavated a large central market called Bartertown, where all the merchants work in brightly colored tents. This market has become a tourist attraction and has been growing. The ice tunnels are home to artists, eccentrics, fossil prospectors, amateur naturalists, and people who want to disappear but don't have anyone who is actually interested in chasing them.

# TWELVE COMMONS (EPIMETHEUS AND JANUS)

**Posted by:** Sakti Wakashi,
Firewall Proxy <Info Msg Rep>

Twelve Commons is a neighborhood of anarchist habitats floating on and near the co-orbital path of two icy moonlets, Epimetheus and Janus. The area occupied by these stations is a cloud roughly 20,000 kilometers across. Despite the name, the population has expanded beyond the original twelve habitats. Over six million people call the Twelve Commons home. Many of the habitats are focused on particular scientific, technological, or artistic projects; the habitat design is often specific to their needs, resulting in a number of unusual station formats.

## DIY SHIPYARDS

**Station Type:** Cluster
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** Arabic, Malay
**Population:** 10,000

The Do-It-Yourself Shipyards are a highly automated ship-building facility, capable of handling most small and medium-sized spaceship designs. The worker's syndicate that operates the station will construct a ship for any other anarchist group on one

condition—they help out. The workers here simply love to make ships, and they are constantly tinkering with new systems and designs. When someone wants a ship, they'll present them with a number of options and handle most of the highly technical aspects. The group requesting the ship is brought in, shown the ropes, and included in the project as much as they are capable. They may help acquire the metals and other raw materials, assist with the blueprint programming, help operate the manufactories, run testing and quality control, or simply manually help put it together. The goal is to spread ship-building knowledge among like-minded autonomists. Quite a few unique designs come out of these yards.

## Janus Commons

**Station Type:** Beehive
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** English, French, Spanish
**Population:** 900,000

Janus is a large and prosperous habitat, known among Saturnian anarchist circles for its chemistry labs and creative theatrical productions. Recently one of its districts suffered from an unknown nanoswarm attack that saw hundreds of biomorphs calcified and turned into living statues. No one has claimed responsibility, though local consensus puts the blame on hypercorp agents. Firewall is not yet sure.

## Long Haul

**Station Type:** Torus
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** English, Hindi, Mandarin
**Population:** 20,000

The anarchists that founded the Long Haul focus on liberating indentures and infugees locked in deep storage in other habitats. These freed egos are brought in batches to Long Haul, where they are given a new body and introduced to anarcho-collectivist ways of doing things. Since many people from Earth have only lived under capitalism, autonomist ways of doing things are sometimes alien. The Long Haul helps get them through this period of adjustment. After one year, the new anarchists are relocated to another autonomist habitat, so a new batch of infugees can be brought in. The Jovians and hypercorps call this place an indoctrination camp, but no one is required to stay. A small percentage do, in fact, decide that the anarchist lifestyle is not their thing, and so they opt to egocast elsewhere and take their chances. There has been at least one instance of inner system ego hunters kidnapping former infugees from Long Haul; the person in question made contact with long lost family in the inner system, but the relatives were convinced they had fallen into the hands of cultists and sent mercenaries to "rescue" them.

## Nguyen's Compact

**Station Type:** Cole Bubble (Variant)
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** French, Khmer, Vietnamese
**Population:** 80,000

This Cole asteroid has an unusual design. Rather than having a single spherical interior, it was constructed with a series of interconnecting spherical bubbles, much like Swiss cheese. It is not spun for gravity, making each of the caverns a micrograv environment. The maze-like interior of this station is confusing to most outsiders, requiring entoptic aids to navigate.

## Red Emma's Dance

**Station Type:** Track
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** Greek, Italian
**Population:** 2,000

Built on a small asteroid, this entire habitat is set on a rail track, so that it circles around the asteroid, providing light centrifugal gravity. The residents here, following historical anarchist Emma Goldman's admonition, "If I can't dance, I don't want to be part of your revolution," are dedicated to creative expression, particularly music and motion. Specifically, they experiment with new morph designs that are musical instruments unto themselves or that are capable of new and pleasantly aesthetic movements. Each morph tends to be a custom design, one-of-a-kind piece; the performances they are capable when working together are something unseen anywhere else in the solar system. Many musicians and dancers from here travel on tour throughout the various Saturnian anarchist stations, often catching a lift from Phelan's Recourse.

## Small Majesties

**Station Type:** Cluster
**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** Spanish, Tagalog
**Population:** 80

Small Majesties was founded by a large collective of nano-artists, dedicated both to creating nano-scale artwork and designing nanoswarms that made wondrous things. Recently, however, a prank nanoswarm triggered a number of long-buried or ignored grudges and personality conflicts between the residents out into the open, creating a major schism. A situation that would normally lead to a split has turned into a tense stalemate, however, as both of the factions stubbornly refuse to leave. Despite attempts from other outside collectives to negotiate a resolution, open hostilities have broken out in the hab numerous times, with each side seizing some modules. More worrisome, however, are reports that the rivals are releasing hostile nanoswarms against each other. Nearby anarchists are attempting to quarantine the situation until it is resolved.



6

## MICROCORPS

These corps vary in how much autonomy they are allowed, but one thing is a constant—microcorp employees must continually re-invest their salaries in social projects. ■ p. 103

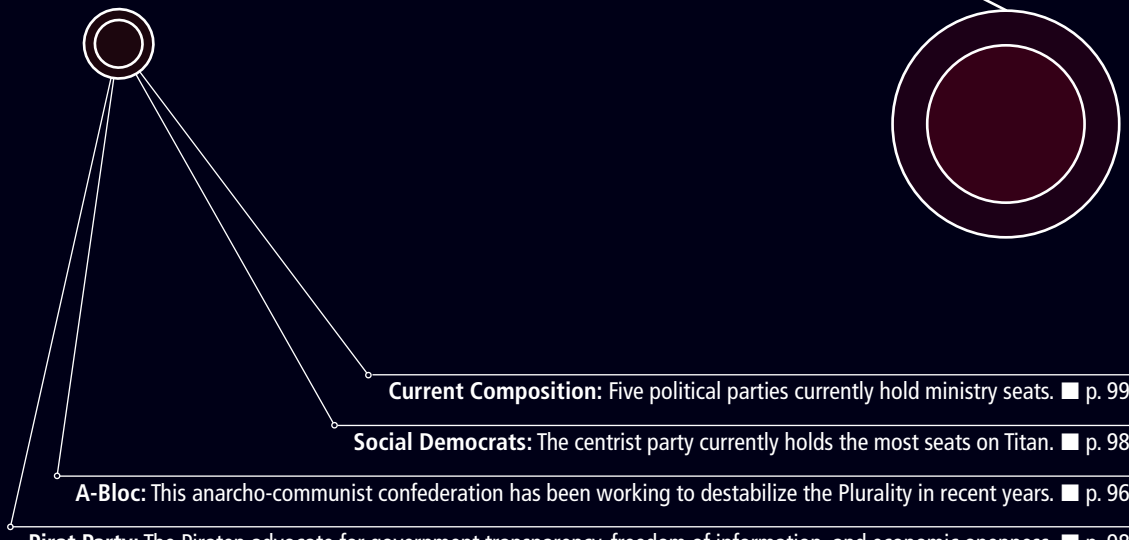
## GEOGRAPHY

Titan's deep ice is covered by a dense layer of clouds and smog and crisscrossed by rivers of methane and ethane. ■ p. 91

# TITAN

## GOVERNMENT

Titan is a parliamentary direct cyberdemocracy.



**Current Composition:** Five political parties currently hold ministry seats. ■ p. 99

**Social Democrats:** The centrist party currently holds the most seats on Titan. ■ p. 98

**A-Bloc:** This anarcho-communist confederation has been working to destabilize the Plurality in recent years. ■ p. 96

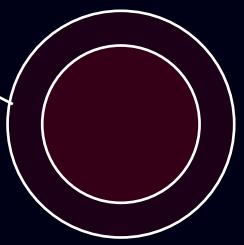
**Pirat Party:** The Piraten advocate for government transparency, freedom of information, and economic openness. ■ p. 98

## PLACES TO GO

**Longueil:** Home to *Bloc Québécois de Titan,* a group of French-Canadian separatists that practice "bioconservatism of the soul." ■ p. 109

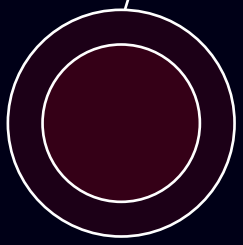
**Commonwealth Hub:** Titan's prime spaceport, orbiting synchronously above Nyhavn. ■ p. 109

**Mankell:** With powerful communications gear, Mankell broadcasts Titanian content sunward and captures broadcasts from the inner system, with full support of the Pirat party. ■ p. 109



## CRIME

Titan's socially liberal policies regulate instead of restrict, and most criminal activities are non-violent. ■ p. 100



# TRUE NORTH

**Posted by:** Magnus Ming,
Titan Autonomous University <Info Msg Rep>

From Aarhus to Nyhavn is a journey of 3,000 kilometers—an easy jaunt by suborbital, but, if one can spare the time, best done on foot. One doesn't learn to respect a world gazing down on it from orbit. Titan's wilderness is one of the harshest environments in the solar system, one that humbles our transhuman hopes for a material order that will succumb readily to attempts to tame it. There is much beauty to be found in the untamed coastlines of the hydrocarbon lakes, the drifting dunes, the play of methane clouds overhead.

I have never felt so transient and insignificant as on my first trek, decades before the Fall, from the tiny research station at Aarhus to the new colony site at Nyhavn. A catastrophic equipment failure had caused us to lose communications with Nyhavn, which at that point was an entirely automated outpost in the process of being constructed by robots. New settlers were to arrive in six months' time, and the base at Aarhus was too small to support them. It was vital that the Nyhavn base be ready to receive them.

Vicious spring storms had destroyed one of our aircraft and critically damaged the other, and we were unwilling to risk our few precious rovers on uncharted terrain. Eleven of us set out on foot to restore communication and finish preparing Nyhavn for habitation. Our LOTV we kept in reserve in case it became necessary to abandon the surface. The arriving colony ship carried enough supplies to both re-provision the first team and seed the second colony, but only in combination with ice and other volatiles harvested from the surface. The possibility that we would have to scrub the colonization mission and return both teams to Earth (very slowly, in cryo) hung over all of us.

Today, I hike the rugged hills around Aarhus and sail methane skiffs on Ontario Lacus for recreation, but in those days, any overland journey was a deadly serious business. To look backward at hundreds of kilometers of identical, trackless aeolian ridges, each in profile the same perfect sine wave as the one preceding it, and to look forward at another hundred kilometers of the exact same landscape, broken only by the occasional sawtooth ridge of rock and ice, knowing one must somehow cross all of it … it tugged at one's sanity, even given the rational knowledge that one was well provisioned with the technology needed for physical survival.

Yet, I have never felt so alive as on that march. Before the Fall, we believed we had made the physical world a safe and easy place for ourselves. It was seldom that we were truly tested. What Titan lacked in big, picturesque threats—we had neither cell-cooking ionizing radiation nor rampant cryovolcanism to contend with—it more than made up for in weather. Mean surface temperature during our journey from Aarhus to Nyhavn was –190 C—a cold spring. We encountered one violent lightning storm—a terrifying experience given the lack of shelter—and managed to avoid several others. It also rained many times, something you'll currently experience nowhere else in the solar system—never mind that the rainfall was liquid methane.

In the wilds, everyone was an island. One stayed in one's suit on a trek with no vehicles. Portable shelters that could withstand surface temperatures of –180 C were still bulky affairs in those days, and we'd opted against them. The only shared contact occurred during rest periods, when we'd link our suits to a portable life support pod to balance out suit chemical reservoirs. The rest periods themselves were arbitrary. The Titanian day and year are identical—about fifteen standard days long. Titan always shows the same face to Saturn; the unaltered haze, faintly illuminated by light reflected from the planet, was a constant.

Sounds reached us in our suits, an unfamiliar sensation to those accustomed to being suited in vacuum. Titan's thick atmosphere blocks virtually all sunlight, but carries sound better than Earth's atmosphere due to its density. The howl of wind, the occasional rain, the faint crunch of ice and carbon grit underfoot, and one's own respiration were the only noises. The trekkers conversed hardly at all, nor did we distract ourselves much with the mesh. Concentration was everything; any of a hundred small mistakes could be deadly. We reached what is today the metropolis of Nyhavn after a trek of twelve weeks, but the stark isolation of the journey had made it feel much longer. Removing one's suit after that long was like hatching from an egg.

With three major cities and myriad smaller settlements, Titan doesn't lack for civilization. We've mastered much. But when all's said and done, we are fragile little beings. When the airlock closed behind the last of our team on completing the trek to Nyhavn, shared exaltation cut straight through our weariness. We'd survived a trial none of us would ever have faced in our staid academic lives back on Earth. Titan's gift to us, one we all received during the First Settlement, was the unforgiving certainty that our physical environment was something we might endure, but never master.

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
AUTONOMIST ALLIANCE
GAME INFORMATION

## GEOGRAPHY AND RESOURCES

Imagine how old Earth's landscape would have looked if one removed plant life from the equation. All of the other forces that shaped Earth shape Titan also. Mountains and volcanoes rise due to tectonic shifts in the icy crust and cryovolcanic upwellings from our planet's water-ammonia mantle. Wind and waves carve beautiful aeolian ice forms and twisting coastlines. Rivers and streams of methane and ethane crisscross vast areas of the planet, draining into lakes as large as some of Earth's seas.

Titan is covered in a dense haze of clouds and carbon smog. This atmosphere, thicker and more massive than earth's, displays complex weather patterns that change with the seasons. The combination of dense atmosphere and low gravity makes high-altitude winds extremely hazardous for aircraft. Winds in the lower atmosphere tend not to be as fierce, allowing transhumans to fly with arm-mounted wings and to sail on the methane lakes.

Most of Titan is covered by rolling, icy terrain. Thin layers of gritty ice and carbon soil form here and there, but with no vegetation to anchor the soil, it drifts constantly, forming seas of dunes that end only when broken up by mountain ranges. The huge swaths of dark terrain one sees from orbit are mostly covered by shifting carbon dunes.

The hills and mountains are themselves of ice. One would call them glaciers on Earth, but Titan's deep cold ice, never subjected to the Sun's warmth, behaves much more like rock. Only in the depths, tens of kilometers below the surface, where tidal warming from Saturn and the presence of ammonia have kept it liquid, does water exist. Water is Titan's magma, shoved periodically to the surface by tidal bending. These effusions yield cryovolcanic eruptions—rarer than elsewhere rimward, but still frequent enough to have rewritten Titan's surface.

Titan possesses the chemistry to support life in abundance, but metals are incredibly rare here. Prospecting for silicates and exotic carbonaceous compounds (like asphalt and paraffins) on Titan is steady work, but finding lodes of metal will make one's reputation overnight. Titanian engineers use metals sparingly, avoiding them completely whenever possible. Aerogel, diamond, fullerenes, and other carbon and silica-derived materials prevail. Where metal is used, it's frequently foamed or worked into strong, light structures to use as little as possible.

Titanian prospecting in the Main Belt creates further friction with the Planetary Consortium and the Jovians. Mars, Jupiter, and Titan all vie for big strikes, because transporting a large, rich metallic asteroid is cheaper than multiple smaller claims. The Extropians, perpetually open for business, have no qualms about jumpin a claim. This, along with the diplomatic factors in play and the predations of pirates, means that Fleet spends a great deal of time guarding the ore freighters of the Commonwealth Merchant Marine.

## DEMOGRAPHICS AND LANGUAGES

Titan has 60 million citizens. While its culture bears strong influences from the original, mostly Scandinavian settlers, Titan is a true melting plot, with virtually every old Earth ethnicity and every transhuman species represented. Uplifts and AGIs hold full citizenship and legal rights in the Commonwealth, and indentured servitude is illegal. Although synth morphs are somewhat uncommon here, one duty of the Ministry of Justice and Equality is to advocate for citizens sleeved in synths or pods in cases of discrimination.

Titan's original settlers, myself included, represented the North Atlantic Consortium, a think tank drawing mostly from universities in Scandinavia, Finland, and Canada. Seventy percent of the original settlers spoke one of the Nordic tongues. Even in those days, nationalism was no longer the done thing, but with the spread of Mandarin and English, linguistic preservationism was a popular meme.

### METAL PIGS

Fullerite plating made from aggregated diamond nanotubes. It's in our sidewalks, fuckers: compressive strength like nature never bothered with. Also carbon nanotubes. Nanotubes, everywhere, and not the crappy kind kids on Jupiter design for science projects. No: beautiful, multi-walled nanotubes, honeycombs nested in honeycombs. Fucking honey-flavored, $sp^2$-bonded masterworks, all out of carbon silt from the dunes. MWNTs bring the tensile strength. You can make sidewalks, space elevators, or a pig sticker out of this carbonaceous beehive dream shit.

So why the fuck do we need so much metal? The oldsters say it's strategy—secure it, conquer it, deny it to the Consortium. The microcorp mavens cite industrial needs. Pig logic. Heard of the Commonwealth Strategic Metals Reserve? Hundreds of thousands of tons of metal, stashed away in Skathi and other places. Fleet's very quiet about it. We don't need as much as they claim for molecular-width circuitry, foil shielding, or reactor containment.

It's all an owner's game, pissing on asteroids and stretches of the ITN because we just can't help pissing on things. Pig logic. Fuck pig logic. Now that you know better, stop voting for this expansionist metal mining bullshit.

—Momo von Satan, Tech Commentator, Monster Raving Goblin Cock News Network ♣

# THE NORTH ATLANTIC CONSORTIUM

So Titan's benevolent founders come from Earth on a mission of peace and enlightenment, settle their new world in a spirit of cooperation, and found the Commonwealth to govern their like-minded fellow citizens, leading them into a new age of knowledge and shared prosperity. Just me, or do they sound a lot more like bodhisattvas than your typical tenure-grubbing university professors?

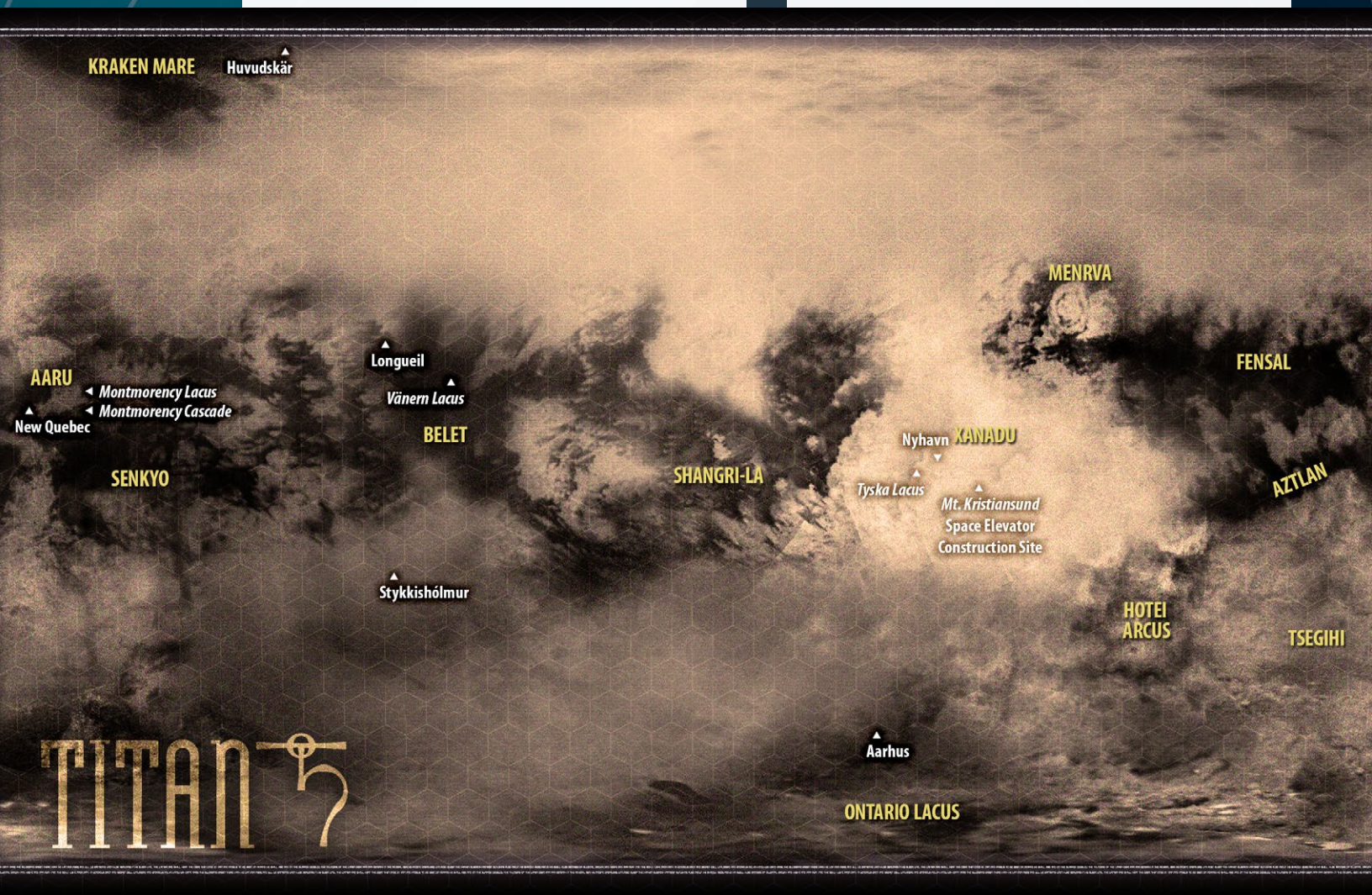
The North Atlantic Consortium was supposedly a group of intellectuals from countries working on a shared problem: they were developed, rich nations situated on real estate that was freezing over due to climate change. Even with the technology to survive on that real estate, over the long run they'd become pauper nations. They'd run out of the hydrocarbon resources and fisheries that made them wealthy, they wouldn't be able to farm, they'd become completely dependent upon imports, and they'd suffer a brain drain from their best minds moving south.

The NAC Titan project explored a radical solution: colonizing a world with even worse weather, but where wealth in the form of hydrocarbon energy literally rains from the sky. The Titan colonies started as a serious but modestly scaled experiment, but when the Fall came, the NAC nations quickly went all in. Titan's population grew from two million to sixty million in the decade between the Fall and the present day.

You won't find much hard evidence of the North Atlantic Consortium. The oldsters from the First Settlement speak fondly of that noble experiment, but apparently they lost all the paperwork in the Fall. But if you mine the data enough, you start to see connections. Microcorps for which the first records all begin on the same day of AF 0 start the trail. Some of them—Maersk-Varner, Torvick Aerospace, Dansk Ecosphere Informatics (DEI)—are rumored to have ties to, among other entities, the pre-Fall central bank of Finland; Danish and Canadian genetics firms; business elites throughout Scandinavia; and the Danish, Norwegian, and Swedish royal families. A total of eighteen microcorps hold a grandfathered-in status called Section Three, exempting them from the usual transparency regulations and Plurality governance. None of them are well known—Gatekeeper is not among them—but they're all old, established, and generate tidy incomes that go, well, we know not where.

Equality for the polity? To a degree. Your average working stiff on Titan lives like a king (or an autonomist) compared to the beleaguered workers of Mars. But there's still an elite hiding behind the curtain, and though they might not be as greedy as inner system oligarchs, make no mistake: the NAC settlement of Titan was carried out to protect their interests.

—Balthazar Grimes, A-Bloc dissident



We settled on Skandinavíska, a register of Danish spoken by Icelanders, because of its mutual intelligibility with Swedish and Norwegian. As the official language of the Commonwealth government, the majority of Titanian citizens are fluent in Skandinavíska, and almost everyone understands at least a bit of it. Other languages widely spoken include all of the Nordic tongues, Finnish, French, English, and Mandarin. Lastly, an interesting bit of trivia: what are thought to be the last handful of surviving native speakers of Scots Gaelic and Faeroese hold Commonwealth citizenship.

## HISTORY

We lost so much in the Fall that it beggars description, but our greatest loss may have been our knowledge of history. More than any other transhuman faction, Titanians are obsessed with history. Rarefied disciplines such as cliometrics and cliodynamics enjoy prominence in our university faculties, and history holds a huge slice of mindshare in the Titanian media. The interests of my university students are illustrative. When I was young, it was sexy to be an artist, a musician, or a game designer. Today, it's the students of history whose beds are never empty on a weekend night—and that is all to the good.

### FIRST SETTLEMENT

I've already described the times of the First Settlement in my account of the trek from Aarhus to Nyhavn. They were eventful, dangerous, and extremely uncomfortable. Such is the lot of pioneers. Yet during this time, we also established the Plurality and laid the foundations of Titanian society.

### NORTHERN DIASPORA

Prior to the Fall, Earth's northernmost nations, with the conspicuous exception of Russia, bought in heavily to transhumanism. Climate change on Earth had disrupted ocean currents that once kept northern Europe warm and livable. The populations of Scandinavia, Canada, and other northern countries had huddled into overcrowded, frozen conurbations, and now they left them in a mass migration for Titan. Our world was just as cold and much darker, but Titan offered opportunity and rich natural resources.

For the egovasting transhumanist migrants, dozens of Titan-adapted exotic morph configurations were on offer. Older Titanians will remember (perhaps without much fondness) oddities such as the linnorm, sildeflokk, and trold morphs. It took the Fall to bring bipedal humanoid forms back into vogue.

### THE FALL

Titan was a major destination for infugees, particularly from NAC countries. Where elsewhere the Fall was a physical struggle, on Titan it was a computer war. The second wave of infugee uploads to reach Titan through the relays, about 3.5 million egos, were infected with the virulent Höðr virus. Höðr was a destructive, polymorphic virus designed by the TITANs themselves to erase data and sew chaos. Aside from causing the loss of millions of uploaded egos, Höðr got loose in planetary networks, where it annihilated stored data by the exabyte before it could be contained.

Meanwhile, Titanian industry, which until then had produced little in the way of military hardware, worked feverishly to build defenses. Titan's rudimentary orbital defense grid was expanded and hardened. Fleet grew from a small tactical force of a few dozen customs cutters to an armada of capital ships capable of projecting force throughout the outer system. But the enemy never quite arrived. The Battle of Iapetus comprised little more than several skirmishes with TITAN killsats followed by surface bombing raids. The TITANs never counterattacked in any substantial way, and by the time Commonwealth marines made planetfall, the TITANs had mysteriously abandoned their matrioshka brain project. The only other major military engagement during the Fall was Operation Jotunhammar, Fleet's operation to secure heavy metal supply lines from the Main Belt. Most of the fighting during Jotunhammar was against Jovian ships trying to jump claims rather than the TITANs.

### THE LOCUS CONFLICT

Having lost few ships in the fighting against the TITANs, the Commonwealth emerged as a major power post-Fall. Debate in the Plurality weighed the benefits of expansionism (advocates tried to call it "protectionism") versus detente with our anarchist neighbors. Some argued that the autonomists could never stand against renewed hostilities with the TITANs, while others felt that Titan must concentrate on strengthening its own defenses and resleeving infugees. In the end, the latter argument carried the day.

Then the Planetary Consortium attacked Locus, using alleged anarchist claim jumping in the Main Belt as its casus belli. Public opinion on Titan considered this outrageous, little more than a thin excuse to lash out at so-called intellectual property violators. Despite ideological differences with the anarchists, most on Titan saw the Consortium as the real enemy.

The Plurality closely followed reports of the battle from the Titanian military attaché at Locus and various journalists. The reports portrayed a surprisingly well-coordinated defense, followed by the Consortium fleet retreating in disarray.

The repulsion of the invasion permanently silenced those who still argued for Titan to absorb its neighbors into the Commonwealth. Now the Plurality was calling for mutual defense pacts with the autonomists. When a second Martian expedition attacked Locus, the Titanian Fleet fought alongside the anarchists, handing the Consortium a resounding defeat.

## WHAT REALLY HAPPENED AT LOCUS?

[Excerpted Transcript from Monster Raving Goblin Cock News Network's talking heads program, "Chewy Gristle Commentary Hour"]

**The Cock:** MING TELL LIES ABOUT LOCUS INCURSION IN NEW HISTORY ACCOUNT.

**Momo von Satan:** Your accusation, while intriguing, lacks credibility. How about some fucking evidence on that, Cock? By the way, for those not on drugs, the Cock is referring to Professor Magnus Ming's recent series of posts, Counting Memory, on the occasion of the ten-year anniversary of the Fall.

**The Cock:** MING NO MENTION SOCIALIST INTERPLANETARY MEME WARFARE.

**Momo von Satan:** The rumor that the Interplanetary deployed propagandizing oneironanites prior to the conflict was most likely contrived by eunuchized Extropian basement trolls looking for a fast hit of rep. This infographic behind me showing that thousands of bloggers mentioned pro-technosocialist dreams in posts before the battle proves nothing.

**The Cock:** LIIIIIIEEEES!

**Momo von Satan:** Silence, Cock. I'm trying to conduct fucking journalism here.

[End Transcript]

The doctrine of "diverse economies; one alliance" remains the majority opinion in the Plurality today.

### AGE OF ACCELERATION

Since the Locus Conflict, Titan keeps an uneasy peace with the Consortium and the Jovians. Normalized diplomatic relations led to the opening of Titanian embassies to all major inner system governments. Only the Jovians continue to conduct diplomacy remotely; they're reluctant to allow modified humans aboard their habitats.

## GOVERNMENT

Titan is a parliamentary direct cyberdemocracy. The Constitution of the Commonwealth establishes a legislative branch composed of the entire adult population, an elected executive branch to administer the government, and an elected judiciary to arbitrate interpretation of the law. The constitution also includes a comprehensive declaration of transhuman rights and a few ground rules for governance, such as the order in which cabinet ministers must be elected.

### THE PLURALITY

The Commonwealth's legislative branch is the Plurality (also called either *Alþing* or *Pluralitet* in Skandinavíska), a tightly monitored public forum and voting system operated by the Ministry of Information.

Every citizen past the age of majority may cast votes when the Plurality is in session. Except during emergencies, sessions occur weekly, although debate on issues goes on constantly. Most Titanians rely heavily on their muses to track issues in which they're interested, research proposed legislation, and remind them when it's time to vote on a given issue. The average Titanian votes at least twice a week, encouraged in part by publicly available statistics on every voter's level of participation in votes and forums and the loss of reputation sometimes suffered by unengaged voters.

### POLITICAL PARTIES AND ELECTIONS

Titanian law severely restricts the activities of political parties. While voting blocs can and do emerge in the Plurality, using a party organization to channel social money or reputation for the purpose of swaying actions of the Plurality is illegal. In practical terms, Titanian political parties only exist during ministerial elections.

Prior to the elections, everyone who wishes to participate in the vote must declare for a party. Anyone may create and register a party, but in order to nominate candidates for office, a party must represent at least 1% of the electorate. Once parties are formed, the Plurality tallies their sizes to determine the number of ministerial posts each party may hold at the end of the election. For example, the Social Democrats, currently making up 40% of the electorate, are allowed at most five ministries.

After the tallying of party size comes much debate and strategizing, followed by nomination of candidates and primary elections. A party may decide to put forward no candidate for a given post, conceding that post to other parties. They may also form coalitions, casting votes for another party's candidate.

Elections are held every four years, though the Prime Minister has the power to dissolve government and call for elections sooner. Elections take place one post at a time, starting with the Prime Minister. The order in which ministers are elected is prescribed by the constitution and may only be altered if a new ministry is added or the portfolio of an extant ministry changes substantially. In each round of elections, the candidate with the most votes (not a majority, but simply the most votes) wins that post. However, once a given party has elected its maximum number of ministers, its membership may no longer vote in subsequent elections (hence the practice of putting forward no candidate in a given election and either supporting another party or abstaining altogether).

It would be possible in this system for a party to split into numerous splinter parties and effectively take more than its share of posts, but the judiciary

closely monitors party formation and may declare that a given party lacks credibility if it looks as if its formation is an attempt to game the election system.

## Cabinet and Ministries

Day-to-day governance of the Commonwealth falls to the Prime Minister and a cabinet representing the twelve current ministries. One never knows when the Ministry of Infrastructure or the Ministry of Education might prove pivotal in a Firewall assignment, but for the sake of brevity, I'll discuss the ministries with which sentinels are most likely to interact.

### Ministry of State

Aside from running Titan's offworld embassies and conducting diplomacy, State operates the Civilian Intelligence Directorate. CID doesn't run ops on its own. Rather, its mission is to recruit, train, and support civilian intelligence specialists, most of whom are analysts and cryptographers. Actual command of operations falls to Fleet Intelligence.

### Ministry of Defense

The Titanian Commonwealth Fleet, Marines, Coast Guard, and Merchant Marine fall under the Defense Ministry. Fleet is Titan's air force and space navy, as well as the service in charge of the planet's orbital defense grid. Fleet Intelligence, supplemented by civilians from the CID, is Titan's primary foreign intelligence service. The Marines are Titan's ground and infantry force; we have no separate army. The Coast Guard, responsible for patrolling Titan's hydrocarbon lakes, is the only surface naval force in the solar system. The Merchant Marine is a semi-militarized fleet of microcorp-operated traders and support ships. Defense also regulates but doesn't directly control the militias of the three major Titanian cities.

Jens Møller, the current Minister of Defense, came to government after a highly decorated career in Fleet that saw him rise to the rank of Chief Air Marshal. Møller arrived during the First Settlement. Initially a hardline supporter of establishing a protectorate over the anarchists, he changed his position after the Locus Conflict. I can't say I've ever felt warmly toward the man. He's a strange fit with politics, but he's as good as one could hope for in a soldier. He and his wife, a prominent medical researcher and also an early settler, have a modern relationship; both are frequently seen about Nyhavn with younger companions.

Fleet Intelligence (and by extension, the CID) is aware of Firewall. While not necessarily hostile toward Firewall, they have wide latitude in dealing with the organization, particularly outside of Titanian jurisdiction (on planet, Firewall agents must be handed over to the Security Police).

Several months ago, a Fleet Intel agent on Extropia approached someone they correctly believed to be a Firewall sentinel and showed the sentinel their reports on a number of recent Firewall missions, including the incident aboard the scum barge *Ecstatic Metamorphosis*. The agent politely suggested that the sentinel convey to her superiors Fleet's compliments—along with a warning not to overstep themselves where Titanian citizens or military assets are concerned.

As long as Fleet continues to observe their policy of destroying TITAN military equipment wherever found, I don't see this as a problem. If only more of my colleagues on Mars and out in the Kuiper Belt agreed.

### Ministry of Justice and Equality

This ministry oversees the planet-wide Commonwealth Police, the Security Police (Titan's domestic intelligence service), the Judicial Police (security at court and penal facilities), and the Special Section on Transhuman Rights (tasked with ensuring equal treatment for pods, synths, uplifts, and AGIs). Hackers accustomed to watching in amusement as Martian police infosec specialists chase their tails, be warned: Titanian law allows the police to freely recruit infomorphs, most of whom are quite zealous in pursuing their duties. I've had to pull strings for more than one sentinel team after their hacker underestimated the Commonwealth Police.

Another complication for sentinels is that the Security Police, or at least their upper echelons, are aware of Firewall. While sympathetic toward many of Firewall's goals, the police remain police. Sentinels identified as such should expect to be extensively debriefed, at minimum. Fortunately, no Firewall operations planet-side on Titan to dat have resulted in major damage or loss of life. I hope to keep it that way.

The current Justice Minister is Nadifa Samakab Geeddi, a diaspora-era Danish settler of Somali descent. Geeddi was a lawyer for many years before entering government, prompting a number of fox/henhouse quips at her election.

### Nadifa Geeddi

Geeddi's worse than a fox. She's a wolf at the door. Geeddi was Victoire Gagnon's counsel for years before stepping into the limelight herself, which means she's a committed member of the Technosocialist Interplanetary, no matter how much she downplays the connection publicly. Oh, she's got a lighter touch than inner system security forces. The Security Police don't go for bundling people off in vans; ain't their style. But you can be damned sure that she's using her position to keep tabs on anyone who's prominent in the A-Bloc.

Offworlders big into autonomist politics, be warned: you'll be watched here.

—Balthazar Grimes, A-Bloc dissident

### Ministry of Science

The Science Ministry operates roughly a dozen institutes and administrations devoted to basic research, including the Institute of Health and Transmortality, the Commonwealth Physics Institute, and the Space Exploration Administration. It also coordinates research efforts among universities, enforces research transparency at microcorps, and ensures security of scientific sites through the Commonwealth Science Police. The current Minister of Science is Pedro Transfinity of the Pirat party, the first AGI ever elected to government.

The Ministry of Science is of interest to Firewall because it has not always been uniform in its approach to dealing with TITAN artifacts and alien technology. This ministry is involved, with Fleet, in investigating the TITAN matrioshka brain project at Iapetus. Science also includes the Institute of Xenoplanetology, which has returned a number of alien artifacts to Titan after safety screenings that were less than hermetic.

### Ministry of Biodevelopment

Aside from habitat biosphere development and public health, this ministry's largest concern is administering Titan's massive public resleeving program. Biodevelopment regulates the dozen or so microcorps that design and grow morphs in the sprawling bodyworks of New Quebec. This ministry has regularly been plagued by charges of low-level corruption due to the heavy involvement of various criminal syndicates in the morph industry. The current minister, Marcus Mackenzie, is viewed as a white knight—but he'll have a tough job ahead of him when he starts cleaning house.

Titan's One Body per Mind policy means that Biodevelopment enforces massive production quotas for standard-model hazer morphs. Synthmorphs are rare on Titan. Even in occupations that require a synth, it's far more common for a user in a biomorph to operate them by telepresence. The sheer number of morphs produced represents an irresistible opportunity for crime syndicates. The notorious St. Catherine Tong, the ID Crew, the Night Cartel, and numerous local gangs have fingers in Biodevelopment's operations.

### Judiciary

Judges and magistrates serve five-year terms and may not belong to political parties. The full Plurality votes for individual judges. Most citizens use their muses to collate a list of judges whose past findings accord with their preferences.

### Counties and Municipalities

Titan is divided into fourteen counties and three municipalities (the three big cities: New Quebec, Aarhus, and Nyhavn). Titanian law limits the scope of local governments. The Prime Minister appoints a governor to each county and municipality, but they must be ratified by Plurality voters living in the area.

The main function of local governors is to train, equip, and command local militias. Every citizen must perform three years of civil service upon reaching the age of majority (currently set at twenty-five for cognitive baseline humans, although the law provides for drafting younger citizens in time of war). Most serve in one of the branches of the military.

Titan's readiness in the event of a TITAN attack is exceptional, equaled only by the ultimates, Jovians, and some anarchist polities. Upon completing service, all citizens are required to keep militia gear in their home and qualify annually with their weapon. The standard militia armament is effective against human infantry but optimized for fighting hostile machine life: an assault rifle with meshed sights and status interfaces but manual control interfaces. Militia rifles are equipped with smart magazines firing standard, armor-piercing, and jammer rounds. Militia members also receive a suit of body armor and a commlink. It is illegal to take militia gear out of storage unless the militia is called up, the militia member is actively training, or a clear and present civic emergency arises. Exceptions are also made in cases of self defense. Violent criminals have their militia status revoked.

Designated nano-warfare specialists are additionally equipped with military-grade nanobot countermeasures. The Plurality has stopped short of allowing heavier weaponry, although it was considered in the aftermath of the Fall.

## Sociopolitical Movements

Planetary Consortium media feeds propagate a view of Titanians as austere intellectuals living in voluntary poverty, perhaps noble in their intentions, yet hopelessly naïve and stubbornly hostile toward progress. This vilification glosses over the dense complexities of political and economic life in the Commonwealth. Participation in cyberdemocracy, a preference for consensus over conflict, and respect for *Janteloven* (the old Scandinavian ideal of self-effacing egalitarianism) are all powerful memes. But sixty million people can't agree on everything.

### A-Bloc

Dozens of anarchist groups exist on Titan, most of them peopled by youthful agitators chafing under the constraints of a state that was entrenched well before they were born. Of these, only the A-Bloc possesses any credibility (or poses much threat, depending on whom one asks). The A-Bloc is a confederation of anarcho-communist groups from around the planet who seek the establishment of permanent autonomist enclaves in undeveloped regions of Titan. They have been unable to garner sufficient support for this project, despite a few surprise election victories that have resulted in anarchist cabinet ministers.

Their leader is Anatole Mok, whose Faction Noire de Titan (FNT) is most active in New Quebec. Mok

served as Minister of Biodevelopment—capably, I'll allow—for a year at one point. He campaigned on a populist platform of greater emphasis on public resleeving programs and trait upgrades to existing publicly funded morphs.

In recent years, A-Bloc has veered toward brinkmanship, voting in a way intended to destabilize the Plurality. They've succeeded mostly in exacerbating tensions between other factions and decreasing support for their own proposals. This is unfortunate for Commonwealth-anarchist relations and worrying to those who support continued military entente with Locus and the Autonomist Alliance. Some have even gone so far as to suggest that Mok is an agent-provocateur in the pay of the Planetary Consortium. I don't credit this conspiracy theory, as Mok is far too public a figure for the alleged Consortium ties to have escaped scrutiny, but many do. That said, I wouldn't expect to see him in cabinet again any time soon.

## HULDER

It might come as a surprise that anyone could live as a nomad on Titan, but there are stranger things in the solar system. The hulder do, though, ranging the dunes and gritty plains of the Titanian wilds, prospecting for exotic chemicals, and keeping herds of Titanian caribou. Their morphs are biological on the inside, derived from homo neanderthalensis, but from without they resemble a long-legged, barrel-chested great auk in a hard suit. They're easily mistaken for synths.

Their sure-footed caribou, similarly armored, dwell in an AR hallucination of Earth's tundra, their instinct to graze on grasses and lichens translated by chemical sniffers into a continual hunt for carbonaceous compounds, which fractal fingers and intakes in their exterior muzzles then harvest.

The hulder themselves partake in this illusion only when resting from their labors. The rest of their time is spent watching over the herd, building windbreaks, making complex ice carvings that are prized by art collectors, and doing knowledge work via their mesh inserts. The hulder, though physically reclusive, participate actively in the Plurality and operate several microcorps. Not surprisingly, they're fierce preservationists.

Hulder and caribou physiology is highly complex and relies heavily on nanotech. The herd and their transhuman companions depend upon each other; periodic link-ups to communal chemical reservoirs and makers are needed to balance out individuals' chemical reserves. This system is not 100% self-sufficient, requiring roughly annual visits to nearby settlements to replenish a herd's chemical reserves.

The hulder, while not inimical to other transhumans like the exhumans, should probably be watched more carefully than Firewall has the resources to do at present. Their extreme reliance on nanotech and their physical isolation make them ideal hosts for the exovirus. A hulder exsurgent with a herd of caribou could accomplish some terrifying feats of organic engineering with little danger of being observed.

## MUTUALIST AND FREE MARKET MOVEMENTS

The Extropian branch of anarchism has its proponents in the Plurality, and there is even a Free Market party that espouses moving the economy toward inner-system hypercapitalism. Neither movement has many adherents, but coalitions and protest votes mean that one or the other party occasionally elects a minister to government.

## OLIGARCHS

When I was a young man, before shipping out to Titan, I frequented the bars in Oslo that played Beijing gang metal. If you're old enough to remember the style, I had the anti-facial recognition tattoos, the choppy hair and fur coat—the whole package. I prefer not to think about how many drugs we pumped into our bodies the night after my team was chosen for the Titan expedition. All of which is to say, I cherish my memories of youthful rebellion, even when I find them embarrassing.

Regarding the oligarchs: my hope is that they're just going through a phase. Their elaborate costumes are pure youth culture: tight white leather, codpieces and shoulder pads, glittering jewelry, and morphs sculpted to appear starved even by hazer standards. Their argot is full of Slavic loan words (they call themselves *oligarhov)* and peppered with diminutives that sound like baby talk. Their penchant for huge, sleek cars on a world where getting around is best done by microlight or personal wings is a strange, wasteful affectation.

These youths are of voting age, however, and they represent a challenge to our tidy system of state entitlements and public capital. They argue fiercely, if inexpertly, for a system with fewer checks on how individuals use their earnings. They charge the older generation with fostering *inertsii*—economic inertia. They're the flip side to the A-Bloc, agitators for Martian capitalism and glittering excess. Interestingly, they're fiercely opposed to the mutualist camp of anarchism. They want ownership, with a legal framework that entitles it, not red markets or contract law administered by a freelance judiciary. They further argue that Titan should expand and absorb its autonomist neighbors, and rail angrily against transfer of Titanian "intellectual property" to anarchist microfacturers.

What they're really up against is not the Plurality and the microcorp system, but Titanian culture. I'm sure for many of them, both the clothes and the political opinions are just fashion, part of the constant youthful hunt for sex partners. But in reading a few of the oligarch diatribes to the Plurality, and in talking with students who identify with this culture, I detect a keen intelligence stretching in its sleep of which I am wary. Could our own youth eventually change the Commonwealth in a direction the Planetary Consortium cannot?



## Pirat Party

The Pirat party has been a voting bloc in the Plurality from its inception. A direct descendant of Earth's transnational Pirate parties, the *Piraten* advocate for government transparency, freedom of information, and economic openness. While they've never been a majority party, "intellectual property is theft" remains a powerful meme in the Commonwealth. They constitute a key swing vote in many elections and an important coalition partner for other parties.

## Preservationists

Titan can never be terraformed in the usual sense. We're too far from the sun, and too much of our world consists of ices and liquids that would be lost to the void over the long run if our world warmed substantially. The thin haze of our atmosphere is a tenuous thing on a world with so little gravity, and terraforming would disrupt the processes that replenish it. And then there is the matter of Saturn's magnetosphere. We spend much of the short Titanian year orbiting through Saturn's magnetotail. Without our dense atmosphere, the surface radiation dose would be intolerable.

Nevertheless, the issue of launching some type of terraforming effort surfaces regularly in the Plurality, and the preservationists are its primary opponents.

The other issue of major interest to Preservationists is exploitation of resources. Draining methane lakes and excavating the carbon dunes could have long term consequences for our planetary climate. Not surprisingly, how serious those consequences are depends on whose simulations one looks at.

The preservationist mandate is a very different thing on Titan than in other parts of the system. With no life to protect, it may come as a surprise that Titan has any preservationist movement, but we Titanians live in a hard-won accord with the harsh climate of our planet. Upsetting the balance could have tragic consequences in the long run. Moreover, the Titanian wilds are precious to those of us who've learned to love the strange beauty of ice dunes and methane lakes. With the loss of Earth, beauty is something of which transhumanity can never have too much.

## Social Democrats

The center party in Commonwealth politics, the Social Democrats comprise most of the electorate and stand for the current Titanian status quo. The social democratic way is an attempt to balance state ownership with some of the benefits gained from market capitalism through the microcorp system.

## Socialists

The socialists are Titan's left-wing statist party. They form the second largest voting bloc in the Plurality. Their key differences from the Social Democrats are on microcorp policy and foreign affairs. They generally support tighter regulation of microcorps, with more ties to government ministries. A minority of the party also supports tightening restrictions on drug, alcohol, and food consumption for citizens sleeved in state-provisioned morphs, an idea that even the Social Democrats find appalling.

## TECHNOSOCIALIST INTERPLANETARY (TSI)

This is the final struggle
Let us group together, and tomorrow
The Interplanetary
Will be transhumanity
—Chorus to *L'Interplanétaire*

The TSI comprises a small but influential group of voices in the Plurality who favor promoting the Titanian political and economic model in inner system polities (and in some cases, among our anarchist neighbors). Not a fractious youth movement like the A-Bloc or the oligarchs, the TSI has its field operatives, but its upper echelons operate as a think tank. While not shying from revolutionary propaganda, its most potent tools are economic simulations, memetic forecasting, and various applications of game theory. Notable members (all of whom were First Settlement colonists) include retired Fleet Sky Marshal Anders Wu, former Minister of Finance and Labor Victoire Gagnon, and Provost Maja Ming Sorenson of Titan Autonomus University (who, in the interest of full disclosure, was my wife for twenty years).

Since the Fall, discourse in the Plurality strongly favors social democracy at home and *realpolitik* abroad. We intervened at Locus out of practical necessity, not out of a desire to spread the Titanian

### TSI TIES TO NAC MICROCORPS



Professor Ming's right about one thing: the Technosocialist Interplanetary hides its tracks well. Hard to say what they're up to. I don't credit the accusations that they're trying to bring Epimetheus, Janus, and Enceladus into the technosocialist fold. Twelve Commons is no more likely to go for a statist regime than the Trojans, and Enceladus is too closely aligned with Extropia. Maybe if anyone were saying the same about Mimas and Harmonious Anarchy, I'd buy it—but they're not.

More interesting is the persistent rumor that the TSI uses Section Three microcorps associated with the old North Atlantic Consortium to convert TSI supporters' kroners into credits, whence they're used to support the Interplanetary's schemes sunward. If they're really monkeywrenching the Martians, cool, although misappropriation of state resources by a hyperaged elite exploiting a legal loophole still doesn't sit well. If it came to light that they were using those resources rimward on anyone other than the Jovians, though, it would be … awkward.

—Balthazar Grimes, A-Bloc dissident ♣

## THE COMMONWEALTH GOVERNMENT, AF 10

Because the Titanian constitution requires that all ministers be elected at once, the composition of the Titanian government can turn on a dime. One result of proportional election of ministers is that the two big parties, the Socialists and Social Democrats, tend to focus on holding key ministries like State, Defense, and Justice, while less powerful ministries like Culture tend to go to the minor parties. However, occasional chinks in the shifting coalitions between the Social Democrats, the Socialists, and the Pirat party mean that occasionally a coalition of minor parties voting together can grab a key ministerial post.

What follows is one possible configuration for the Titanian cabinet, with Social Democrats holding 40% of the vote (5 posts max), Socialists 30% (4 posts), Pirats 15% (2 posts), A-Bloc 7% (1 post), Mutalists 5% (1 post), and Free Marketeers 3% (1 post). Note that under the Titanian constitution, the elections occurred in the order listed here. To secure the Trade ministry, the Social Democrats put forward no candidate for several of the intervening elections. The Free Market party, though eligible for one cabinet post, could not muster enough votes to secure one.

| Ministry | Party | Minister |
|---|---|---|
| Prime Minister | Social Democrat | Hjalmar Torssen |
| State | Socialist | Claudine Trudeau |
| Defense | Social Democrat | Jens Møller |
| Information | Social Democrat | Natalya Iversen |
| Labor and Finance | Social Democrat | Heikki Virjonen |
| Justice and Equality | Socialist | Nadifa Samakab Geeddi |
| Science | Pirat | Pedro Transfinity |
| Energy | Socialist | Mo Li Fengsdottir |
| Biodevelopment | Socialist | Marcus Mackenzie |
| Education | A-Bloc | Anastasie Mok |
| Trade | Social Democrat | Yusef Eriksson |
| Infrastructure | Mutualist | Qasim Ibsen |
| Culture | Pirat | Erika Lemminkäinen ■ |

model to other polities. Most Commonwealth citizens would agree that autonomist space is anarchist because anarchism responds best to the economic realities facing widely scattered habitats. They would not be so charitable toward the inner system's predatory brand of capitalism. Even in the inner system, however, the Commonwealth finds it can partner with some entities—like the academic consortiums with which we collaborate on solar research. Keeping the peace with the Planetary Consortium, while not an ideal state of affairs, does allow us to reap the benefits of trade and knowledge sharing. The Technosocialist Interplanetary is a minority, but one whose opinions carry much weight.

Abroad, the TSI supports dissident groups in the inner system, particularly on Mars. Which groups it supports is a matter of rumor; TSI's due diligence methodology prior to providing patronage is rigorous, with an eye toward establishing a group's ability to keep its ties to TSI secret. It also backs microcorps whose activities compete disruptively with inner system hypercorps. TSI members own ten percent of Gatekeeper Corporation, were backers of the failed Scoop project, and invest in icepushing and asteroid mining microcorps that undercut Consortium prices.

Not surprisingly, the Planetary Consortium considers the TSI a hostile organization; local groups supported by TSI are often targeted for crackdowns. Close association with the TSI is a fast path to being denied a travel visa to Mars or Mercury, unless one happens to be a diplomat—and the Plurality has been very cautious about appointing anyone from the TSI to a Mars-bound legation in recent years. Lunar and Venusian security forces have yet to deny TSI members entry, but they take a keen interest in their activities.

Firewall avoids recruiting from the Interplanetary. The organization's high profile draws too much attention, both from hostile security forces abroad, and from Titan's own Security Police, who have had to investigate several assassination attempts on prominent TSI members in recent years.

## CRIME

Titan is socially liberal. Forking, open microfacturing blueprints, and most drugs are legal, their use regulated by reputation and custom rather than law. Violent crime is uncommon, with much of it accounted for by mental health issues rather than typical criminal motives. The ubiquity of heavy armament among the populace may account for this, along with the difficulty of committing crimes using an easy-to-trace, government-issued weapon.

### ST. CATHERINE TONG

Based in New Quebec and strongly associated with morph trafficking, the St. Catherine Tong started as a harmless benevolent society for Chinese immigrants to New Quebec. Its meeting hall was on the Rue St. Catherine. Many Chinese had found jobs as inspectors and handlers in the clone vats. Following the Fall, Guanxi operators subverted the tong, first by using intimidation to get workers to look the other way, later by directly taking it over.

The tong's main rackets include diverting morphs from Titan's public resleeving program for private resale, resleeving kidnapped egos in stolen morphs to work as slaves or sex workers, and installing illegal biomods (such as poison glands, which are illegal on Titan) on otherwise legal morphs.

The St. Catherine Tong is more than a small time cartel of skin thieves. The gang has aspirations to diversify, and they've aroused our interest with alarming regularity of late. A cache of TITAN war gear was retrieved from one of their safehouses amid the cloning vats recently, its provenance unknown. I've had sentinels pursuing some disturbing leads that suggest that it came from Iapetus or somewhere in the Titanian wilderness. Although there were no outbreaks of TITAN activity on Titan itself during the fall, large swathes of the wilds are still uninhabited.

The tong has a reputation for staging brutal public assassinations of enemies and doesn't shrink from inflicting collateral damage on bystanders. Their bosses and enforcers act as if they were unafraid of being apprehended. This is in part because they're incredibly hard to track; they have an endless supply of new morphs and top-notch facilities for augmentation and cosmetic modification. Conversely, their enemies face some particularly unpleasant options for resleeving if captured. One boss, Luc Hoi, is rumored to keep a tank full of cyberbrain-equipped koi housing the egos of former rivals.

### REBOOT GANGS

Not everyone resleeved under the One Body per Mind policy wants to integrate into Commonwealth society. Nyhavn in particular has a large underclass of working people who haven't resolved themselves to the loss of Earth, don't wish to participate in the Plurality, and won't adapt to the reputation economy. Some of these people turn to crime, joining reinstanced gangs such as the Wipes, the Freebeers, and the Jokers.

#### REBOOTED



So I have to vote every six hours, I'm expected to clean recycling vats in the name of 'community,' and I live in a cold dark hell hole at the ass end of the solar system? And that's the good life? The fuck is wrong with these people? I'd rather spend sixteen years as a robot slave on Mars. Then I could work off my indenture, get rich, and own a bunch of pleasure pods with big tits. That'd be the life. This is a bunch of shit.

—Nils Högarn, Rebooted gang leader

## EXOVIRUS: VITTRAD STRAIN

I was assigned to examine the suspect in a murder at Halsskär, a remote island on a lacus in the Belet region. I was one of a panel. Our purpose: to determine whether the subject, Ernst Valikko, was fit to stand trial. Valikko served as carbon mining engineer on a team of four; the others were technicians. Halsskär sits atop rich deposits of asphalts and other complex carbonaceous compounds, and the team had been mining from the island down into the ice under the lake bed.

Valikko killed and dismembered the rest of the team using a stunner and an assortment of mining equipment, taking two unawares in their bunks and the third down in the tunnels. After dismembering them, he burned off their faces and most of their skin but didn't bother with their cortical stacks. Two of the four victims were so badly traumatized by their deaths that it seems unlikely they'll be capable of giving testimony against their attacker.

Valikko wouldn't willingly look at other people for more than a few seconds. The only way to interview him was through a teleoperated synth, at which point he haltingly explained the change he'd begun to see in other people. At first I assumed he was hallucinating, but Ernst Valikko actually sees the effects of entropy on the transhuman body in magnified and horrific detail. A tiny broken capillary on my nose affected him the way viewing a hideous deformity would a normal person.

Valikko could identify minor genetic defects and ailments in the people around him with complete accuracy simply by glancing at them. He could also see structural flaws, material stress, and minor damage in physical objects around him, although this aspect of his ability didn't affect him in the way that looking at people did.

Blood work confirmed that Valikko had become infected with a hitherto unknown exsurgent virus strain. The Vittrad strain, as I haved dubbed it, bears some similarity to Watts-MacLeod. Valikko's ability to perceive entropic effects in living and non-living material is essentially an async power—but one over which he has no control.

Once Valikko's infection was confirmed, his morph was destroyed and his stack turned over to Fleet Intel for storage. The question of how an exotic exovirus strain infected Ernst Valikko in the Titanian wilds remains unanswered.

—Karsten Hauer, Sentinel, Titanian Wilderness

Though largely a nuisance at present, there is some concern that Consortium agents-provocateurs could organize these gangs into a more dangerous force.

### KRON KARTELYEĬ

The flow and use of the Titanian kroner is heavily regulated in a way designed to encourage investment in Plurality-chartered microcorps. It's a currency that is invested but rarely spent. Loopholes exist, however, and several semi-legitimate banks specialize in exploiting them. Once kroners move out of the microcorp system, they're real money, a liquid asset. Sometimes desperate Titanians needing credits in other parts of the system make deals with these banks (many of which go badly for the person trying to change their money).

Other times, the Kartelyeĭ are involved in what amounts to little more than wire fraud. They're red market operations, often with their central hubs located in places like Phelan's Recourse or Extropia. Short of sending Labor and Finance Ministry strike teams to exact vendettas against the Kartelyeĭ, there's little that can be done about their operations.

The Kartelyeĭ do have agents on the ground. Few have ever been charged successfully with involvement in money laundering; Kartelyeĭ VPNs are a tough hack. The Kartelyeĭ are largely of Russian or Ukrainian ethnicity and, in addition to banking, run almost all of the chess boxing leagues (legitimate and otherwise) on Titan.

### GLOOM, COLD AND MADNESS

Titan's mental health services, unfortunately, keep very busy. The high incidence of seasonal affective disorder and related conditions among ethnic Scandinavians made its way into the hazer gene line, and it's proven startlingly difficult to eliminate. While habitats tend to be very well lit and the hazer morph's enhanced vision augmentations compensate somewhat, the perpetual gloom outside is still more than some can bear. Recent years have seen several high profile cases involving grisly murders committed by people in high-stress occupations or stationed at far-flung outposts.

At least one of these murders, though, was more than a case of someone snapping due to environmental stress. I refer you to the report of our sentinel, a psychologist employed by the Commonwealth Police.

## MEDIA

Titanian media outlets are a bit of a paradox. On one hand, all are state-owned microcorps. On the other, the wide variation of tastes among the voting audience means little homogeneity among them. They range from staid news programs presented by old-fashioned suited anchorpeople to the downright bizarre.

### PLURALITY AGGREGATOR CHANNELS

The closest thing Titan has to traditional news programs, the PACs report on current events and debates in the Plurality in a video blog format. PAC-1 and PAC-2, the main Social Democrat and Socialist news vlogs, strongly resemble anchored news programs of a century ago. Others, like PAC-9, the Pirat party vlog, look less like blogs and more like the allusive, reference-saturated image boards of the early 21st century, with links to legislation peppered here and there.






## ENTERTAINMENT AND RECREATION

Numerous microcorps focus entirely on sports, gaming, music, drama, and other forms of entertainment. Titan's most popular pastimes are football (adapted for Titan's low gravity by enlarging the goalie's box slightly and adding a second ball to keep things interesting) and augmented reality roleplaying games (descended from the long tradition of live action roleplaying in the Nordic countries). I have trouble at my age keeping track of trends in music, but lately my students have been playing music that sounds like 2050s revival bhangra married to Swedish polskas. Other popular activities include competitive pole dancing, chess boxing, pre-Fall period dramas, hiking and sailing in the wilderness, and lugeboarding (similar to skateboarding, but done in a 100-meter-deep half pipe excavated in the ice).

### MONSTER RAGING GOBLIN COCK NEWS NETWORK (MRGCNN)

MRGCNN is currently the most popular comedy news program on Titan. The presenters are Momo von Satan, a diminutive, gothed-out Japanese woman, and The Cock, an AR projection of a red-eyed, toothy-mawed, venous gray penis wearing a horned Viking helmet. It is unknown whether The Cock is von Satan's muse, an AGI, or a puppet controlled by another transhuman. The show consists of von Satan's sardonic commentary on current events punctuated by The Cock's subhuman ravings. MRGCNN has garnered wide critical praise despite its bizarre content. Fans of the show, "ragers," obsessively analyze each clip when it comes out, attempting to find the cleverly encrypted easter eggs that often accompany it. Many of the easter eggs are hidden XP tracks featuring Momo von Satan: Momo standing in a waterfall of milk, Momo vivisecting the governor of Valles-New Shanghai and feeding him to school children, and similar bizarre scenarios only vaguely related to the news.

### CAPITALISM TODAY WITH OLIE AND YULIA

Capitalism Today is a stream of consciousness vlog with embedded snippets of XP. Plenty of inner system media makes it out to Titan. Capitalism Today makes memetic salad out of it, mashing up Martian simulspace games, songs, and reality shows with VR projections of the hosts, Olie and Yulia, to create a nightmarish landscape of violence, polished speeches, and consumer lust. This type of commentary through juxtaposition is common in Titanian media. When the assumption is that the viewer's muse has already filled them in on all of the facts of the day, it's an interesting interpretation of them that makes the reputation of media presenters.

# MICROCORPS

Microcorps vary in the degree of autonomy allowed for in their charters. Some operate as virtual extensions of the policy makers in their affiliated ministries. Such is the case with the microcorps operating the New Quebec clone vats, whose day-to-day operations are closely tied to production quotas set by the Ministry of Biodevelopment. Others, such as Gatekeeper, are only partly owned by the Plurality. Finally, there are the Section Three microcorps, whose activities receive considerable Plurality oversight, but whose finances are not subject to the same transparency as other microcorps.

The biggest difference between microcorps and hypercorps is that Titanian kroners earned working at a microcorp can't be spent; they can only be re-invested. Therefore, microcorp employees are motivated not by money, but by reputation. This in turn serves to reinforce *Janteloven* (in short, "don't think you're better than us"), because a good reputation tends to be earned through consensus rather than competition.

## ABRAMSEN MUNSCH BOXLEITNER (AMB)

AMB is a Section Three microcorp and one of several consultancies that advise the Plurality on economic development and long-term strategy. Economic reports from AMB and a handful of other firms exert a powerful influence on how the Plurality votes. The founder, former Finance and Labor Minister Snorri Abramsen, now in reclusive semi-retirement, is famous as architect of the Titanian economic system. While widely credited with being the brains behind Titanian prosperity, AMB is also the bête-noire of conspiracy theorists obsessed with the NAC and Section Three microcorps.

## GATEKEEPER

The best known of Titan's microcorps, Gatekeeper operates the original Pandora Gate on Saturn's moon Pandora. Gatekeeper has been extensively reported upon elsewhere, but it's worth nothing that Gatekeeper is not a Section Three microcorp, nor are the majority of its shares owned by the Plurality.

## ISAACSON MAUER OGEMBE (IMO)

IMO is a quiet but highly influential law firm that represents offworld interests such as Lunar reputation banks, Extropian mining concerns, and Venusian aerostat construction companies. Rumor has it that some of the "Extropian" companies are actually fronts for Martian hypercorps. If this turned out to be true, and if IMO knew who they were really dealing with, Commonwealth law would require that their charter to do business be immediately revoked. The principals of the firm would likely face criminal charges as well. IMO keeps such a low profile, though, that a Plurality inquiry into their dealings is currently unlikely.

## PAGAN SEED

Pagan Seed is a New Quebec body fashion house. They grow high-end morphs like sylphs and olympians, but their main business is faces. The sheer number of hazers grown in New Quebec introduces the risk of physical looks being too similar. Morph psychologists have known for some time that too much facial homogeneity in a population raises the risk of mental health problems, so Pagan Seed's function is to constantly tweak gene lines according to a facial diversity algorithm, assuring that no two hazers look too much alike.

## VAKKER ORDNANCE WORKS (VOW)

VOW is Titan's premier arms company, specializing in drone swarms and ship-mounted weaponry. VOW is another Section Three microcorp founded by early colonists. The full extent of its wealth is unknown, but based on the size and quality of its R&D facilities, it must be vast. In recent years, VOW has been lobbying the Plurality (so far without success) to allow it to sell arms to the Morningstar Constellation, an unusual position in that both the Socialists and the fringe Free Market party support it.

# SCIENCE

Between the Ministry of Science and various microcorps, Titan produces an immense amount of scientific knowledge, none of which ends up locked away in hypercorp IP filings. At the same time, Titanian science projects in areas like recovered Titan technology and high-energy physics are a source of concern to Firewall. Some of the most interesting projects are discussed here, but these are only a small sampling.

## INTERSTELLAR SPACE EXPLORATION

Titan is the only government in the solar system with an interstellar space program employing sublight space travel rather than Pandora Gates. The Space Exploration Administration's first interstellar mission, the *Crystal Wind,* is transgressing the Inner Oort Cloud on its way to Barnard's Star. Another self-replicating seedship probe, the Aubade, which will use antimatter-catalyzed nuclear-pulse propulsion to reach Proxima Centauri, is nearly complete.

SEA also provides spacecraft for Pandora Gate exploration. Several SEA designs for modular craft designed to be broken down to pass through the small openings in the Gates and reassembled on the other side are now considered old standbys among gatecrashers.

## IMMORTALITY PROGRAMS

Transhuman bodies still age and die, and more importantly, most transhuman egos develop mental health problems in extreme old age. Titanian immortality research currently focuses on geriopsychiatry—finding and treating the causes of the so-called "immortality blues." At the same time, basic research in longevity

treatments continues, the current goal being to keep a morph alive to 200 years of age.

Some of the physical immortality research is questionable. As soon as I can assemble a team with the right qualifications, I plan to have sentinels investigate the rumor that TITAN biotech used to modify humans into drone slaves on Iapetus was transferred to one of the immortality research groups.

### THE LARGE COLLIDER

Ringing Titan's north pole like a monumental orbital halo, the Large Collider, at 1,000 kilometers in circumference, is the biggest particle accelerator ever built by transhumanity. The Collider was only recently completed and has been tested successfully but not yet put fully online. Able to speed particles to velocities attainable by no other scientific apparatus in existence, it promises to enable new and profound discoveries in high energy physics.

### MEMETIC CIVIL DEFENSE

How does one harden a polity not just against the brutalities of war, which many populations have prevailed against during human history, but against the doubts and fears that come with them? By mathematically modeling the effects of various memes on feelings of safety and well being, psychologists seek to develop civil defense memes: ideas that inoculate against an aggressor's hostile memes. Ironically, this line of research is another area of concern to Firewall, because researchers have taken a page from the books of Martian advertising firms, using iterative virtual worlds and accelerated consciousnesses to arrive at faster results.

## CITIES

Titan's cities each have their own architectural style and distinctive look, despite similarity in the practical design details. Where cities on other worlds tend to be shaped by terrain and climate, all Titanian cities have a common set of problems to overcome, and their layouts reflect this.

Titanian cities are domed, although virtually all of the light in them comes from inside. Titan is a dark world in the visible spectrum. Almost all Titanians have enhanced vision augmentations, and we keep them open to a very broad spectrum of light and electromagnetic energy. The visual culture has picked up on this, and much of Titanian clothing, architecture, and AR graphics can only be fully experienced by those sensitive to radiation beyond visible light.

Domes are lenticular, not hemispherical, their edges supported by massive outer walls of ice shaped into wide cylinders. The ice is in turn reinforced with skeletons of carbon struts to prevent the weight of the dome from slowly deforming it. Tunnels and flyways connect domes within cities, tube railways connect to nearby settlements. Because air and space travel are so cheap, Titan's rail and road systems don't yet connect all settlements. However, trunk rail lines converging on Nyhavn do connect the capital to the northern part of the Xanadu region, to carbon-rich Belet in the west, New Quebec in the east, and Aarhus in the south.

Even with the best transhuman technology, insulation and heating are major challenges, and the energy expenditure to keep the domes warm is considerable. The climate inside is usually humid but cool, rarely more than 10 C. Plants and animals are either chosen from hardy species or bioengineered to tolerate cool temperatures.

The upper airspace within domes is mostly kept clear of buildings, allowing for an orderly grid of flyways. Buildings tend to be tall, narrow, and tightly spaced for more efficient energy usage, but regular breaks in the buildings for public parks prevent Titanian cities feeling too claustrophobic.

### NYHAVN

With twelve million inhabitants under its four domes, Nyhavn is the gem of the Commonwealth and the largest transhuman habitation rimward of Mars. Rising from the hills of the Xanadu region, Nyhavn was sited for proximity to the equator and to the plateau of nearby Mt. Kristiansund, an ideal site for eventual construction of a space elevator. Viewed from a distance through the planetary carbon haze, Nyhavn's domes, with their constant air traffic, remind those who can remember of jars of fireflies, set out by a child to ward off the dark.

#### NEIGHBORHOODS

Nyhavn's neighborhoods consist of four domes, a variety of other surface works, and a vast network of underground tunnels. Several major rail corridors and highways/flyways, busy at all hours, connect the domes.

#### GREAT NYHAVN

Nyhavn's massive central dome, several kilometers across, is nearly as large as that of New Shanghai on Mars, and pierced in a dozen or so places by elegant blue spires that reach skyward from the ground below. Great Nyhavn is a business and residential district where aerial traffic runs between towering buildings, but it's also the Commonwealth's public showpiece, with sports stadiums, parks, restored colonization equipment from the First Settlement, and museums taking pride of place.

Great Nyhavn is heavily planted with trees, mainly conifers, and cut through by numerous canals and small lakes. Banks of lights power plant photosynthesis, and in turn the great conifers yield a considerable percentage of the dome's breathable atmosphere. Other life support methods like algae vats and $CO^2$ scrubbers supplement the trees.

This sort of heavily planted biosphere is repeated throughout the city, as well as in most of Titan's other settlements. Although algae vats are more efficient oxygen producers, the psychological benefits of bright lighting and vegetation justify the

energy expenditure. The main argument at present is between those who favor powering the system by burning hydrocarbons and the preservationists, who advocate switching over to fusion and other energy sources as quickly as possible.

Titan's media have made Great Nyhavn their home ground. Although the business of government is conducted primarily in Old Nyhavn and on the mesh, important media channels like PAC-1 and PAC-2 have offices here, as do the local bureaus of many offworld media outlets.

The constant presence of news, entertainment, and sports figures has led to some of the most conspicuous application of Janteloven in the Commonwealth. Not only do Nyhavners deem it extremely déclassé to acknowledge the presence of a celebrity, the celebrities themselves actively avoid being treated in public as figures of note. One mesh personality, whose popularity had waned, quipped that she didn't mind so much; she enjoyed being able to joke with her barista without everyone around assuming she was being condescending. On Titan, to be a celebrity is acceptable only in simulspace; on the ground, one must be a citizen.

### Telemark City

The newest of Nyhavn's four big domes, Telemark City rises to the east of Great Nyhavn. The Plurality built Telemark City to help accommodate the massive number of Commonwealth citizens being resleeved under the One Body per Mind law. The law mandates minimum standards of housing for the reinstanced—no warehousing them in underground warrens, for example. One sees little of the squalid blandness that prevails in working-class Martian housing. The neighborhoods of Telemark City are a riot of color and embellishment, encouraged in part by public fabricators and by recent public enthusiasm for pre-industrial handicrafts.

Telemark city is nearly full. Another habitation dome north of Great Nyhavn is already being planned as the public resleeving system catches up with the backlog of people still in dead storage from the Fall.

All is not well, though. Here and in many sections of New København, the reboot gangs represent a social time bomb for Titan. Martian economists scoff at the One Body per Mind law, and from the standpoint of a political and economic system that places capital over compassion, they are absolutely correct. A massive number of the reinstanced don't have the skills to make reputations for themselves, so they turn to the only social network that has a use for them—Guanxi. Open violence in Nyhavn is uncommon, but the police stay very busy.

### Old Nyhavn

The first and smallest dome, Old Nyhavn houses government ministry offices and very little else. This is the least active and bustling of the domes, yet all Titanians are familiar with it, because almost everyone spends part of their civil service term here. Old Nyhavn is largely mothballed for day-to-day use, but in the event of another TITAN attack or large-scale civil emergency, it's designed to act as a command and control center for the planet.

The buildings inside are bunker-like, with independent life support in case the dome is breached and heavy nanowarfare countermeasures. Copper wiring and primitive computers, too simple to fall prey to TITAN mesh attacks, connect Old Nyhavn to similar communication centers in every major habitat on the planet. Voice communication is provided by a hardened, pre-information age telephone system run off an analog (yes, analog!) switchboard system. The guts of this system, along with backup controls, are half a kilometer under the ice. Every Titanian citizen trains on this equipment during their civil service term.

It may seem incredibly paranoid to maintain a system like this, one based on technology even the Jovians would view as neolithic. But while slow and primitive, the system was battle tested aboard Fleet's ships on a smaller scale during the Fall, and it works. Titan is a cyberdemocracy, and the Old Nyhavn backup system means that even in a full-on infopocalypse, our government can maintain a minimal level of functioning.

Kilometers below Old Nyhavn is Lake Nyhavn, a tidally warmed lake of water and ammonia that the original settlers tapped to bootstrap biosphere development.

Embassy Row in Old Nyhavn holds most of the embassies of offworld powers, although a few (notably the Planetary Consortium trade legation and the embassy of Elysium) are instead located in Great Nyhavn, closer to the media and microcorp offices. For most inner-system powers (and the Jovians), Nyhavn is the only place in the outer system where they have embassies. This makes Nyhavn the obvious meeting ground for anyone who has business with sunward polities that can't be accomplished remotely.

### New København

Built after Great Nyhavn but before Telemark City, New København stands directly south of Great Nyhavn, astride the route of the North Xanadu-Aarhus rail lines. New København is densely built. Apartments fill the upper stories, while microcorp facilities—labs, microfacturies, and offices—pack the lower ones. New København also has a large population of the working reinstanced due to its proximity to the Skyport and the rail yards, and many of the microcorp facilities contain specialized teleoperations centers for workers running synthmorphs outside.

### Skyport Nyhavn

The Skyport is Titan's busiest short haul spaceport, with flights to orbit and to almost every settlemnt on the planet with an airstrip. Atmospheric craft fly under power, but many orbital ships use their rockets only for re-entry. Titanian gravity makes it more efficient to use catapults or mass drivers to fling a ship into orbit.

Military and police ships also berth at Skyport, although they're rarely visible from the tarmac except

## THE WARRENS

If you want to live off the grid but in the conurbation, you go down. Don't even have to dig; that's been done for you. Nyhavn's got dozens of kilometers of subsurface tunnels. Some were made by early carbon prospectors, some to pump liquid water up from Lake Nyhavn, and some still get used for pipelines, feedstock lines, and automated cargo transport. There's geothermal bore holes, too; they experimented with using the temperature difference between the surface and Lake Nyhavn as a power source long ago.

Aarhus and New Quebec got big tunnel networks, too. Most of these passages are unused, with little or no surveillance. They got no breathable atmosphere, and they're cold, though not as cold as the surface. Still, people live down here—people who don't want to be bothered. And there's always rumors that the gangs, tongs, and Section Three types keep some of their secrets hid under the ice.

—Balthazar Grimes, A-Bloc dissident

when landing. Most launch directly from fortified hangars dug into the ice.

Skyport looks like an incomplete dome from a distance, surrounded by a thick, cylindrical barrier wall of ice similar to those ringing the domes. The barrier wall serves as a windbreak, a way of slowing the drift of ice and carbon silt onto the tarmac, and additional fortification for the military assets berthed there.

### TYSKA LACUS

Tyska Lacus is a good-sized methane lake, 120 kilometers across at its widest point, but also shallow, with a depth of at most 3 meters in most spots. The lacus is used for recreation, with methane skiff sailing a popular sport, but hydrocarbon extraction is what brings the most transhuman activity. A large refinery draws methane and ethane from the lake, whence it flows along a pipeline to Nyhavn. Hydrocarbons from Tyska Lacus supply about 30% of Nyhavn's power, but at a price. The early belief that rainfall would keep up with transhuman demand hasn't panned out, and the lacus is now half a meter shallower than when we arrived here.

### SPACE ELEVATOR CONSTRUCTION SITE

Depending upon whom one talks to, the space elevator is either a victory for the preservationist movement over those who wanted to simply keep burning hydrocarbons to send rockets up, a waste of social money, or a benchmark of Titan's continued maturation as a great power in the solar system. In any case, construction should be completed in about a year.

The site already boasts rail and road connections, an ice shield wall like that encircling Skyport, and groundside fabrication facilities for the cable. Meanwhile, in orbit, work proceeds at a brisk pace to stabilize and prep the counterweight, a sizable ice asteroid.

Security around the site is some of the tightest on the planet. Everyone remembers the failure of the Scoop project, a megastructure designed to skim gas directly from the atmosphere of Saturn without mining drones. XPs of the Scoop's main intake shearing off from its counterweight and tumbling silently downward to be engulfed in the yellow fog below still see playback during Plurality debates and on news programs whenever someone wishes to make a point about the hubris of one of our mega-projects. Though never proven, sabotage has long been suspected as the reason for the Scoop's failure, and a repeat of that disaster would be a terrible blow to morale in the Plurality.

### AARHUS

Under the spreading boughs of an immense, bioengineered oak on the campus of Titan Autonomous University squats a blocky, gray-white dumb matter hab module. Now roped off and marked with a plaque, it was the first human structure built on Saturn's moons, and my home (along with twenty-two of my colleagues) for five years. Aarhus, city of universities and hydrocarbon powerhouse of the south polar region, now boasts three hab domes, each a kilometer and a half in diameter, housing five million citizens.

Situated on the shores of the immense Ontario Lacus and closely proximate to dozens of other sizable hydrocarbon lakes, Aarhus is fantastically wealthy in energy and exotic chemicals. Yet the native preservationist movement is so strong that almost none of the city's energy comes from hydrocarbons. Aarhus's domes are arranged in a triangle, with the northeast and southeast domes directly on the lake shore, while the western dome faces a smaller lake, Holmgard Lacus. The southern run of the North

## THE TENOR OF THE DEBATE

[Excerpted transcript of MRGCNN Field Report from Bremerhaven neighborhood of University City, 6 November AF10]

**Momo:** I'm coming to you live from the rapidly congealing pool of blood shed by anarchist student Rada Čustović, whose femoral artery was severed by a vibro-knife cut just minutes ago in this popular night spot. The assailant's identity is unknown, but sources in the crowd believe her to be a student affiliated with the oligarchs movement who quarreled with Čustović over today's Plurality deliberations. Citizens who won't stand for this shit are encouraged to start tracking spimes and bring this bitch to bay.

**The Cock:** KILLING PEOPLE FOR THEIR BELIEFS IS AAAWWWESOOOOMME!

**Momo:** Fuck you, Cock. Clearly it is not.

Xanadu—Aarhus maglev rail runs through the western dome to its terminus in the southeast dome.

Aarhus's readiness in case of renewed hostilities with the TITANs is a mixed bag. The militia is as good as any city's, but thanks to extremely low crime, the Aarhus Police have more experience breaking up student parties that get out of hand than responding to serious emergencies. To Aarhus's benefit, though, an unusual number of Firewall agents, myself included, base themselves here.

### University City

University City, the northeast dome, is the physical hub of Titan Autonomous University (motto: "Onward. Upward. Outward.") and our (usually friendly) rival Titan Technological Institute, a major engineering school. Aarhus has over a dozen institutions of higher learning, most located here, although several are in the other domes. Because delays in radio communication between the outer system's widely scattered habs hinder long-distance learning, the practice of going away to university hasn't died out as it has sunward. More than 20% of Aarhus's population are students, many of them offworlders.

University City, and indeed most of Aarhus, is densely built up. Few streets accommodate vehicles larger than scooters, but almost every building has public roof access, a landing pad, and a place to fold and rack microlights or personal wings. Larger buildings have landing pads big enough to take small powered aircraft.

The universities are heavily involved in the Science Ministry's many projects and with microcorp research. The ministry's Science Police are in evidence at most key university research facilities, as are officials from Nyhavn and officers from Fleet (the latter not always without protest). Both students and faculty tend to be strongly political. Every Titanian social movement has its proponents, and the argonaut faction has strong representation, as well.

Aside from academia, University City is home to many artists and entertainers. Players immersed in augmented reality LARPs are such a common sight that few people pay them any mind despite their oft-outlandish costumes. Several large buildings in the district are devoted to this activity, although the Aarhus Police sometimes take notice when the play involves taking petals.

Weird tech-driven art happenings and student pranks are common distractions here. Even student tricks bear watching sometimes, as attested by the recent out-of-control reproduction of tiny, venomous marmosets released by Titan Tech students as a prank. The marmosets were not to have been venomous; hunting them all down took weeks.

### Kulstofbyen

The symmetry of the outer ice wall of Kulstofbyen, the southeast dome, is broken by the Refineries, a cluster of huge, blue structures that process carbonaceous compounds for export to other parts of the planet. A wide web of roads and local rail systems connect to this dome, and nearby, the squat shield wall of Skyport Aarhus rings an area several kilometers in diameter. Half a kilometer distant, farther down the lake shore, is the immense, blocky mass of the Old Powerhouse, now abandoned save by urban explorers and the hardiest of squatters.

Under the dome, Kulstofbyen is a mixture of housing and industry. The population combines students, industrial workers, and energy microcorp employees. Kulstofbyen is also known for aquaculture. Little oceans have been excavated beneath its streets, some of them farming fish that were extinct on Earth even before the Fall. This biological treasure is more than a foodstuff; it's also of great interest to aquatic habitats seeking new species to balance their ecosystems.

### Oulu

Oulu, the western dome, nicknamed the Blue City, is the seat of government, microcorps (who flock here for the wellspring of student talent), and political organizations. Several prominent organizations within the preservationist movement, including Citizens for the Wilds and the Commonwealth Preservation Front, center their operations amid its famously azure towers and apartment blocks. Oulu boasts parks, a stadium, several of the city's other universities, and the Morpharium—a museum of transhuman bodies, including restored synthmorphs and biomorphs kept in medical stasis.

There's also a red light area, the Ecstasy District, although it's not what an offworlder from sunward might expect. Drink and drugs flow freely, but there's very little of what one would call prostitution, with sex clubs the norm instead. Exotic dancing, and in particular pole dancing, is a popular competitive sport, with categories for all genders and species. Audience members are expected to publicly share data from their biomods, allowing the judges to measure the spectators' collective arousal during each act. Of course, no money changes hands; dancers compete for reputation.

The Ecstasy District lost a bit of its sheen for some several months ago when a sexually transmitted wild nano-plague ran rampant in the district, infecting thousands over the course of a few nights. Fortunately it turned out not to be TITAN-related, but the district is a perfect cauldron for this particular type of machine life problem to brew.

### New Quebec

Third largest of Titan's cities, the two domes of New Quebec, each a kilometer and a half wide, are home to one and a half million people. New Quebec lies on the Carbon Prairie, a plain the in the Aaru region covered by wind-shaped dunes that roll in vast reaches of sine waves across the landscape. The region gets its name from its rich and diverse chemical resources. Montmorency Lacus, a collapsed cryovolcano whose remains form a 20-kilometer-wide crater lake, is 50 kilometers from the city. The region is rainy, and the



regular fall of ethane and methane feeds Montmorency Cascade, a dramatic 200-meter-high carbonfall that drains the Lacus into a wide-spanning alluvial system, whence the Quebecoise pump much of their fuel.

Though even this city is safe compared to places like Kronos Cluster or Little Shanghai on Mars, it's the most dangerous on Titan, and the one of most concern to both Titanian authorities and Firewall. Both the fearlessly violent St. Catherine Tong and the more subtle Kron Kartelyeĭ carry on major operations here.

For all that, New Quebec is a charming city, combining the necessities of Titanian habitat planning with embellishments meant to evoke the cities of Canada on pre-Fall Earth. The two main domes, Trudeau-Macalester to the north and Lavalle to the south, stand quite close to one another, with only about 100 meters of highway/flyway tunnel needed to connect them.

New Quebec's preparedness in the event of a TITAN attack is high. The police and militia are seasoned and fearless from regular actions against criminal gangs, and ironically, the gangs themselves might form a significant, if untrustworthy, force of resistance to an attack. Of course, it's the gangs, with their unscrupulous collecting of questionable technology, who are most likely to unwittingly create a problem in the first place.

## TRUDEAU-MACALESTER

The Kartelyeĭ chess boxing rings are all in this dome (and indeed, one won't find so much as a gym for boxing in the southern dome, Lavalle). This is by dint of a long-standing truce with the St. Catherine Tong. The tong leaves the Kartelyeĭ alone, and in return the money launderers don't so much as set foot in Lavalle. The Kartelyeĭ would rather talk with their money and influence than their knives. Their chess-boxing operations are only borderline illegal, anyway. They know how to collect what they feel they're owed, though, and they've spirited more than one debtor off for a long and uncomfortable talk in simulspace.

Chess boxing itself is a fascinating sport. Described but never practiced by a pre-Fall French comic book artist, fans eventually turned it into a real sport. The concept is simple: rounds of boxing alternate with a period of chess play. Each boxer must pursue a coherent strategy whilst being pummeled into incoherence by their opponent. Variants exists, the most popular being Muay Thai alternated with German-style board games, but the big bets always ride on the classic chess/boxing combination.

## LAVALLE

Lavalle's most important feature, both locally and from the perspective of the entire Commonwealth, is the massive bodyworks occupying kilometers of caverns beneath this dome. Reboot gangs are a nuisance in the poorer neighborhoods here, but it's the major syndicates that keep police inspectors and local militia commanders awake at night. The bodyworks produce thousands of morphs per day and are the engine powering Titan's massive public resleeving program. They're also the engine powering an ongoing and sometimes intense war between the St. Catherine

Tong and their offworld rivals, the Night Cartel and the ID Crew. The shifting alliances among the three big gangs and a host of smaller operators are behind New Quebec's reputation for corruption and violence.

Lavalle's remaining populace are a tough lot of morph vat technicians and miner/harvesters who prospect the land outside. Given their surroundings, they're a remarkably hospitable lot—as long as one doesn't start asking too many questions about who's on the take.

## SETTLEMENTS

Outside of the big cities, numerous smaller settlements dot Titan's surface, oases of warmth and light in the dark, frozen haze of the wilds.

### HUVUDSKÄR

The hulder maintain this small methane/ethane processing station on the shore of Kraken Mare in the far north. Although the station has few permanent residents, hulder from all around the region regularly come and go from it. Ethnographers hoping to study hulder culture in less extreme surroundings than the open wild often come here.

### LONGUEIL

The *Bloc Québécois de Titan* (BQT) is a small separatist group of several thousand French Canadians, mostly Fall evacuees, who live on several hundred square kilometers of land in the Belet region. The main settlement, Longueil, is built into a headland at the end of a small peninsula in Vänern Lacus. The area settled by the BQT can only be reached from the outside by off-road vehicles or air, but the BQT has cut and maintains their own roads in the area.

The BQT's dominant meme is an unusual fork of bioconservatism, but an isolate group on Titan can't afford full-on bioconservatism. So the BQT practices "bioconservatism of the soul." The BQT uses modern medicine and bio-augmentation as much as mainline Titanian society—up to the point of backing up and resleeving. Soul bio-cons have no problem with transhumanism as long as no one is cheating death. Unfortunately, since most transhumans have been resleeved, egocast, or brought back from the dead at least once in their life, this still means that, to the BQT, the rest of transhumanity are a bunch of copies, their original selves long dead.

### STYKKISHÓLMUR

I blame all of the depictions of Titanians in horned helmets by our detractors from other factions on this roughnecked mining town in the Belet region. Far from the big cities, amusement outside of the mesh is hard to come by, and visitors are few. So the people of Stykkishólmur, partly to alleviate boredom and partly to attract tourists, began fabricating and sailing Viking longboats on the nearby methane lacus. Frankly I find this ridiculous, but my students, particularly the offworlders from the Trojans and elsewhere, rate Stykkishólmur as a favorite destination on inter-term breaks. It's all amusement and diversions until someone goes berserk and has to resleeve after an axe fight.

## ORBITALS

Titan's low escape velocity makes bringing construction materials and supplies to orbit easy. About a hundred permanently occupied space habitats and thousands of satellites orbit the planet. Many are small cluster habitats, components in the planetary defense grid, or stripped-down orbital manufacturing facilities, but others approach the size of small cities.

### COMMONWEALTH HUB

Titan's main space port maintains a synchronous orbit above the capital, Nyhavn. Home to a permanent population of 200,000, the Hub is similar in design to the Nuestro shells common in the Jovian Trojans, but with massive open internal spaces for berthing spacecraft. Titan has no skyhook or space elevator, so the Hub is also home to a massive fleet of LOTVs and tugs for shuttling materials, people, and equipment to and from the surface.

### CAPTURED MOONLETS

After the Locus Conflict, the Plurality funded a project to capture three of Saturn's small retrograde moons—Phoebe, Skathi, and S/2007 S 2 (later renamed Abramsen after the noted economist)—and outfit them as orbital defense installations. The capture of the three was possibly the most ambitious orbital engineering project ever undertaken by transhumanity, requiring an unprecedented expenditure of antimatter to maneuver the three so that they formed a stable L1-L4-L5 system orbiting Titan. Many opposed the plan due to the risks from an accident, but it was a success, despite at least one attempt at sabotage.

Phoebe is the largest of the three by orders of magnitude, a heavily cratered mass of rock and ice, and serves as home port for Fleet. The other two moonlets, Skathi and Abramsen, are much smaller and very icy. All three bristle with armaments, comm relays, and sensor equipment. Deep silos on Phoebe designed to house interplanetary high velocity antimatter missiles were dug but never armed, and may we hope the Plurality never again feels the need for such a deterrent.

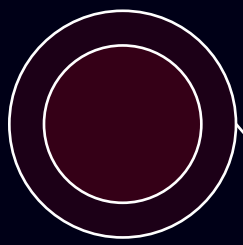
### MANKELL

Mankell is a mid-sized cluster hab, home to 50,000 people. It's an important microgravity manufacturing center, as well as a media hub. Mankell boasts some of the most powerful and sensitive civilian comm gear in Titan's orbit, which it uses both to pirate inner system media and to broadcast Titanian content to sunward. Experia regularly files complaints about Mankell to the Titanian embassy on Mars, to no avail. As long as the Pirat party is an important voting bloc in the Plurality, the chance of Titan accommodating hypercorp intellectual property laws is virtually nil.

# 7

# URANUS





## AT A DISTANCE

**Skimmer Society:** This far from the inner system, some take it even further from established habitats. ■ p. 112

## THE ULTIMATES

**Xiphos:** Inside the rings of Uranus, this habitat is an industrial and scientific powerhouse. ■ p. 117

**The Ultimates Declaration:** Those that seek to be the best live by this credo. ■ p. 116

**The Challenge:** Those that seek to be the best live by this credo. ■ pp. 118–120

**Eternal Struggle:** The inner workings of this group of aspiring philosopher-kings. ■ p. 121



## MANY ORBITS

**Oberon:** The most accessible Uranian moon; home to spaceport Chat Noir and the Fissure Gate. ■ p. 114

**Titania:** This tourist and Xtreme sports destination faces increased conflicts as its popularity grows and mysteries remain unsolved. ■ p. 114

**Ariel:** Rich in volatiles, this heavily cratered moon is closely guarded by the ultimates. ■ p. 123

# URANUS



**Posted by:** Iftikhar Quraini, Gatecrasher
<Info Msg Rep>

I first came to Uranus when I was nineteen.

I was born on Earth. When the troubles came my parents spent everything they had to get me out. *Everything*. I still remember the drive to the clinic where they uploaded my mind, the twisted feeling in my gut knowing that I would live and my father and mother wouldn't. I was eleven.

I was egocast to Mars where Cognite was nice enough to take me in. As a virtual slave. When I finally freed myself from the grip of the hypercorps, I decided to move as far away from the sun as I possibly could. The inner system hadn't been good to me. I wanted out, I wanted to get as far away from that life as possible. Uranus fit the bill perfectly.

Let me tell you about my new home. The last planet in the solar system with any serious population lies just a shade under three billion klicks from Sol. The planet's extraordinary color comes from the methane in its atmosphere, tinting the clouds a shade that is half blue and half green, like a clear tropical sea on a warm summer day.

Not that anything about Uranus is *warm*. Mean cloud temperature is a couple hundred degrees south of zero. *Cold*.

Of course, none of this makes the planet unique. In fact, Uranus has a twin: Neptune. The last planet is slightly smaller than its sibling but also slightly more massive. Both worlds have rings and plenty of moons.

It turns out they're not identical twins, though. There's one big difference. The Uranian equator is inclined 98 degrees to the its orbit. That's right. Uranus makes its long journey around the sun on its side. Each of its poles gets 42 years in the sun, followed by 42 years of darkness. It's magnetic field is also tipped over, nearly sixty degrees from the planetary equator. Uranus is the only planet in the solar system other than Venus that rotates backwards, east to west.

How did all this happen? Billions of years ago Uranus was the victim of a terrible cataclysm. A planetary-sized object smashed into it, knocking it over.

Which gives me a certain sympathy for this frozen world. All Uranus is doing is trying to hold it together after a disaster of epic proportions.

Something we all know a little bit about.

## CAVEATS

The planet's disastrous early history plagues the system to this very day. Most interplanetary travel is confined to the ecliptic, the common orbital plane of the solar system. But Uranus's extreme inclination makes orbital insertion complicated. Instead of gently firing thrusters to set orbit, ships making port around Uranus have to engage in a short, furious burn to swing into the system's orbital plane. Usually the maneuver is more or less automatic … if you have the fuel to spare. And as long as your navigation system is functioning properly.

If your nav software crashes while you're making your approach, you've got problems. This is not an insertion you can eyeball. Aside from the more than two dozen moons and all the orbital habitats, Uranus has thin but dark rings that extend all the way out to 100,000 klicks. You don't want to plow through all that garbage at a substantial velocity. It doesn't take much more than a dozen kps to turn a snowball into a lethal projectile.

## CLOUDTOPS

Not only is Uranus literally far from the inner system, but it's also metaphorically distant. There's little trace of the Planetary Consortium out here. Uranus is dominated by autonomists and anarchists and even ultimates. All this and the odd brinker, too. (And I do mean *odd*.)

Most of the system's people can be found on the moons Oberon or Titania or living on an orbital habitat. There's a whole weird ecology, however, living at the top of the Uranian atmosphere. Everyone calls them skimmers, because their principal economic activity is skimming volatiles (hydrogen, helium-3, methane, water) out of the Uranian atmosphere with remotely operated sleds or aerostat gas collection farms.

Turns out, Uranus isn't too bad a place for aerostats. Jupiter has deadly radiation and Saturn and Neptune have killer winds, but here the magnetosphere is mild (a hull is sufficient protection) and wind speeds are only half that of Saturn. There are also fewer storms and they don't last for decades. Add in lower gravity and a cheaper escape velocity with an atmosphere full of useful volatiles, and you have a recipe for Uranus making one of the best gas mining outposts in the system.

## SKIMMERS

Skimmer society is filled with misfits and loners, people living in mini-aerostats that drift on the wind, going wherever Uranus will take them. Some of these vessels are big enough to support a few hundred people. Others are only big enough to support a family or a single, lonely soul.

Who are these skimmers? By far the biggest portion of them are brinkers, isolationists hiding from the rest of the universe. Turns out Uranus is a good place to

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
AUTONOMIST ALLIANCE
GAME INFORMATION

hide. First off, it's *big*. The planet's 51,000-kilometer diameter gives it a lot of surface area. That's a lot of haystack to search if you're looking for a particular needle. Second, it's isolated—between 8 and 30 AU from Saturn, its closest well-populated neighbor. Finally, for a hole in the wall, there's plenty of resources and even a touch of civilization.

So it's not a bad place for brinkers to hunker down. Some are religious seekers, people who can't quite believe the new realities the universe has thrown their way over the past ten years. Or they come from a faith where the established holy figures let them down and now they've gone to the very edge of the system to try and figure out how to make sense of it. Others are former infugees who didn't integrate well into autonomist society or broken people fleeing broken lives and hoping Uranus is the place they can put the pieces back together. Then there are those running away from terrible secrets—or terrible crimes. You have to run far to escape your past. For some, nineteen astronomical units is far enough.

The biggest group of brinkers are people who believe The End Is Nigh. Many barely escaped Earth and the horrors they saw shattered their minds. These people are the most dangerous inhabitants of the clouds, because they are waiting on apocalypse, whether it comes in the form of aliens, the Exsurgent virus, or another runaway singularity. They are clinging to a tiny scrap of safety.

Which is not to say that everyone that lives among the clouds is a crackpot. There are many perfectly normal people that have embraced the skimmer lifestyle. Some of them will even talk to outsiders.

## VARUNA

**Station Type:** Aerostat
**Allegiance:** Independent (Brinker)
**Primary Languages:** Hindi, Punjabi, Wu
**Population:** 1,000

The only large, populated aerostat is Varuna. It's an independent habitat run by an elected council, operating with a transitional economy, though there is a small mutualist enclave. A few hypercorp reps work here as individual mobile offices, most of them buying volatiles from the skimmers. A small number of indie scientists have set up shop here too, studying Uranus and engaging in other work.

One of the most interesting research projects is working on creating a free-floating oxygen-free biome that could colonize the clouds of gas giants. If such an experiment were successful, it would open up huge swaths of territory to transhuman civilization, expanding the livable area of the solar system by several orders of magnitude. The scientists are basing their research on the Earth species *Spinoloricus cinzia*, a millimeter-long creature found in anoxic regions of the Mediterranean before the Fall. These tiny multicellular creatures' mitochondria were replaced by organelles that acted as hydrogenosomes—allowing them to live without oxygen. The research is still in its infancy, but there are stories that the project has already built some beautiful open-air garden and larger animal adaptation is on the way.

## BELOW THE CLOUDS

The skimmer culture provides much-needed raw materials to the rest of the system. It also serves as a relief valve, bleeding off those people too maladapted to live in harmony with their fellow Uranians. Perhaps unsurprisingly, many skimmers are prone to exaggerated stories, weird beliefs, and conspiracy theories. Chief among these are tales of weird things spotted among the clouds.

### NINE FRAMES



At first, it's nothing but dark cloudscape, great billowing towers of hydrogen only dimly lit by the far sun. The camera's plunging towards those clouds, racing toward the flat top of a massive light blue cumulonimbus. The massive formation goes on and on and on, big enough to swallow a habitat. Big enough to swallow the nucleus of a comet.

Hydrogen skimmer zeta tau one seven six four is in trouble. Engine failure alerts flash. The craft has lost attitude control. It's going down.

Then there's nothing but dull blue as the skimmer plunges into the cloud, its camera still reporting its pointless demise.

Five seconds. Ten. Twenty. The skimmer dives through the cumulonimbus and into a deeper, thicker cloud, this one tinged with yellow from ammonia and organic compounds. Pressure alarms flash. The descent goes on forever. Nothing but speed and cloud as gravity works its deadly will. Then—

STOP. A shadow at the edge of the frame or maybe a dark patch of especially dense organics.

STOP. The shadow doubles in size, taking up the bottom, left corner of the frame. A shadow of what?

STOP. The thing grows again. What is it?

STOP. It's not a shadow. There's a bright spot right there. Definite variation in pixel brightness.

STOP. Bigger again. More detail. It can't be another skimmer. Skimmers aren't supposed to be down this low.

STOP. The skimmer must be moving towards the object. It's big enough to show an edge.

STOP. The camera's poor resolution makes the edge look jagged, but look past the saw-tooth pattern and you can imagine a smooth arc. Is it artificial?

STOP. Definitely light and dark patterns now. The object fills the image. The bright portion is triangular.

STOP. And then—

You stop the frame-by-frame analysis and sit back. Then you go back through it all over again, asking yourself the same question. You can almost imagine that white triangle is shaped a little like a shuttle. And in that last frame—

*Did it move?*

Most of these are bunk: hallucinations, sensor glitches, ploys for attention, and stories to frighten skimmer kids. Then you realize there's evidence. Some skimmers have recordings of when they detected strange thermal plumes and encrypted comms below them in the deep clouds. It's wise to ignore the ravings of lunatics, but I'm not so sure they're wrong—especially after I reviewed the camera feed from a lost skimmer craft that went down in the equatorial band. Someone's down there, hiding in the well of Uranus's atmosphere, someone who doesn't want us to know they're there. I have my suspicions, and I know plenty of brinkers that will tell you their theories after a few pints. Hypercorp black labs. Anarchist WMD bunkers. TITAN machines. A secret Factor base. As for any evidence as to what it really is, well, if you've got some, Firewall would like a chat with you.

## OBERON

**Allegiance:** Autonomist Alliance (Anarchist)
**Primary Languages:** English, French, Mandarin
**Population:** 10,000

It's likely you've already heard of Chat Noir, Love and Rage, and the Fissure Gate. There's more to the tenth largest moon in the solar system, however. One thing that makes Oberon unique is its distant orbit. Swinging around Uranus at a radius of well over a half-million kilometers, it's the big planet's most distant moon. Oberon's placement in the Uranian system leads to a couple of implications.

First, Oberon is the only moon that isn't fully cloaked by the Uranian magnetosphere. Due to the odd shape of the planet's magnetic field, Oberon actually dips in and out of the magnetosphere during its orbit. As a consequence, it is the single best place to study variations in field strength and observe how the wildly changing magnetic flux affects the moon. A small argonaut base of a few hundred souls built in the equatorial crater Lear does just this, garnering raw scientific data that can be gathered nowhere else in the solar system.

The second implication of Oberon's position is that it is the easiest moon to reach by ship—large, well away from the rings, at least partially free of the twisting madness of the planet's magnetic field. This reality has made Chat Noir the primary stopover for ships inserting into the Uranian system.

Unfortunately, the presence of the gate makes every arriving vessel a potential threat. Chat Noir has prepared itself for a surprise attack by arming itself to the teeth, restricting airspace over the gate, and thoroughly scanning incoming ships. A lot of traffic comes this way to take advantage of the gate, most of it from autonomist habs and other friendly groups, but Love and Rage isn't afraid to warn off any craft they have suspicions about. After the second warning, they shoot. If necessary, they'll apologize later.

### FUTURE STATIONS

Not everyone out here subscribes to the anarchist credo, however. A group of Extropians looking to exploit the gate's market potential complained for years that the overzealous security and Chat Noir's lack of complete spaceport amenities were not good for attracting future shipping business. They're currently raising capital to build a twin pair of stations that will travel in a long, elliptical orbit around the moon. The orbit is carefully mapped out so neither station passes over the gate and one station will always be available to an incoming ship without having to burn inside Oberon's orbit. Called Graupner Alpha and Beta, the twin stations are intended to encourage the gate's free market trade while reducing the risk. The anarchists of Love and Rage are, to put it mildly, less than thrilled about this plan. The fundraising and initial attempts to secure raw materials for the stations has been beset with a string of suspicious failures. When asked to comment about this, the anarchists typically shrug and happily tell you "accidents happen."

### COBWEB

Perhaps the strangest mechanism on the small moon is the spider-walking farcaster. Because it is least effected by the Uranian magnetosphere, Oberon is best positioned to send and receive egocasts without interference. The Oberonian farcaster station, named Cobweb, is *mobile*, moving about the surface of the satellite to enhance signal reception. Anyone egocasting in to visit Chat Noir that lacks @-rep and hasn't been vetted in advance is directed here for security screening. Though small, the station can accommodate about fifty. It sits on a massive, building-sized, arachnid-like walker frame. Currently it is located in the crater Othello, near the moon's south pole, but as Uranus continue on its journey around the sun, the farcaster will skitter out of the crater and move northward, following the voice of the inner system.

Use of the farcaster is limited due to tight security around Oberon. No amount of money can buy you a farcast, only being in good standing with the autonomists and calling in a big favor will do, or being personally invited by a member of the Love and Rage collective, the argonauts from Lear, or a member of the Gelderloos collective that oversees the farcaster.

## TITANIA

**Allegiance:** Mixed (Anarchist/Brinker/Hypercorp)
**Primary Languages:** English, Mandarin, Russian
**Population:** 10,000

The largest of the Uranian moons at 1,600 kilometers in diameter, Titania is most notable for an impressively long canyon and a population that is able to think outside the box.

## XTREME

Fast. Dangerous. On the edge.

There's one name in Xtreme sports that says it all.

Messina Chasma.

1,500 kilometers long, the chasm stretches across Titania's ugly, gray face like a scar. Every last centimeter of it is a mind-blowing experience unlike anything else in the solar system.

Skate across frozen ammonia polished to a nearly frictionless sheen in Lake Emma, a three-klick impact crater transected by the valley. Go diving off the Cross-Rift Suspension, where you'll drop a half kilometer into the dark. Upload into one of our superconducting sled bots and hurtle down a hundred kilometers of the High Valley Run. Scale the cliff face at Eaton Wall, one of the most difficult technical climbs this side of Valles Marineris.

Come visit Messina Chasma for the thrill of your life.*

Contact the Titania Travel Bureau for further details

[YES]/[NO] ✤

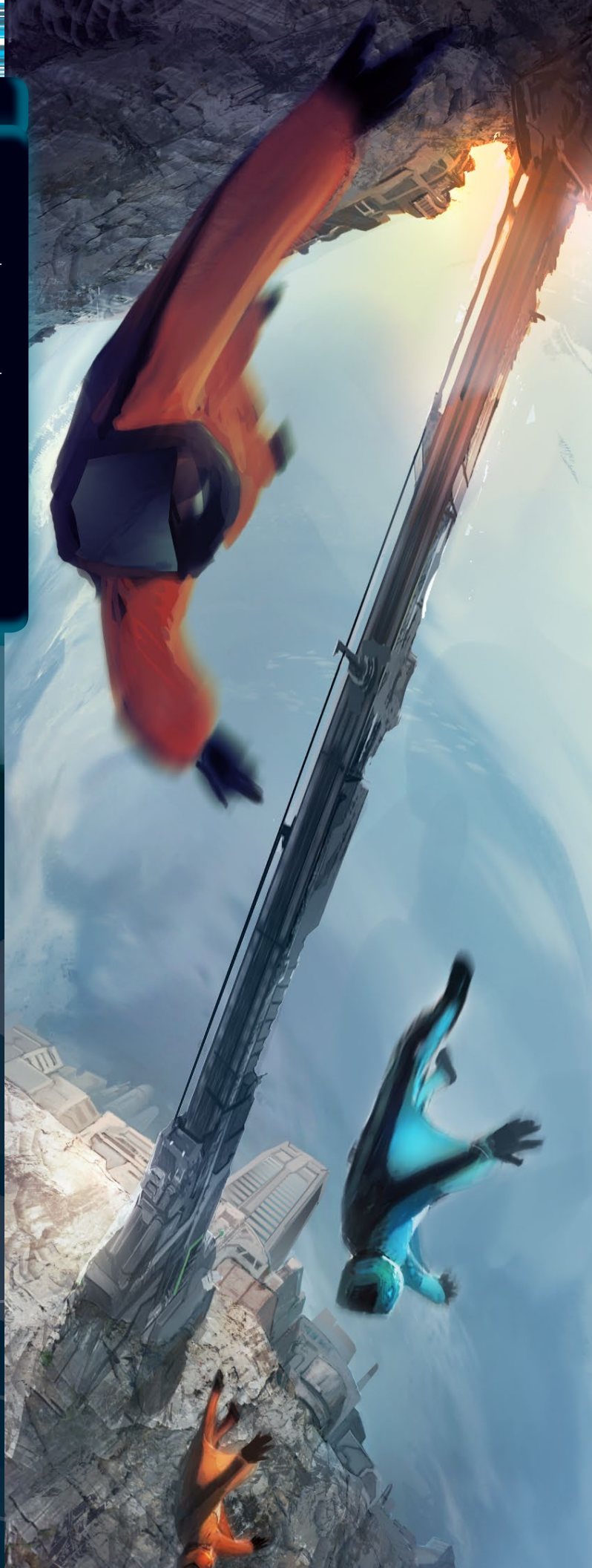
*Free resleeving services provided with every package. Sorry, no morphs can be accepted without a working cortical stack.

## MESSINA CHASMA

Starting with absolutely nothing, the people of Titania (who locally calls themselves Titaniots to distinguish from the technosocialist Titanians) built Messina Chasma into one of the few genuine tourist destinations beyond the orbit of Saturn. Originally catering to younger anarchists and Extropians seeking a thrill, the mesh clips of amazing jumps into the chasma went viral a few years ago, prompting media and sports hypercorps to get in on the action. The canyon gives the illusion of danger around which the Xtreme sports industry is built—without the actual danger. Titania's low surface gravity (.04 g) lowers the potential energy available to X-athletes—as well as the potential damage.

Especially popular is bridge-diving off the Cross-Rift Suspension. Divers drop off the bridge, accelerating at a mere 0.38 meters per second. The acceleration is slow, but it's a long way down—fully half a kilometer. By the end of the 51-second drop, the divers are falling at nearly 70 kph—and then they're pulled back up by the elasticity in the carbon fiber cables tied to their ankles. It's one hell of a ride.

It's not all camaraderie and good times, however. The increasing presence of media crews, inner system tourists, X-athletes, and hypercorp representatives is creating friction with the local autonomists. For the most part, this conflict has remained in the realm of the occasional drunken brawl and shouted insults. The local collectives would prefer the hypercorps not be on Titania, but as long as they're not actively hostile, they're welcome to do as they want. Most of the problems have come from X-athletes trying to market their bad boy/girl reputation by going after the Consortium's favorite scapegoats, the anarchists, to show how badass they are. The clips where they get their bad asses handed back to them by their intended targets are just as popular in anarchist feeds.



# THE ULTIMATES

I stand apart, for I rely on myself.
I stand above, for I do not fall.
I look within, to see the need for growth.
I look beyond, to face new challenges.
I move ahead, to claim the future.
I rise, for I am worthy.
I am Ultimate.

—The Declaration,
made upon recognition as an Aspirant.

You have survived. Where billions of others have faltered, you have fought through the fall of humanity and endured the birth pangs of transhumanity. For that, you are to be congratulated. That is all, congratulated: a fleeting acknowledgement of a past accomplishment.

So, now what? Spend your days working to afford nights in a VR paradise? Shuffle through immortality caring about which XP stars are doing what to whom? Then what—some new distraction? Why? So many live with scales on their eyes, blind to the potential and promise surrounding them, because they are too lazy to take it.

## CROSSING

Like the Xtreme sports attractions, most of Titania's population hugs the edge of the chasma. The largest city is Crossing, with a population of nearly 2,000 souls. Crossing is the site of the Cross-Rift Suspension, a massive bridge five kilometers long that links the eastern and western sides of the chasma. The polymer composite bridge is painted a bright canary yellow, which makes it a stunning sight when Uranus is rising in the background. Crossing is the autonomist city that first popularized bridge diving, and most of the pioneers of the sport still reside here. Offworlders who are willing to abide by Crossing's collectivist work ethic, which means pitching in where needed, and who have a good reputation with autonomists are welcome in the city.

## LYOD

Lyod anchors the northern end of the chasma and is responsible for the production of most of the moon's land crawlers. Populated primarily by resleeved infomorphs who fled a dying Russia during the Fall, Lyod is one of the few remaining centers of Orthodox Christianity in the transhuman world. Currently Lyod finds itself in control of the Titaniot land transportation market, a position threatened by an anarchist plan to build a maglev line that runs a third of the length of the canyon. The residents of Lyod are more brinker in their mentality than autonomist, and inner system types prefer their transitional economy to the anarchist zones. Nimbus operates a small egocasting and resleeving facility here that most of the hypercorps use when they need to get someone to Titania.

## XUE

Xue is an anarchist town a hundred kilometers west of Crossing whose principal business is the spaceport. It's also home to several industrial fabbers and has the largest resleeving facility on the moon. Xue is smaller than either Lyod or Crossing, but is the fastest-growing population center along the chasma, since most anyone who needs anything beyond basic supplies on Titania has to come through the town.

## LAKE EMMA

Experia and a few other media corps have branches out at Lake Emma, where they broadcast all the moon's Xtreme sports. It's a sweetheart deal for the hypercorps since the anarchists aren't interested in monetizing the sport. Of course, their signals are immediately pirated and rebroadcast to any hab that wants it outside the inner system, so most curious parties are able to indulge anyway. Not all of the autonomists are too keen on this, though, since these broadcasts allow the corps to hype Titania throughout the solar system, boosting the moon's tourist trade and drawing unwelcome inner system interest.

## THE VORY

Behind the scenes lurks another presence on Titania. A Russian Vory mob outfit, one of the few not absorbed into the Night Cartel, operates out of Lyod, skimming its share of the profits that spill into the canyon. Calling themselves the Brotherhood Without Emotions, they've tried repeatedly to expand their influence but have been staunchly opposed by the anarchist communities. They have recently started providing support for some of the hypercorp operations, investing in good will that they hope to leverage in the long term to consolidate a hold over the moon. The Brotherhood is a canny investor, plowing its profits into businesses that are likely to be winners and using its muscle and political connections to force open still more opportunities.

## URSULA

Ursula is a large crater near Titania's south pole. It's surrounded by smooth plains, except where its cut by the Belmont Chasma. The main crater is 135 klicks across, but there is a circular pit near its center that has a diameter of 20 kilometers.

The people of Titania awoke one morning to find heavy thermal plumes emanating from Ursula's central pit. The residents of Ursula have had almost no contact with their neighbors on the chasma, which makes the rest of Titania suspicious.

You seek. What, you may not know, but you have the strength to search for more where the rest of transhumanity says "we have enough." You realize that being better is not good enough, not when you can be the best. For that, you are to be recognized, and so I challenge you: Be better than you are. Understand that there is more to do than can ever be done, yet declare to yourself and the universe that you are undaunted and resolute. Tell me you are capable, know it to be true, and prove it. Claim your position as one of the ultimates ... or don't. Continue on, subject to the whims of others who own your body and control your fate. Whine impotently at the actions of each leader or government that you blame for your life. Squander the opportunity the rest of transhumanity fought the TITANs for, and died to give you, and hope that the skill of others will save you again in the future.

Ultimates are the uncommon few. Many are not fit to join us. Which are you?

—Excerpt from *The Challenge,*
by Autarch Katalin Asztalos ■

Firewall hasn't done much better at piercing the mystery. We've learned that the Ursula group is a brinker apocalyptic cult that calls itself Messiah's Children. The cult is secretive and hostile to outsiders, using home-cooked genetic modifications and psychosurgery to maintain a close-knit community.

I've been able to track long-haul automated ships coming and going from the base. At least one of these ships seems to been carrying living cargo, leading some to hypothesize that Ursula is a waystation on some kind of cult underground railroad. That still doesn't explain what they're doing below the surface, though. Wild rumors circulate that they found another gate, but it seems unlikely that there would be two gates in such close proximity. There's a raging debate going on in the anarchist communities about how to deal with them. Most favor leaving them alone, but a few are seriously concerned they may pose a risk to the rest of the moon and may also be keeping some residents against their will.

Regardless Firewall, and the locals, would love to know more about just what they hell they're doing in there. Anyone who could get in and out with the data would rack up some major favors.

## XIPHOS

**Station Type:** Hamilton Cylinder
**Allegiance:** Ultimates
**Primary Languages:** English, German, Hindi
**Population:** 10,000

Originally commissioned as an O'Neill cylinder nearly twenty years before the Fall, Xiphos's technology was considered groundbreaking and well ahead of the curve at the time of its creation. It was also unique in that the superstructure was built in orbit around Mars and then towed, over a period of years, to its location in the rings of Uranus. Not content with this old tech, the leader of the ultimates, Manu Bhattacharya invested heavily with personal wealth garnered before, during, and after the Fall to expand Xiphos, turning the old station into the core of a newer Hamilton cylinder—the first built outside of the Saturn system. Observers believe this upgrade has been completed, making Xiphos one of the largest and best-appointed habitats outside the Main Belt. Some also suspect that Xiphos may be capable of moving under its own power. Running almost 5.5 kilometers long and just over 1 kilometer in diameter, the station takes its name from an ancient Greek double-bladed shortsword used as a close-quarters weapon, and the habitat itself is similarly purpose driven. Orbiting just inside the R2 ring, it benefits from this natural defense, making it hard for attackers to approach and ensuring that anything that does is exposed to the station's significant long-range weaponry. If an attacker actually managed to make it inside the reach of the wide defensive net, the station itself bristles with an array of surface defenses and is guarded by short-range killsats and dozens of wings of high-performance fighter drones.

Unlike other cylinders that devote the majority of their space to accommodations and the associated support infrastructure, Xiphos is predominantly an industrial and scientific facility that houses extensive research and development capabilities. The ultimates have spent the past decade gearing up to take the creation, testing, and manufacture of the morphs and military equipment their survivalist ideology calls for in-house so they won't be beholden to corps or lose control of their designs. Ultimates new to the philosophy might be surprised to learn that Xiphos also houses a number of museums, civic monuments, and meditation spaces devoted to the growth of an unique culture and tradition for the faction. Notable among these are a set of genuine Chinese "scholar stones" in a contemplation garden, the parade grounds used for training exercises, and the Armory, a cavernous hall displaying a collection of arms and armor from pre-Fall Earth, including an authentic ancient Greek xiphos. By far, the most important and frequently used location is the colosseum, an extravagant, fully-enclosed dome that is supposedly

capable of producing any environmental effect up to and including lethal atmospheres and radiation. Though officially meant to allow observation of combat testing of morphs and gear, it's an open secret that Xiphans regularly hold events that can't be called anything other than bloodsport.

The three-day annual Olympics are the closest the ultimates have to a holiday and the heart of their budding civic culture. Some of the games are broadcast publicly via the mesh, displaying the martial prowess of the faction for potential clients. The activities surrounding the games themselves are unknown, as non-ultimates are never allowed on Xiphos, but are equally, if not more, important to those within the faction. The colosseum routinely overflows as any ultimate who can makes the trip to compete or watch the games, participate in debate, and strive for recognition of new levels of personal achievement. Respected members perform and teach master classes, showing and sharing the fullest extent of their skills. Heavy betting and other, more debauched, physical activities are allegedly common during the games, as the ascetic strictures most ultimates observe are abandoned for a few days of celebration among those they deem equals and comrades. Appearances and speeches by the autarchs and Manu, the Demiurge himself, to open and close the games are always highlights for the attendees. Their words and actions are

## THE FIRST STEPS TOWARDS PERFECTION

A common misconception holds that ultimates are hardass mercenaries with a thousand-yard stare and a yen for obsessive biomodding. While it's true they are typically more combat-capable than the average transhuman, believing that's all they are can be dangerous. Ultimates literally see themselves as a breed apart, and their near obsession with the pursuit of physical and mental perfection has deep ideological roots. They model themselves to be philosopher-kings and warrior-ascetics that are accomplished in all areas. To them, life is an active, explicit struggle for survival. Fitness not only guarantees the right to exist, but the right to self-determined superiority over the less-fit "zeros" and "genetrash" that don't share their beliefs. Most transhumans, when they think of the ultimates at all, believe them to be a fairly recent, post-Fall, movement. But understanding the movement from its pre-Fall origins is key to unlocking the role it could play in transhumanity's future.

Before the Fall, much of Earth's population was still engaged in an ongoing battle to adapt to the resource scarcity created by extreme climate change, numerous small wars, and skyrocketing inequality. Small wars over resources—primarily water—were common throughout the equatorial regions. The strong survived and the weak died of deprivation. The ultimates' founder, Manu Bhattacharya, began as a mercenary leader in the Indian subcontinent. He quickly became a kingmaker when he realized that those in power paid better than those rebelling and that being on the winning side brought with it many favors that could be called in later. His success on the field, connections with multinational forces, and work as a security contractor for various corps and governments quickly allowed this charismatic and intense man to establish his own private military company, Ultimate Security. Wealth, access, and exposure followed, allowing Manu to both influence and be influenced by a broad range of thinking as he codified his beliefs. His personal philosophy of relentless self-improvement, evolutionary fitness, and preparedness mixed with objecivist thinking, free-market capitalism, Confucian philosophy, and even the divine right of kings that he encountered in his research and business dealings. He argued that the most capable can and should rise to power and must exercise it as they see fit in order for humanity to advance, even if it means taking action that violated the freedom or sovereignty of less-fit others.

Debates over the ethics of genetic engineering and voluntary gene therapies also shaped his views. Bhattacharya viewed the benefits of new technology uncolored by any religious morality and saw it as an unalloyed good. If one can improve, one must. The alternative is oppression or death. Putting aside any advantage, either out of some misguided sense of morality, sense or honor, or desire for fairness was the path of fools and the naïve. Manu used his visibility to argue what would become the core tenets of ultimate ideology: informed, voluntary, and consensual editing of the human genome and mind, no matter how radical, was ethical so long as it made positive changes in capability. Bhattacharya viewed forced genetic selection and editing as no different than birth control or corrective gene therapies meant to treat disease or prenatal deformities, since it was informed decision-making to benefit the future. His opinion was that humanity had too narrow a concept of sickness and infirmity. Traits that could be enhanced, should be enhanced. The herd is only as strong as its weakest member, so every individual must continually improve or the growing promise of immortality would only create successive waves of unfit elders, senescent fools rooted in sentimentality and outdated moral codes. Any polity or organization that could, must institute measures to improve its constituents or it would be out-competed by others over time. People who self-select to be inferior have the freedom to

eagerly discussed and dissected in the days immediately afterwards.

Xiphos is also noteworthy due to growing rumors about the dramatic increase in the ultimates' purchase of infomorph indentures since the opening of the station. Although transaction records are publicly available on IndEx, the Planetary Consortium-managed indenture exchange and registry, all of the contract terms are sealed until after the indenture has completed service. A comfortable explanation is that the ultimates are using the indentures as cheap, semi-skilled labor to run the vast and complex systems for Xiphos or to conduct the construction of the Hamilton cylinder. This seems unlikely, however, given that the contractees are almost all Fall infugees and would have little or no skill running state-of-the-art hab systems, and long range scans show most of the work on the new habitat areas are being conducted by automated drones. Given the ultimates' belief that Fall victims were unfit for survival, more disturbing possibilities are raised about use as slaves or test subjects for morph designs, psychosurgical techniques to perform and resist mental and VR torture, or experiments with exhuman or TITAN remnant tech. Noting that the purchase of tens of thousands of indentures seems almost indiscriminate, others suggest the ultimates may recreating some pre-Fall scenario or wargaming parts of the Fall itself.

choose, but must accept that they are also limiting their capabilities and the rights to exercise them.

Bhattacharya put these views into effect within his organization from the start. Ultimate Security operatives could divert wages with a company match to pay for biomods and implants to boost their capabilities. Those who pushed their bodies beyond normal human limits got fast-tracked for promotion and command. Casualties received some of the best care in the world and often came out of treatment with additional enhancements. Within a decade of establishment, Ultimate Security fielded entire units of the first true transhumans and was working with their employees directly on growing and training the next generation via company-backed genefixing and child-rearing programs. Bhattacharya himself invested huge sums into early research and development on digitized consciousness. Some of the earliest developed cortical stacks were tested by Ultimate Security operatives in combat situations.

At the same time, Manu himself established a popular personal following. His extreme personal regimen of fasting, meditation, and survival excursions to some of the harshest climates, with little or no survival gear, earned him many admirers and imitators. Soldiers within Ultimate Security respected and followed him loyally and were exposed to watered-down versions of Bhattacharya's asceticism as part of their normal routine. Personal discipline was made a hallmark and prerequisite for advancement in the firm. Even though they were accused on many occasions of using excessive force, Ultimate mercenaries were never once charged with the type of graft and corruption that plagued other mercenary outfits. Their reputation was that they would get the job done, efficiently and quickly, as long as you didn't question their methods.

Of course Ultimate Security also got dragged through the muck as investigative journalists published dozens of reports detailing human rights abuses and war crimes committed by the organization against civilian populations and enemy combatants. Bhattacharya was always quick to respond that such actions were the work of bad elements or those who had not fully internalized the warrior ethos, though his explanation that such acts against "lesser people" would be unconscionable to a true warrior did little to mollify his opponents. In the years immediately prior to the Fall, the leadership of the organization were formally charged with crimes against humanity by a toothless International Criminal Court, but never brought to justice, after evidence emerged that a commander had ordered all of the residents of a mental hospital in India executed for being "unfit" human beings.

Presciently, Bhattacharya also advocated for immediate and aggressive extraterrestrial colonization, as even a transhuman population would have too much demand for Earth's badly-damaged environment. He proved his convictions by starting the planning and pre-construction of a habitat in Earth orbit named Struggle in 24 BF. With the publication of his seminal work, *Eternal Struggle, Eternal Growth* in 17 BF, Bhattacharya laid out a codified set of ideals and organization for a model society that would promote self-improvement and reward those that maximize their potential. In 13 BF, Struggle was opened for initial occupancy and adherents of the movement began to migrate to the station. Supporters celebrated their freedom from the needless restrictions of their inferiors while detractors decried the establishment of a crypto-fascist state and a cult of personality around a war criminal who was using Struggle to avoid having to answer for his actions back on Earth. Despite the criticism, Ultimate Security officially moved its headquarters to Struggle and several thousand self-styled ultimates made the trip to start their new society. ■

## ULTIMATES IN ACTION AND REPOSE

During the Fall, the ultimates came into their own. Many saw the Fall as eschaton and gladly stepped forward to see if they were fit to survive. Stories abound among ultimates, in some cases supported by Solarchive files, that Manu and his autarchs all led battalions in some of the worst fighting on Earth, including the evacuation of Sydney, the destruction of the TITAN war machine factory in Beijing, and as part of the final defense of the last space elevator. Though the ultimate casualties were significant—almost 80% of those that saw action by some estimates—the fact that they survived at all and even succeeded in several major evacuation efforts bought them enough new notoriety that their ranks saw net growth as a result. Though their Struggle habitat was lost to a TITAN attack, there were other outsystem habitats with significant ultimate presence that were spared, leaving the ultimates well-positioned to quickly establish themselves as a stable political entity. They initiated an active effort to recruit from militaries that had lost their backing state, so those that came to the faction post-Fall were some of the most capable survivors. Within a year after the final Fall of Earth, the ultimates were stronger than they'd ever been, enjoying a surge in popularity and setting up lucrative contracts for mercenary work throughout the system. Ever the canny leader, Battacharya rebranded the ultimates, tossing aside the corporate structure that had been necessary when dealing with Earth governments and softening some of the harder-edged philosophical tenets, at least in public. This decreased tensions with many of their more collectivist neighbors and positioned them as a non-hypercorporate alternative to outfits like Direct Action and Gorgon. Though a tiny minority of the transhuman population, they became a disproportionally influential player in rimward politics.

In the decade since the Fall, though, the ultimates have lost much of that momentum. Their resources have been spread thin across projects like the establishment of facilities at Aspis, Xiphos, Ariel, and Eris and increasing response capability and presence throughout the system. The brief swell of popularity vanished as the ultimate disregard for those they viewed as too weak or shortsighted to adopt their philosophy became fixed in the public eye and as relations soured with the Autonomist Alliance and the Titanians. The loss of so many of the original pre-Fall ultimates also damaged the camaraderie and inclusion that the founders and first members shared, so new recruits face a distinct separation from their ideologues and founding members. There has also been a steady loss of candidates who have washed out, finding that their individualist leanings can be more easily indulged among the Extropians, who don't require the same level of physical and mental commitment.

The appeal to individualists does naturally limit the adoption of a shared culture, and operational demands have also pulled the faction in different directions. The permanent military installation at Pharos and the large numbers of ultimates that spend significant time away from Aspis and Xiphos don't have the same access to core leadership. Although these activities give the faction very important access to a gate and keep the credits and favors coming in, there were simply too many individuals for the pre- and early post-Fall organization to maintain its earlier cohesion.

Distinct strains of thought have also come into being, as the founding ideals are continuously elaborated and debated away from Manu and his inner circle. **Exceptionalists** hew closely to Bhattacharya's original thought and current dissatisfaction with the rest of transhumanity's shortsightedness. They profess a long-term plan to establish a separate civilization beyond the gates so ultimates would be free of other transhumans' weakness. Self-styled **overhumanists** are the most aggressive in their disdain for non-ultimates. Internal debates led by Myron Chalmers question how much longer they should tolerate the less fit "genetrash" before taking action to rule outright since they are more advanced individuals; their condescension is responsible for much of the current ultimate stereotype of being judgmental and arrogant. Bridging the two viewpoints are the **iconics,** led by Katalin Asztalos, who argue that the ultimates' philosophy should lead by example and continue to engage with broader transhuman culture to bring more voluntarily converts. All sides agree, however, that other transhumans are weaker than they could be and that weakness is an ongoing threat in a universe where TITANs still lurk. The ultimates must be ready to carry on civilization after the next inevitable Fall. ■

# STANDING AMONG GIANTS

In order to maintain stability and promote participation, the successful organization of skilled individualists depends on a mutually beneficial social hierarchy. This must recognize personal achievement and clearly separate degrees of authority and levels of inclusion to establish a core of "true believers." To foster this, the ultimates have developed a symbolically dense system of formalized titles and awards that they use to denote an individual's physical and mental acumen. The division between the mental and physical spheres is deliberate: an ultimate recognized for their rhetorical brilliance won't be given command of an ops team clearing out an exhuman hive, nor will a champion athlete be given a leading role in contract negotiations for a gatecrashing operation. One of the strengths of the faction lies in the explicit acknowledgement that one person is not an expert on all areas; indeed, many outsiders are surprised at how collaboratively ultimates approach planning and strategy. Competing viewpoints and areas of expertise are brought in specifically to foster genuine disagreement and debate, and only those positions that can overcome such opposition are deemed worthy of use. Once a strategy is in place, however, all parties involved are expected to support it to their best ability and work smoothly under the guidance of the appointed leadership. It is on the director of an endeavor to see it succeed, though, as ultimates have little patience for failure of any kind and do not hesitate to hold those in high position accountable. Anyone leading should have the wherewithal to identify and overcome any situational difficulties or they don't have the right to lead.

Deliberate obscurantism through the use of uncommon languages, coded profile information, and encrypted AR displays keeps non-ultimates unaware of the specifics, but allows fellow factionists to immediately recognize one another and help organize themselves around acknowledged expertise as any situation demands. Deliberately taking cues from a mix of military and religious traditions, different types of titles are employed, acording to the realm of endeavor. Standard military rankings are awarded based on active combat operations and the development of skills such as weapons training, vehicle piloting, squad tactics, security procedures, and field medicine. Intellectual, philosophical, creative, and technical achievements are usually recognized with more esoteric titles drawn from meditative religious traditions and Greek and Chinese culture. These are awarded based on rhetoric, social refinement, artistic endeavors that depend on control such as calligraphy and sculpture, and scientific or technical knowledge. Such specialized titles are only used very formally, either as a show of respect and deference to a superior of extreme achievement in a given field or as part of the occasional ceremonies observed by ultimates as a group. Casual reference and interactions use a common nomenclature of rank based on overall standing within the faction blended from all achievements in any sphere:

**Aspirants** have no recognized accomplishments and are those just joining the movement. They have proven themselves committed to the philosophy and possess useful skills and basic personal competence. Typically they will have only read *The Challenge* and/or *Eternal Struggle, Eternal Growth* and have little other exposure to the core philosophy. They are put in touch with an exemplar to act as a mentor.

**Initiates** are ultimates that show significant skill in several valuable areas and have proven themselves useful to the faction. Not yet wholly absorbed into the movement out of fear of spies and infiltrators, initiates are only exposed to certain select works. They are slowly integrated into the faction by other ultimates through involvement with field work that places the initiate in real physical and psychological danger to weed out the unfit.

**Exemplars** have already proven themselves and often act as mentors for aspirants and initiates. Exemplars are successful and proven in their areas of primary competence and are often deeply engaged in building skill in other areas. Those with this level or recognition often act distinctly distant, condescending, or proselytizing towards non-ultimates. Should they request it, they may be granted occupancy on Xiphos or another ultimate habitat. Exemplars are most often encountered by others as squad commanders of other ultimates.

**Ducti** serve as the operational heads of major projects such as morph design, hab governance, memetic propagation, and direct large-scale military operations command. They are all highly accomplished individuals and often have very high standing outside the ultimates as well, as their responsibilities to the faction require long-term planning and routine dealings with non-ultimates. Their skills alone set them in the upper reaches of transhuman achievement.

**Autarchs** are the tiny handful of individuals who serve as the directors of the faction's ideological, technical, military, and political strategy. These are the transhumans universally recognized as important thought leaders, innovators, and luminaries in their fields. All current autarchs are founders of the movement and are known to have been alive since at least 60 BF. They are the philosopher-kings that other ultimates aspire to be.

The **Demiurge** is the undisputed ideological leader of the movement, Manu Bhattacharya. His words are pearls, his attacks do not miss, he weeps at beauty and laughs at war. He dares you to surpass him. ■




## ULTIMATE ATTITUDES

**To:** Donovan Astrides
**From:** Sukhbataar Batu

I am sorry my friend, but there is no way I can help you gain access to Xiphos. Even were you not a notorious anarchist and troublemaker, it is forbidden for any non-ultimate to visit. As to your offer to join us if it would gain you access, I am afraid this is also not possible. While I have no doubt as to your fitness and ability to survive, it is not one shared by my fellows.

In regard to your second question—how do we view other groups of transhumans?—this is complicated. I would say this varies, we are not some hive-mind, all thinking as the Demiurge does, believing as he dictates to us. Individuality is a core aspect of our being, and judging others by their actions and words is stressed over reliance on rumor or stereotype.

That being said, there are certain attitudes that prevail among my brothers and sisters.

For those such as you, the anarchists, the scum, and autonomists, we see you as survivors, but not like us. You are tenacious survivors, but so is the cockroach. Worse, you are weaker than the cockroach, as you allow the sick, the infirm, and the unfit to live among you and even procreate.

While we work for the hypercorps, we do not respect them. Any being so given over to the acquisition of material goods at the expense of self-development is unfit and worthy only of scorn. The same applies to those such as the Extropians.

We view both the Titanians and the Jovians as clinging to failed, antiquated models of social organization. They are rooted in a past of states and services, one that will doom them as the weakest among them will drag them into the abyss.

As for the others? Those so-called brinkers are lost and broken people, it is better that they never existed. Criminals, of all stripes, are parasites on the social body and should be exterminated whenever encountered. And the rest, those who cling to a provincial attitude, rooted in a place like Mars or Venus and unable to see the larger picture, we ignore. Soon enough, the tide of history shall wipe them away, showing the error of clinging to a tiny part of the wide universe when the legacy of transhumanity is written in the stars of other galaxies. ♣

## THREAT ASSESSMENT REVIEW: ULTIMATES

Fellow reviewer,

To recap: since Firewall's inception, the ultimates have been viewed with caution. The hyper-individualistic ideology of the faction makes their plans difficult to divine to outsiders. Our attempts to get an infiltrator recognized as an exemplar with access to solid intel have also failed. None of our operatives who came to us from the ultimates have shared anything of note, and when—despite very vocal protests from myself and other reviewers—attempts have been made to forcibly extract information from backups, we've never found anything to elevate the organization to an actionable risk. After some newly acquired data from [insufficient access], however, we feel it is a priority in the short term to deploy direct operations with Watts-McLeod assets.

The ultimates' current system-wide PR push to recapture some of the factions' former good will spur recruitment should be viewed as a peacetime buildup of forces. There is growing internal consensus that if the ultimates were to seize control of both the Fissure and Discord Gates, they would likely be able to make and solidify permanent gains in exploration, colonization, research, and military preparedness. The likely scenario is that Chat Noir would be hit first, given Oberon's proximity to Xiphos. It's no secret that the ongoing control of the Fissure Gate by their "inferiors" in Love and Rage is a thorn in their side for many ultimates. Likewise, the ultimate base on Pharos puts them in a prime position to move against Go-nin.

Once in control of two gates, the danger exists that the ultimates could move to seize all of the gates within the solar system. This would be difficult, and would require forceful access through a chain of linked extrasolar gates, but is in the realm of possibility. The high proportion of ultimates involved in gatecrashing missions via all of the known gates provides them with ample opportunity to scout targets.

This scenario could be a major x-risk. The ultimates could become the sole extrasolar power at a stroke. Though other factions would doubtless contest any such action, the initial assaults could very well succeed, and as a result the ultimates could at the very least destroy a gate in order to deny it to their enemies. Though gate destruction is theoretically temporary, it could put the ultimates in control of all of the operating gates for many months at least. It is worth noting that very few exoplanet colonies are likely capable of putting up a strong enough defense against the ultimates on their own.

In the event of another x-threat being realized while the ultimates control the gates, they could be the only ones in a position to leave and could theoretically shut out the rest of "unfit" transhumanity. ♣

# ARIEL

**Allegiance:** Ultimates
**Primary Languages:** English, Hindi, Mandarin
**Population:** 2,000

Less than 1,200 kilometers in diameter, Ariel is a small moon that is half rock and half ice. The moon is most noted for its cratered surface and the long, smooth rift valleys that were likely carved out by flowing liquid, most likely ammonia, methane, or carbon monoxide. The moon has little strategic value within the Uranian system, but it is rich in volatiles and the tidal heating it endures makes them relatively easy to extract. Most outsiders assume the ultimates on Xiphos want a second source of CHON that's more reliable than that offered by the skimmers, which certainly fits the survivalist and self-reliance profile of the movement as a whole. Ariel's resources are not enough to offset the massive amount of funds and time the ultimates have sunk into establishing a base there, however, even if the bulk of those resources have gone into the construction of Xiphos. The same tidal heating also makes the moon very tectonically active, yet the developments there have all involved extensive subterranean excavation that would be unstable and costly to maintain. Further, the mining operations that are nominally the reason for the base would require at most a few hundred personnel to run, yet close to two thousand ultimates are stationed on the moon.

Possible explanations are easy to come by, and none of them bode well for non-ultimates. Ariel's harsh, cold environment is somewhat analagous to many other outsystem moons—or nearby ice moons like Oberon, home of the Fissure Gate—and even some large asteroids, making it a ready-made staging ground for wargames. Others claim that the head of operations for Ariel, Autarch Myron Chalmers, is using it as an R&D facility for experiments deemed too dangerous to perform on Xiphos or that other ultimates might disapprove of. Given Chalmers's disdain for non-ultimates, there is a fear he may be using the facilities as a harsh prison for captives or internal dissenters, for researching TITAN or exhuman artifacts, or for developing or refining new WMDs. There also exists the dim possibility that the ultimates may be preparing some option to deliberately destabilize the subcrustal tidal action and destroy the moon itself, either to deny others access to the moon, as a proof-of-concept for planet-busting weapons, or as a way of creating a debris field that would significantly impact cargo access to Uranus. Given the near-obsession with survivability in the movement, there would also be value to preparing Ariel as a fall-back position to use if Xiphos were ever compromised.

## PLACES TO CRASH?

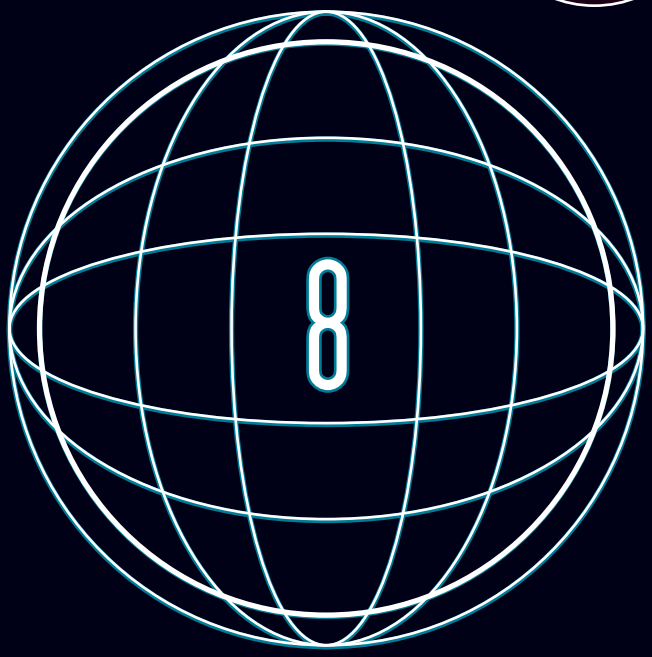
Gate prospectors and other hopefuls have yet to find a gate within the system—but the rumors just won't stop. ■ p. 126

# NEPTUNE

## WITHIN THE TROJANS

**Hawking:** Space drive research is the focus of this venture. ■ p. 131

**Ilmarinen:** A melting pot for oddballs, Ilmarinen sports a unique (lack of) atmosphere for a habitat. ■ p. 132




## GLITCHED

20,000 infomorphs populate Glitch—a seriously enhanced environment with ongoing radical experiments. ■ p. 128



## HIDING ON THE EDGE

Some travel to Neptune to hide, others to reinvent themselves. Brinkers, survivalists, and paranoid freaks hunker down here, also. ■ p. 126

## FREE

Newcomers to Free are promised just that—free morphs in exchange for labor. A good deal, on the surface … ■ p. 130

# NEPTUNE



**Posted by:** Adam Mooljee,
Firewall Sentinel <Info Msg Rep>

Few people are ever going to travel this far out; there's not much reason to, and the options for getting here are either an expensive egocast or a remarkably long journey by spaceship. Out here, you're also seriously out of touch. News from the inner system takes four hours to reach Neptune by light speed. If you want to keep up-to-date, be prepared to burn some serious qubits while you're here. Other than the occasional extreme tourist or researcher, there are three major reasons people visit Neptune: Glitch, Ilmarinen, and Mahogany. In a more general sense, almost everyone comes to Neptune for one of two reasons: to hide or to join or start a community of people (to use this term in a particularly broad sense) who are exploring the limits of sapient existence. Both Uranus and Eris have gates, Neptune doesn't and so is rarely visited by anyone who isn't considering immigrating there.

## HIDING

There is a lot of laying low going on this far out, but there are many different reasons behind it. Despite various vids telling stories of desperate fugitives egocasting or taking a ship to the edges of the system, most people who simply want to avoid pursuit find a convenient scum barge or a place in the Belt, the Jovian Trojans, or Saturn to hole up in. One of the big advantages of not going too far out is that there are a lot of people and habs to vanish in and so tracking someone down is hard.

Less than 100,000 people inhabit the region around Neptune, compared to the millions in the Belt, so vanishing is much more difficult. Instead, what you have out here are people determined to reinvent themselves and to get away from everyone and everything that might either recognize them or remind them of their past. That's a fairly unusual subset of people. It is far more likely to consist of people running from themselves than fugitives fleeing from justice or rivals.

There's the other sort of hiding, of course: people bunkering down out of concern over potential or imagined threats. The survivalist meme is surprisingly popular out here. Neptune and its Trojans are a popular destination for brinkers. You're far out on the black emptiness, and there's no gate around for TITANs or alien invaders to come pouring out of. I've heard all manner of crazy stories from people here about how the Planetary Consortium, the Titanian Commonwealth, or even the anarchists are secretly run by TITANs. Most of these people either expect some sort of trouble to come from the gates or continued work on AGIs, while others simply have never gotten over the trauma of the Fall and can't believe the TITANs aren't waiting somewhere to finish the job. I'd love to be able to say all of them are wrong and crazy, but none of us can, and so maybe they'll still be around long after everyone else has suffered some hideous fate. Paranoia and conspiracy theories are practically a hobby around Neptune, especially among the brinkers.

## GATE RUMORS

Since there are Pandora gates around Saturn, Uranus, and Eris, there are more than a few people living around Neptune who wonder if there isn't one here too. Performing an organized, thorough, and relatively fast search of the various moons would take more funds and organization than anyone out here can muster, but there is no shortage of desultory gate prospectors and more than a few rumors of gates or buried anomalies that might be gates. Triton, with its cryovolcanoes and occasional seismic activity, is the most common site for such tales. Every month or two, someone attempts to confirm a possible discovery there. Since none of the other Pandora gates have been found on a planet's largest moon, however, most people speculate that if one exists it will be found on one of the other seven inner moons, with most bets on either Nereid or Proteus. Except for Triton, though, all of these moons are small enough that it is likely a surveyor would have found any such gates by now. It's always possible that there's a gate buried too deep to easily spot, but efforts to find one are built more on hope than rational expectation. Some Neptunians hope eagerly that one is found, since it would make the planetary system far more prosperous and influential. Of course, not everyone wants that to happen. The brinkers don't want to attract too much attention and some of the more radical mercurials want to be left alone to pursue their own strange destinies without interference from outsiders. Naturally, there are some locals who believe that a gate has been discovered, but that its existence was covered up. Until I see evidence to the contrary, however, I'm betting that there isn't one around Neptune.

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
AUTONOMIST ALLIANCE
GAME INFORMATION

# NEPTUNIAN AEROSTATS

Unlike the folks lurking out in the Oort Cloud or the various dwarf planets like Pluto or Eris, Neptune and its moons has an abundance of resources of all sorts—and there is also a gas giant to hide in. Ever since Morningstar declared Venusian independence, far too many people are crazy about aerostats. Now we have a couple here, in what's perhaps one of the craziest places to consider them. Neptune's atmosphere is the most dangerous of the gas giants, with massive dynamic storm systems and raging wind speeds that can exceed 2,000 kph—that's nearly supersonic. It's an impressive feat that any aerostats have survived here at all. Of course, the people living here actually have a good reason for building them.

## MUSHROOM

**Station Type:** Aerostat
**Allegiance:** Independent (Brinker)
**Primary Languages:** Cantonese, English, Russian
**Population:** 1,200

I recently visited Mushroom, which is one of at least two aerostats in Neptune's atmosphere. It was quite a trip to get there; the inhabitants lend new meaning to the word paranoid. To leave Mushroom, I needed to agree to have the details of its location and how to contact it deleted from my memory. All I know now is that it's deep in the clouds of ammonia and hydrogen sulfide, where outside pressure is around three atmospheres. This is not a tourist hab or really a place that anyone sane wants to spend any time. The local gravity is 15% higher than Earth, the outside environment is ludicrously cold, and the pressure in the interior of the habitat is also three atmospheres. That's narcotic to biomorphs without mods. However, it's also not the worst Neptune has to offer.

From orbit, Mushroom takes a lot of careful work and no shortage of luck to find. Taking a ship to the station, even if you knew where it was, would be a challenge. I'm told it is well armed and the residents are more than happy to blow any trespassers out of the sky. The only way to visit is to egocast in from someplace run by people they trust. Stations that are in good with Mushroom are Phelan's Recourse, Lot 49, and at least two scum swarms that mostly spend time out beyond the orbit of Jupiter. You need to know the right people to make contact. Everyone who egocasts into Mushroom is run through psycho-surgery; if your reasons for coming don't look good enough or there's anything off about you, you're immediately bounced back to where you came from.

Mushroom is fairly small, holding only around 1,200 or so inhabitants. Keep in mind, I'm taking the word of some very strange and not very forthcoming people for this data. Mushroom is a very odd hab, and exactly as paranoid as you'd expect. There is no radio or mesh traffic out—zero. Attempting to is grounds for immediate exile. They have several repeater antennas in the upper atmosphere so they can receive radio broadcasts, but can't transmit. Instead, the only communication is via quantum farcasters linked to one of the habs from which they are willing to accept egocasts. From there, messages can be broadcast to the internal mesh normally.

In my limited time there, I never got a good grasp on what Mushroom was for or who was backing it. The residents had a hard-bitten anarchist vibe, they were very cognizant of x-risks posed to trans-humanity, and they clearly have connections with the scum, but what they hope to gain by hiding in Neptune's atmosphere remains a mystery.

## JAQUES

**Station Type:** Aerostat
**Allegiance:** Independent (Brinker)
**Primary Languages:** Unknown
**Population:** 5,000

While I was on Mushroom, I talked to several people there who had returned from an even deeper aerostat that's closely allied with Mushroom. Known as Jacques, after some Earth undersea explorer or other, it's down in the deep and completely opaque water ice clouds, where the pressure is around 50 atmospheres. You can't build a hab that can survive that environment without equalizing the pressure, and in air that sort of pressure is too high for anything but synths, so the hab is filled with water and inhabited only by aquatic morphs. The residents get to live in a fish bowl surrounded by a high pressure atmosphere and if anything goes wrong, they swiftly become one with the compressed water and methane ice below them. The one consolation is they're deep enough that the external temperature is actually habitable, which also means that the station is invisible to all IR scans and deep enough that no other sorts of scans are going to find them. You can't detect Jacques from orbit, and you'd need an insanely tough ship to get close to the station, so these brinkers are very well hidden. The only way to get to Jacques is to egocast from Mushroom. I wasn't allowed to visit the habitat, it is supposedly only for people who are hard-core brinkers.

I obviously don't have much intel to work on here, but I overheard something on Mushroom that makes me wonder about Jaques. None of the three people who'd been there were willing to talk about it, but one made a comment to another that made it sound like some of the inhabitants were not there voluntarily or were prevented from leaving. My guess is either that they are either using slave labor or they won't let anyone who might say anything bad about them leave. In either case, I think there's something nasty going on down there, and maybe someone should take a look.





# NEPTUNE ORBIT

**Posted by:** Raisa Geld,
Firewall Sentinel <Info Msg Rep>

The presence of both Glitch and Mahogany have made Neptune a magnet for the more exotic mercurials, as well as for others who seek to go well beyond the boundaries of ordinary transhumanity.

## GLITCH

**Station Type:** Processor Locus
**Allegiance:** Independent
**Primary Languages:** English, Japanese, Russian
**Population:** 20,000

Glitch is the largest and most well-known processor locus. It has no embodied residents; everyone is an infomorph.

Glitch accepts visitors as long as they pass a few fairly simple memory and personality examinations. They screen for smart and imaginative people who work well with others. Most of the people they accept either bounce on out of here pretty quickly or they never leave. It looks like I'm going to be in the second category.

Even if you've spent a good bit of time as an infomorph, there's no easy way to describe Glitch. The first thing you realize is that it's an incredibly rich and seriously enhanced environment. The instant you arrive you're smarter and thinking faster than ever before. However, there's a lot more than enhanced thinking going on there. They aren't doing anything like the neo-synergists or anyone else who's trying to make some sort of hive-mind, but between the cognitive speed-ups and the high bandwidth, communicating with other residents of Glitch isn't like talking in meatspace—or even like communication in any other infomorph environment.

The standard communication protocols here include easier conveyance of emotions, thoughts, memories, and perceptions. Sharing a memory with someone else or temporarily linking your thoughts with theirs is as easy as opening a voice or full sensory channel. Sure, anyone can do this anywhere with a modern mesh architecture, but nowhere near this easily or this fast. The subroutines are sufficiently slick that all of this takes no more effort than saying hi to someone, and that's both strange and amazing. It's also addictive. Anyone who

spends much time on Glitch is going to have trouble interacting with outsiders.

With 20,000 other residents to communicate with, and absolutely no lag-time on information transfers, Glitch becomes your entire world—and it's an impressive one. Currently, there are a dozen planets simulated down to a level of detail well beyond the limits of perception. However, what's going on here is a whole lot stranger than what it looks like from the inside. Glitch has a dedicated farcaster link with Bright in the Saturn system and another to Ilmarinen over in Neptune's L4. Most of the locals don't bother communicating directly with anyone from either hab; the lag and lack of bandwidth makes communication too alien, but Glitch constantly shares data with both habs.

Radical infomorph enhancement is one of the major projects going on here. I haven't gotten close to anyone at the top of that particular initiative, but it's well funded and has highly skilled people working on it. While many of the cognitive researchers on Bright are currently focused on allowing individuals to become part of temporary, ad-hoc mental processing networks, here the goal is more about self-contained individual enhancement through a series of software upgrades to cognitive processing. There are rumors that one team is trying to turn infomorphs into something like seed AGIs, and that sounds like something that's well worth looking into. I'll see what I can find out.

### Mahogany

**Station Type:** Disc
**Allegiance:** Autonomist Alliance (Mercurial)
**Primary Languages:** English, Indonesian, Spanish
**Population:** 4,000

Mahogany has set the standard for uplift and mercurial habitats, inspiring many others to establish their own colonies. Their efforts to establish a mercurial society, free from human intervention, has been a rousing success. Notably, Mahogany's neo-avians are not content to isolate themselves from the rest of transhumanity; they remain actively involved, with residents engaging in more widespread scientific, political, and social initiatives across the solar system.

## Neptunian Moons

**Posted by:** Adam Mooljee,
Firewall Sentinel <Info Msg Rep>

Neptune has thirteen moons, four of which orbit within the ice giant's thin ring system. Most of these are only sparsely inhabited.

### Triton

Triton is the largest of Neptune's moons, dwarfing the combined mass of the rest. It has an unusual retrograde orbit, opposite that of Neptune's, indicating it was captured from the Kuiper Belt. It is believed to hold an ocean underneath its mantle of ice, much like Europa, but this has never been explored. It remains geologically active, with cryovolcanoes and a tenuous nitrogen atmosphere.

### Afrik

**Station Type:** Torus
**Allegiance:** Independent (Mercurial)
**Primary Languages:** Dutch, French
**Population:** 3,000

Afrik is a mercurial attempt to create an artificial engineered wilderness in orbit around Neptune's moon, Triton. Lacking the funding and access to the full gene libraries of hypercorps like TerraGenesis meant that the original plans to recreate a mixture of pre-Fall African jungles and savanna had to be scrapped. Instead, the designers are establishing an ad-hoc, cobbled-together, tropical ecosystem that contains plants and animals derived from Central and South America, Africa, and Southeast Asia. At first glance, the interior of Afrik looks completely wild, with infrastructure carefully built into the landscaping. Interior construction is still underway, however, so there are some gaps and areas that are completely devoid of occupation.

Almost all of the animals and flora introduced here have been heavily engineered. To fill in some of the gaps in this ecosystem, the designers added a mixture of entirely created animals and plants, and even a few designs based on alien life forms found on several exoplanets. The various trees in the jungles and savanna are far more than just trees. In addition to producing excellent wood, they pump up drinkable water from the forest floor and provide several different types of edible fruit on a single tree. They are also technological marvels, with active nanotech circuitry growing into the wood that provides mesh access, detailed sensor readings of the surrounding area, and even sometimes nanofabrication options. Amidst the tall grasses in the savanna, the few isolated trees and the huge termite mounds serve the same purpose. The entire ecosystem creates its own mesh network, where even tall grasses contain a few small, embedded sensors, processors, and transceivers. Every animal in the forest also carries some sensors and transceivers. This mesh network allows users access to a detailed real-time picture of the local ecosystem. Any biological problems are noticed as soon as they happen, as is any attempt at vandalism or infiltration.

The inhabitants consist of various uplifts in a variety of morphs. The most common are neo-hominids, hyper-gibbons, some ripwings, and even a few scurries. A handful of neo-avians live here, but most prefer the open spaces of Mahogany.

## PROTEUS

**Posted by:** Jake Carter,
Firewall Proxy <Info Msg Rep>

I don't leave Mars much, but when I do, small and boring-ass moons of Neptune such as Proteus are not usually where I choose to go. Unless there's a good mystery, that is.

### FREE

**Station Type:** Beehive
**Allegiance:** Independent
**Primary Languages:** Arabic, English, Italian
**Population:** 10,000

I've had my nose to the ground for some missing Martian infomorphs the last few months, and now I've found 'em. They've been spirited off to a tiny hellhole called Free, way out on the fringe.

"Gather data. Look for evidence of x-threats. Don't interfere." Balls, man. I want intervention on this one. If I don't get it from Firewall, I'm calling in the Movement. My cousin Young-Ja's got a crew of futeisha badasses who'd love to take a break from street actions and train jobs and shut down this bad news farm.

This hellhole promises morphs for everyone, with better morphs coming with proof of superior ability. I can tell you right now that's a load of shit—we're looking at slavery here. The locals buy Martian indentures and then enslave the ones who don't measure up to their criteria for citizenship.

I don't understand all the technical-ass criteria they use for these decisions. Some of it involves having useful skills and an appropriate temperament, but there are other criteria that the locals keep secret. The upshot is around 5% of all immigrants get fairly basic but nice morphs like splicers or bouncers, another 15% get worker pods and similar cheap morphs and the opportunity to earn better morphs, and the rest are stuck in synth and case morphs that contain various override switches and other limitations.

These people also have involuntary psychosurgery to make them content with their lot. The people in bios and pods can earn better morphs, but the rest don't want better morphs—they just want to work themselves down to bare synth muscle and be praised for their ceaseless effort. There are stories that the Consortium tried this sort of crap six or seven years ago and gave it up because bad PR started leaking out—and on account of some seriously problematic side effects. I don't know what those side effects are, but we've got mind-slavery here, and if these fuckers can make it work, it'll spread.

Free's made a name for itself by providing the kind of sophisticated data analysis and complex design strategies that were performed by AGIs before the Fall. Now, AGI is illegal in pretty much all inner system habs, and hiring people to perform this sort of data mining and manipulation is expensive. Free's made a nice profit undercutting local talent in the Consortium and other places where AGIs are illegal.

Most of their contracts are new, but with the payments starting to roll in, Free could make a big push for growth, and we really don't want to see this place get a major influx of immigrants or to start spreading their poison to other habs. The chink in their security is that they're so eager for work, they don't check the credentials on potential clients—or those posing as such—too close. I got in and out without a hitch.

But I'm waxin' political, and that ain't what I got paid for. So, demographics. Free has a total population of around ten thousand, and the general layout is a clear reflection of the local politics. The habitat is a beehive dug into the surface of Neptune's moon Proteus, and the deeper you go, the better things get. The areas near the surface are either hard vacuum or helium and are home to the synths living in drastically Spartan conditions. If you ask them, they'll all

## THE LARISSA TRACKS CONTROVERSY

A few months ago, controversy erupted when a lone brinker, surveying for a Pandora gate, claimed to find evidence of alien visitation on Neptune's moon Larissa. According to the documentation, the brinker found scorch marks, nonhuman footprints, and other signs of a landing etched into the cold regolith. What might have been passed off as the signs of another brinker's passage at a quick glance, however, showed clear signs that they were much, much older: hundreds of thousands of years. Researchers from Ilmarinen visited the site and took their own readings. Though their results were not entirely conclusive, they do seem to verify the age of the tracks and marks as being placed before the evolution of humans. Naysayers abound, of course, with many claiming that the entire thing is an elaborate hoax set up by brinkers with too much time on their hands. Tourists have already been making pilgrimages to the site, despite concerns about contamination of archeological evidence. The site has also drawn even more explorers to Larissa, hoping to find other signs or even alien relics stashed away somewhere on or within the cold, icy moon. ■

tell you that luxuries would distract them from their work and that they all love their work. Ask as many as you like; you'll get exactly the same spiel.

Below that, you get some heavy-duty airlocks with armored walls and doors and the sorts of sensor suites and concealed defenses normally found on high-security installations. This is where everyone who still has an intact mind lives. The next few levels are mostly for pods and look like most other mid-range habs you've seen. The primary difference is the mixture of fear and hope. Some of the people here are horrified by what's going on, but not so much that they'll risk trying to do anything to stop it. My guess is that anyone who'd stand up to what's going on ends up mind scrubbed and stuck in a case.

Even deeper in, you get the areas where the biomorphs live. Down there, you can see that while it's small and fairly new, Free is doing pretty damned well for itself. Of course, when each resident has the work of a dozen people supporting them, it ain't surprising they're living fat. The elite have high-end cornucopia machines, ubiquitous smart materials in walls and furnishings, and top-of-the-heap personal energy and raw material budgets.

Even then, there's a pecking order. The people in charge plan to stay that way. Even in the high-status areas, the local leaders have all the cornucopia machines locked down from printing any weapons other than knives. The only unrestricted fabbers are personally owned by the local oligarchs. If you want to procure a nice morph or serious bio-mods, you gotta know somebody.

It's just how Mars would be if there were nobody around to throw monkeywrenches. I'm thinkin' we should import some.

## THE NEPTUNIAN TROJANS

**Posted by:** Adam Mooljee,
Firewall Sentinel <Info Msg Rep>

Most people don't realize that the Neptunian Trojans outnumber the asteroids in the Jovian Trojans by an order of magnitude. While a lot of these are just clumps of dirt and ice no more than 10 klicks in diameter, there are fewer small asteroids here, as they fragment into dust more easily. The amount of asteroids over 100 kilometers in diameter is significant. What this means is that the Neptunian Trojans are big but sparsely populated neighborhoods. In other words, the perfect place to hide out. Most of the habitats out here are small tins and beehives full of brinkers and other eccentrics. It's uncommon to find one with more than 500 inhabitants, and most have less than 100.

### HAWKING

**Station Type:** Beehive/Cluster
**Allegiance:** Independent (Hypercorp)
**Primary Languages:** Arabic, English, German
**Population:** 3,000

Hawking is a joint hypercorp scientific venture dedicated to practical research of novel and hypothetical space drives, particularly those involving

## SECRET SHIPYARD

**To:** <encrypted>
**From:** Adam Mooljee, Firewall Sentinel <Info Msg Rep>

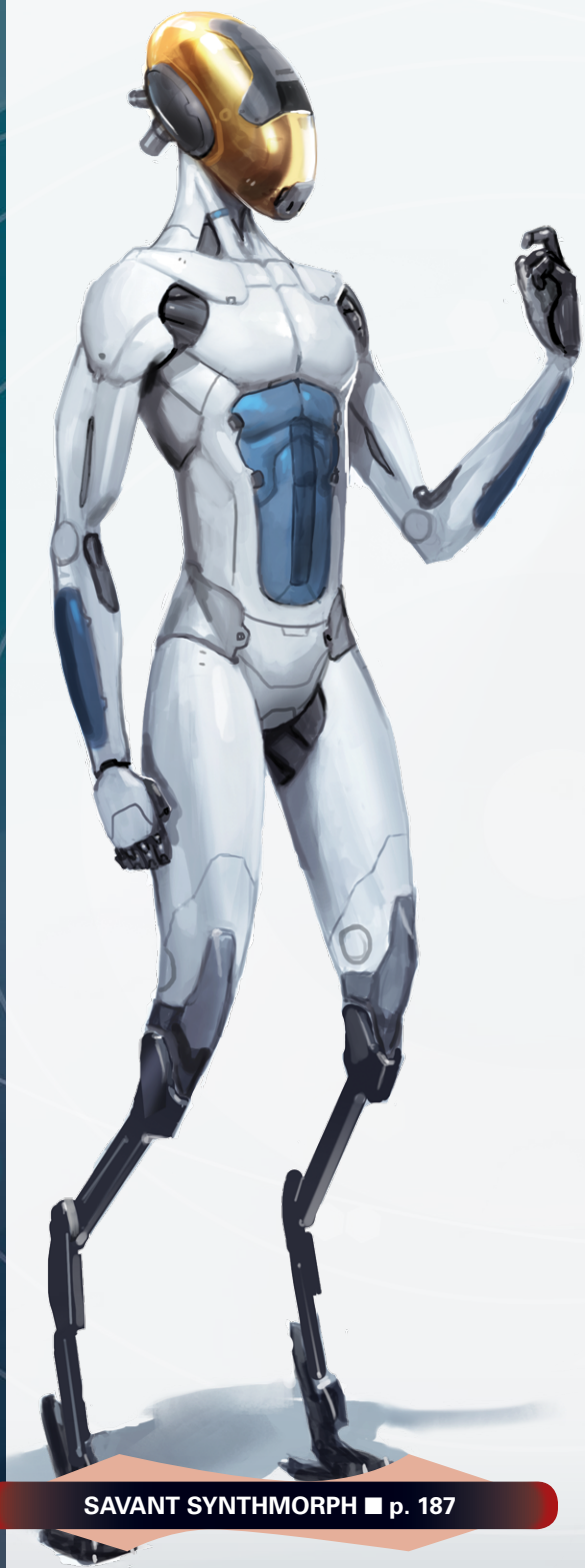
I'll send an image when I get one, but I thought I'd make a report first. I was talking with a group of neo-primitives who want to build their own faux Eden out on one of the rocks in Neptune's L4 point. They sent out a swarm of small autonomous mapping probes to do their own survey of the asteroids they had in mind because they don't trust the official data. One of their people said that they found something odd on one of those bodies there, something that doesn't match up with any known records. They want to sell the info and thought I might be a likely buyer.

My informant, a woman named Chylie, showed me the image, but only after I disabled all my recording methods—these neo-prims are a seriously secretive bunch, but you see that a lot out here. I saw a single frame of a deep crevice in one of the smaller asteroids, a body only around 30 or 40 kilometers in diameter. The probe's angle was such that it recorded a partial image of the bottom of the crevice. It revealed what looked like a single huge ship. I couldn't tell without data analysis, but it looked like a high-speed transport of some kind, probably over a kilometer long. I saw some parts that looked like an antimatter drive, but there were a number of engine components that I didn't recognize. The edges of the crevice were in the way at various points. The ship also had the look of being under construction or going through heavy maintenance.

The problem is that the probes the neo-prims used were pretty old and they only managed to get a few useful shots with telescopic lenses. They didn't show me the others, but they claim they show evidence of half a dozen of these ships, all similar. Chylie said that a later probe got a partial image of the same crevice 14 hours later and it showed up as less deep and empty of any ships. Whoever's building this thing presumably got it back under hiding.

My guess? Either someone's playing with experimental drives or someone's building a fleet for interstellar travel. Why they're hiding it out here is anyone's guess—but it bears looking into. I hope the neo-prims actually have hard data on the rock's identity, some of those old probes have larger error bars on their location figures and there are more than 100 bodies at Neptune's L4 that match this asteroid's specs.

propulsion via negative energy, negative mass, exploitation of the dynamic Casimir effect, or even inflating space-time itself. The facility is large and well-guarded and reputably is home to some of the best theoretical physicists of our time. It's not entirely clear who is backing the project, though ExoTech's Morgan Sterling is rumored to be one of the main investors. The facility is already gaining an "Area 51" type of reputation among local brinkers, who speculate about different unusual phenomena and unusual ships they claim to have seen in the area and how it is related to the research.



SAVANT SYNTHMORPH ■ p. 187

## ILMARINEN

**Station Type:** Beehive/Cluster
**Allegiance:** Independent (Anarchists/Argonauts)
**Primary Languages:** English, Farsi, Mandarin
**Population:** 7,000

Egocasting to Ilmarinen is a bit of a surprise to anyone who hasn't done their research. They have a high-grade egocaster and deluxe facilities for fabbing and personalizing morphs, but every morph available for rent or purchase has vacuum and low-temperature adaptations at minimum. The ability to tolerate hostile environmental conditions is considered a requirement here; they charge you for these mods and won't let you sleeve if you aren't willing to accept them. Also, if you're here for more than a short visit, most locals think you're both cheap and foolish if you don't upgrade to better temperature and vacuum tolerance or just go with a synthmorph. The few visitors who arrive by spaceship are also expected to have the same adaptations. The general opinion seems to be that anyone who lacks these adaptations is too foolish to survive here and will be too much trouble to deal with.

When you actually get inside, all these rules make sense. By the standards of the rest of the system, Ilmarinen is a place that's remarkably casual with pressure and temperature. The people here make certain that any place containing delicate possessions or plants have stable and well-protected environments; most of the locals really like plants. Major portions of the habitat, however, have an inert atmosphere, no atmosphere, or are extremely cold. Most locations that don't contain anything too delicate are designed to drop pressure or temperature if it's convenient or useful. I once saw a small fire break out one of the common areas when a fire-spinning performance in a bar went drastically wrong. Some sirens went off, then the automatics dumped the atmosphere while pumping in –30 C helium. The fire was out in a couple of seconds, and most of the locals just held onto something and drank up before their drinks froze. It took almost 20 minutes before the area contained breathable atmosphere again, and no one considered this worthy of comment. That's life on Ilmarinen.

Coming from Luna, this place is a bit shock. Like most of the rest of the system, most Lunars do their best to ignore the fact that swift and icy death waits outside thin walls. The residents of Ilmarinen do a whole lot less ignoring. The general attitude is that they're living in space, far out where the sun doesn't provide much in the way of warmth, and so they'd better accept and deal with this fact. It's also a haven of morphological freedom. While there are a fair share of morphs that superficially look human, there are plenty of novacrabs, exotic pods, xu fu, and swarmanoids.

The situation gets even stranger when you start attempting to describe exactly who lives here. You almost never find anything like this sort of eccentric

## THE BRINKER WAR

Brinkers are not exactly a homogenous group, and many of them have competing or even hostile ideologies. They sometimes clash over mining and homesteading claims, deals gone sour, or even unfortunate romantic liaisons. Sometimes, they even go to war.

The "brinker war" currently ongoing in Neptune's L5 Trojans began when an asteroid with a small tin can hab module owned by an extended family of Malaysian sikhs crossed into the territorial range claimed by a bunker of Canadian survivalists. The survivalists claim they issued several warnings and fired several warning shots, but the sikhs, who couldn't really control the asteroid's trajectory, say the former Canadians simply lobbed a missile over and destroyed the hab. The family responded by seizing a nearby automated mining outpost used by the survivalists, and it went escalated from there. Several small habs and a few dozen deaths later, the rivals are now engaged in full-blown hostilities. The main stations of both are equally well armed and dug in, so the strife has settled to periodic waves of drone and missile strikes that are downed before they inflict too much damage. Both enemies have also been shooting down attempts by the other side to re-supply, leading to chronic shortages. The sikhs are allegedly attempting to hire some ultimates to resolve the conflict, but others in the region believe that the survivalists have a few secret weapons they haven't quite grown desperate enough to use. ■

diversity in the inner system. You've got hackers, makers, techies, brinkers, semi-professional conspiracy theorists, radical morph hobbyists, mystics, and poets. The locals largely divide themselves into subcultures that are often fractious, cliquish, and sometimes impressively hot-tempered, but outside of these divisions, the locals cooperate quite closely with one another. It's easy to see why: anyone who doesn't feel like being social can find their own rock to live on, either alone or with a few dozen like-minded fellows. Ilmarinen is where the more social and cooperative elements of our oddball and reclusive Neptunian Trojan culture end up.

The other reason that people in the outer system end up in Ilmarinen is work. Many outer system habitats are focused on either exemplifying some ideology or on self-sufficiency. In short, they're all about mining raw materials and keeping things fixed up while they play various exotic social or political games among themselves. Ilmarinen is named after a mythological smith, and is well named. It's the main hub for research and design out beyond Saturn, attracting a number of skilled outer-system technicians, designers, and engineers. Creating tech and augments that work in environments where temperatures start at –150 C and go down from there is no easy task. Recent upgrades in various cryonic temperature tolerance augmentations for biomorphs are the most well known of the recent products to come out of Ilmarinen, but they are far from the only ones. The savant morph was crafted here as a proof-of-concept that synthmorphs could be loaded with intelligence augmentations to the same level as mentons; savants are now one of the most popular shells in the hab. A number of perfectly ordinary pieces of technology, from smart rope to grip pads, have had minor tweaks from Ilmarinen techs to help them work better in extreme low-temperature conditions.

The residents of Ilmarinen work closely with Glitch, despite the distance. Some of the initial software architecture in Glitch received patches designed by a Ilmarinen techs, and relations between the two habitats have been very close ever since. There's a whole lot of concentrated and enhanced mental processing power over in Glitch, and being able to set even a small portion of it on a particularly tough design or materials science problem is part of what allows the best techs at Ilmarinen to accomplish some of what they do. Researchers from Ilmarinen regularly send forks over to Glitch to get advice, and there's lots of neutrino com traffic between the two.

This segues nicely into the reason I was here. The folks in Ilmarinen are expert problem solvers, but a few of the problems they're asked to solve aren't very nice. One of the project teams, called Azure Sun, has done work for both Xiphos and Free. I haven't been able to discover exactly what these projects entailed, but anything for either of those habs is likely to be nasty. The rumors I've heard about the mental enslavement hacks they use in Free sound fancy enough that they may have had some help. Also, according to a report I've seen—which may just have been bragging—Azure Sun also helped design some of the data security protocols and weapon targeting systems for Xiphos. I'm going to try to turn one of the members of this team and see if I can gain access to details of the work they've done. If I fail, then likely the only way to get this data will be some sort of snatch-and-grab of the data or one of the team members. I'm also recommending that the agent we've got over in Free look into the connection with the Azure Sun design team.

It's also worth noting that it was explorers from Ilmarinen that first discovered the Discord Gate. Many of the locals are still sore about the way Go-nin stole it away from them. Many of them are not the type to forget a grudge or turn their cheek to such an act of aggression. No one openly talks about taking the gate back, but I'd bet my morph that someone here is making plans.

## MARCHING IN TIME

**Alpha Plus:** Every resident of Alpha Plus is altered to fulfill a specific societal role. ■ p. 137

## OORT CLOUD

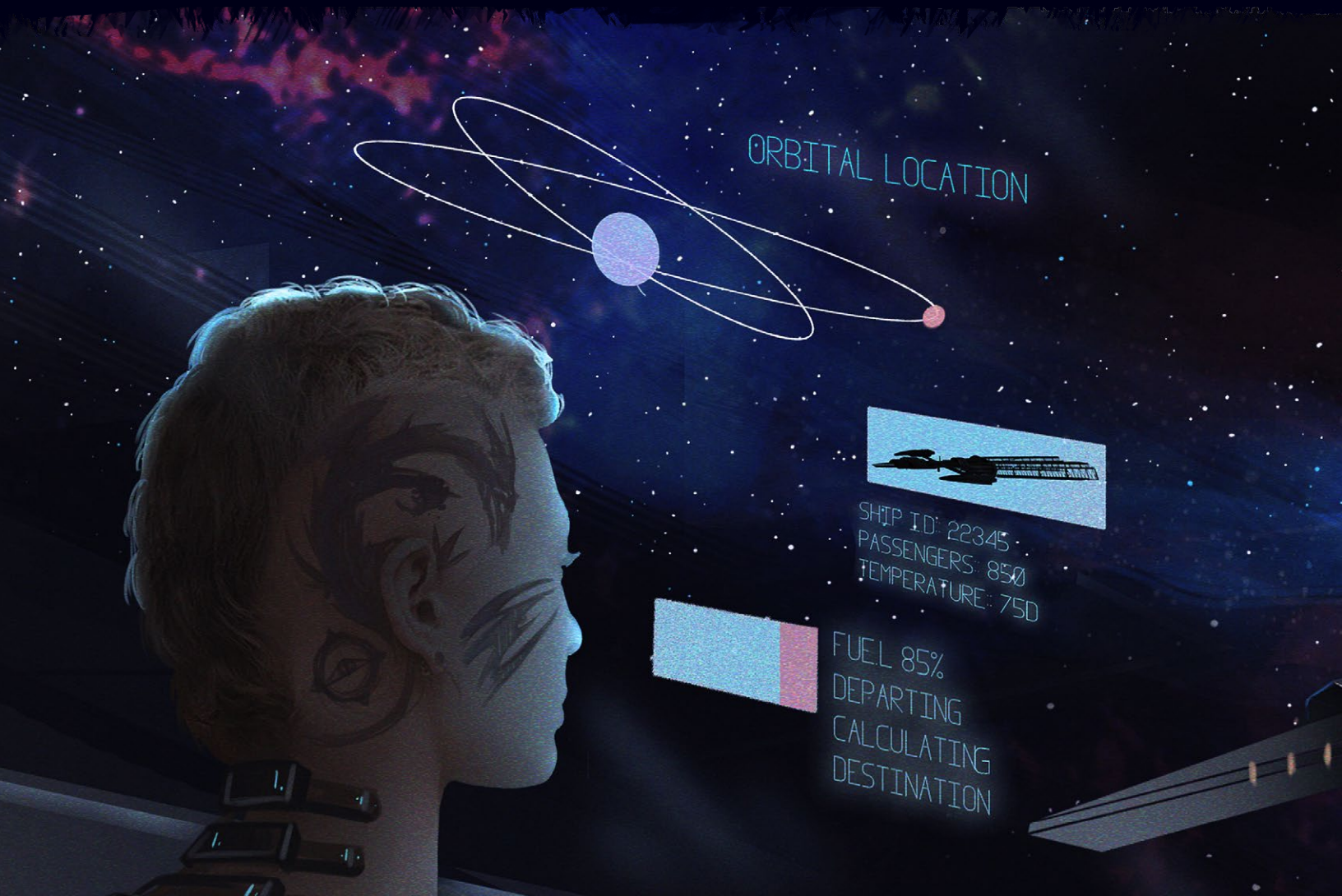
From 2,000 AU to the edge of the sun's gravitational pull.

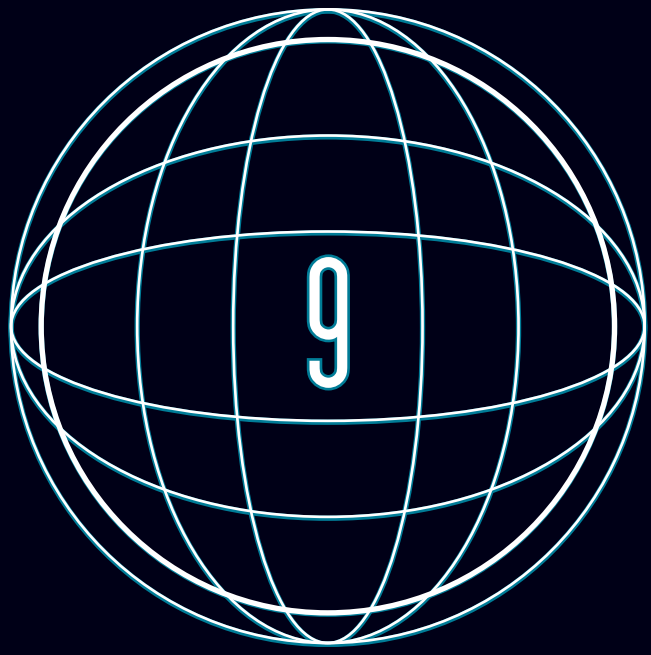
**Evangelium:** Hub to the Resurrectionists, those who are trying to create a simulspace version of heaven. ■ p. 144

**Tyche:** This remote planet is always under observation but argonaut probes will not reach it for decades. ■ p. 145

**Tycho Brahe:** Out'sters coast in this fleet of mostly disabled ships, all created from the original Tycho Brahe fabber. ■ p. 145

# OUTER FRINGE






## KUIPER BELT

Ice and dust, the Kuiper Belt is home to hundreds of planetoids, thousands of asteroids, rare minerals, and more.

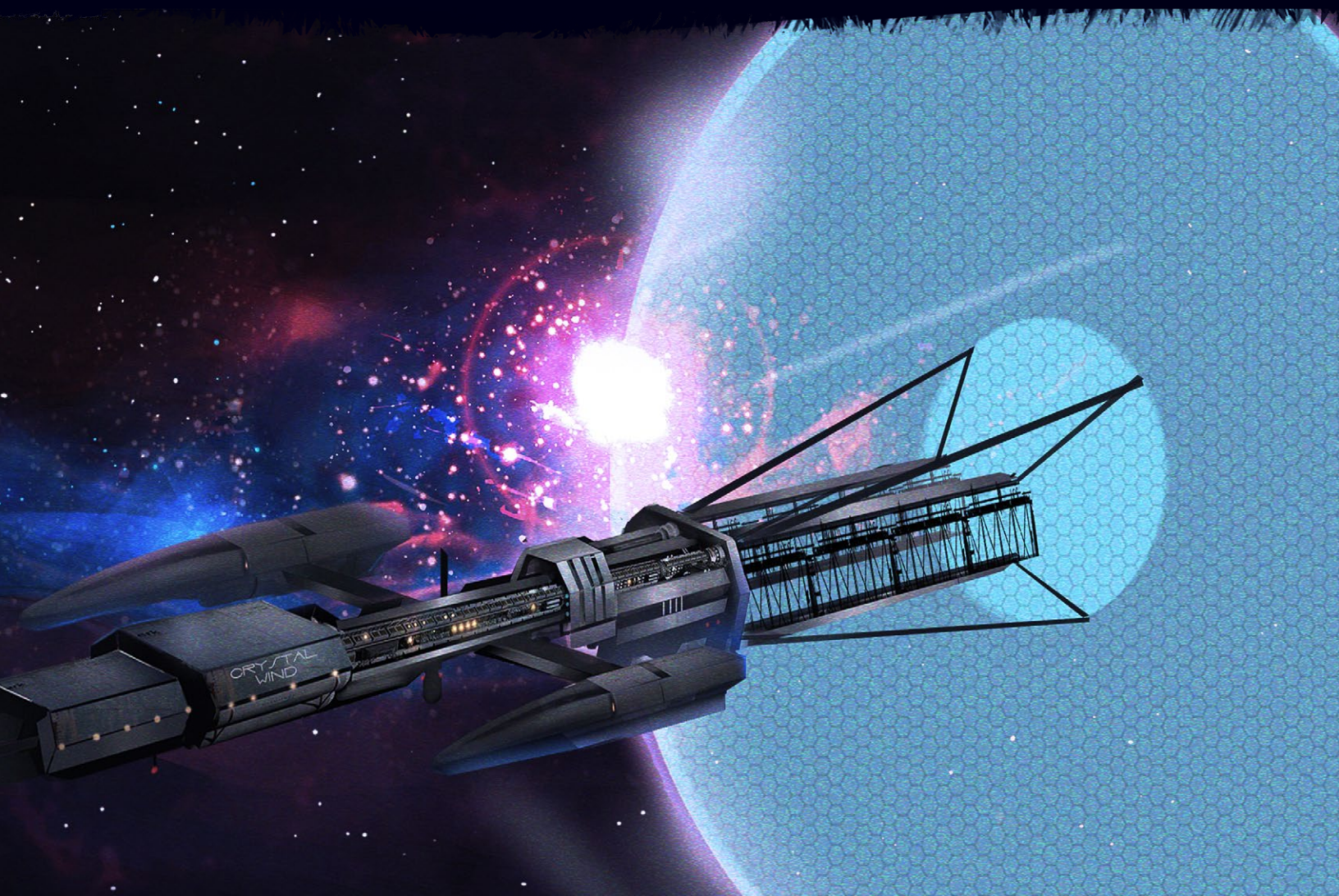
**Markov:** The argonaut stronghold is only known and accessible to a few. ■ p. 140

**Whiskey:** This independant habitat bills itself as one of the last outposts of frontier capitalism. ■ p. 141

**Eris:** Go-nin, with ultimate assistance, controls Eris and, thus, access to the Discord Gate. ■ p. 142

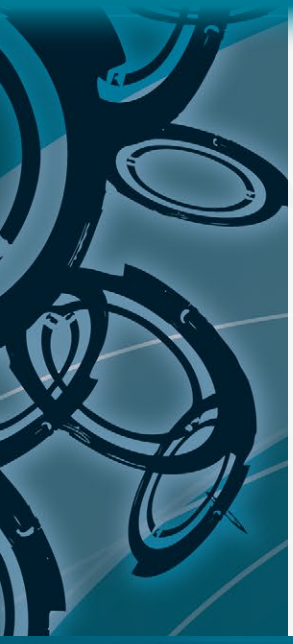
## THUNDERSTRUCK

**Bolters:** A bioconservative faction that practices programmed cell death, to ensure death at an unknown point in the future. ■ p. 139



# OUTER FRINGE





**Posted by:** Atalee Bonedanse,
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Welcome to the deep black. If you've come to the fringe looking for friends, turn back now. This is the darkest, coldest, loneliest part of the system.

Most of the natives guard their secrets closely and don't take well to visitors. Agents are advised to keep their curiosity in check and mind their manners. Out here, a corpse in the recycler doesn't raise too many questions.

Next to privacy, the major industries of the fringe are research and prospecting. Most of the fringe is too inaccessible for commercial exploitation. Life is more a matter of survival than profit, so the hypercorps keep out. It's only when they want to do something really dangerous or anti-social that you'll find them skulking around.

Despite the difficulties, a few places have found ways to get by, offering freedom from the stranglehold of the inner system. At the request of your proxy, I've pulled some files of notable locations that may relate to your work. These documents are for your eyes only—even most of Firewall isn't aware of half of the stuff that's buried out here on the fringe.

## OUTER SYSTEM NICHES

The rimward side of the solar system is vast. Even when you account for the major planetary systems, the Belt, and the various Trojans, there's a lot of space out there still, and not all of it is empty. If someone

## A WORD ON BRINKERS

Transhumans have established themselves in the most desolate corners of the solar system, often specifically for the isolation. While these people span the gamut of experience and motivation, a few of the dominant factions are listed below.

### CONSERVATIVES AND RETROGRESSIVES

Isolation, especially in Earth-like habitats and exoplanets, is favorable to bioconservatives, neo-primitives, and retrogressives. Any place with constant life support, gravity, and protection from radiation can support a low-tech lifestyle. Most of these colonies are forced to be exclusive, else they risk being overrun by custom-designed neighbors with superior equipment. Some individuals have found themselves living a retrogressive lifestyle as a career choice. Out on the fringe, materials are too rare and precious for equipment to just be replaced as needed. Specialists in older technology and methods can expect plenty of business servicing antiquated equipment, assuming they can get there.

### CULTURAL GROUPS AND UNUSUAL MEMES

Solitude offers the opportunity to fully immerse oneself in one's creativity or obsessions, be it creating a "neural map" of the solar system or living as a pet cat served by an army of robotic butlers. These habitats fully explore the particular fetishes, interests, beliefs, or lifestyles of their group, sometimes to the point of ejecting anyone who breaks paradigm. Artists, inventors, and fashion houses also benefit from the brinker life, as prohibitive distances and secret stations make it difficult for rivals to steal designs and well-to-do clients are charmed by the romantic ideal of life in the seclusion of the abyss. The best known cultural brinker group is Carnivale, before it went mainstream, but other examples are Qo'noS, the invitation-only virtual Star Trek environment hosted in Olympus, and House of Hedgehogs, asteroid sculpture gallery of the industrial artist CB-04.

### EXPLORERS AND SCIENTISTS

The fringe is a frontier, and it has attracted its share of explorers and scientists, working diligently to prepare the way. As civilization follows the trailblazers, so they continue out into the black. Research stations are scattered throughout the system; some pursuing wild hypotheses and studying natural phenomena, others evading competitors, law enforcement, or lynch mobs. Most gatecrashing missions prioritize establishing a scientific outpost, and habitats experimenting with highly destructive experiments are necessarily isolated in case of an accident. Isolation obscures many brinkers pursuing questionable ends, and Firewall has a long database of black-budget labs, many with high-level sponsoring, engaging in all manners of unethical and dangerous research.

### RELIGIOUS COLONIES AND CULTS

Spiritual beliefs and moral living are sometimes stifled under the culture and laws of heathens. Isolation permits the persecuted and spiritually inclined to live in closer harmony with their creator or spiritual guide, whatever form he, she, it, or they may have. Unfortunately, isolation also creates unhealthy

wants to find a nice, quiet little spot to do their thing, there are plenty of options: unoccupied Lagrange zones, the centaurs zipping through gas giant orbits, and other erratic asteroids and comets on highly elliptic and inclined orbits, just to start.

### ALPHA PLUS

**Station Type:** Bernal Sphere
**Allegiance:** Independent (Brinker)
**Primary Languages:** English
**Population:** 15,500

Stationed at the Sol-Uranus L3 point, Alpha Plus is an attempt to create a perfectly ordered society. Each of the residents—all of whom voluntarily joined—has been psychosurgically and genetically modified to fulfill a predetermined social position. Everyone is shaped to play their role in society and all are quite good at what they do—in fact, they would have a difficult time doing anything else. Any ambitions, desires, abilities, or personality traits not in line with their position have been weeded out. Residents undergo yearly evaluations and conditioning sessions to ensure that their programming remains intact.

While considered a nightmare by many autonomists, no one was coerced into joining Alpha Plus, and the station regularly draws new recruits who look forward to having the burdens of indecision and individuality stripped from their lives. The habitat is certainly a model of efficiency and harmony, with no appreciable crime or discontent, and a seemingly happy population. Though no one is in theory prevented from leaving the habitat, no one wants to because of their conditioning; the station does occasionally send out ships to acquire supplies or mine necessary raw materials.

### CONCH

**Ship Type:** ITN Cycler
**Allegiance:** Independent (Brinker)
**Primary Languages:** Mongolian, Portuguese, Spanish
**Population:** 2,500

The *Conch* is a refugee ship, assembled during the Fall, that follows the Interplanetary Transport

feedback loops, sometimes guiding even upstanding groups into strange and destructive rituals. A few spiritually guided groups have sought out locations especially close to their source of inspiration, commonly the sun, Factor ships, alien artifacts, and deep space. Some temples and cult habitats actively lure new members to their ranks.

## SOCIO-POLITICAL GROUPS

Disliking their government or cultural restrictions, many brinkers have opted to establish colonies to practice things their way. Some of these are proof-of-concept experiments, like rotating leaderships where every resident serves a term or all-lesbian stations with no men. Others are enclaves for groups that suffered persecution or prejudice, such as AGIs and uplifts. Brinkers suffer from a poor reputation in part due to the number of these isolated outposts that have become corrupted or twisted. These include instances of brinkers purchasing thousands of infugee egos and destroying those with undesirable racial or religious backgrounds, forced-breeding programs, and uplift experimentation, all allegedly in pursuit of the ideal society.

## SURVIVALISTS

Having learned a sharp lesson from the Fall, survivalists seek to remove themselves from the risks of system-wide disaster, attack, or infection. As individuals, they range from the prudent to the crackpot and are unified only by their readiness, self-sufficiency, and healthy distrust of outsiders. A few have taken it upon themselves to warn the "Pollyannas" in the rest of the system about the dangers of nanotech, hypercorps, alien threats, and so on. It is suspected a number of the hyper-elites keep forks and supplies in survivalist enclaves. For Firewall agents, a survivalist habitat can sometimes be the best refuge against danger.

## THE WEALTHY

Few cherish their privacy like the hyper-elites. While rarely brinkers themselves, they are long-term planners and cautious about their options, in the manner of survivalists. Others simply maintain private and secret residences where they can engage in unpopular or illegal business, indulge in a hedonistic or harmful lifestyle, or simply relax.

## OUT'STERS

"Out'ster" is a broad category applied to all those in the extreme outer rim that are "unknown." They have thrown themselves into the abyss and left transhumanity behind. They aren't overtly threatening enough to be considered exhuman (yet). As a rule, they shun transhuman contact, though it is unknown if this is out of fear or lack of interest. We've asked, but none have answered. Many out'ster colonies are well on their way to shedding transhumanity like an old skin; not to become something better, just something very different. Perhaps due to the shroud of mystery around them, (likely groundless) rumors hint that they've learned to communicate across the vast emptiness of space, have developed cultural groups of their own, and are pursuing goals outside of our understanding. ■

Network, a gravitationally determined, meandering path through the solar system that requires very little in the way of fuel, but is quite slow. Originally packed full of primarily Brazilian and Panamanian refugee families, the social order aboard the cycler quickly became dominated by rival gangs. Things took a step to the weird in 3 AF, when the hyperelite Lhagva family stepped in and purchased the ship, completely buying out and replacing the command crew. Three idle socialite sons of the Lhagva oligarch, who had become an embarrassing thorn in the family's side and were wanted in the Consortium for a number of criminal charges, were willingly exiled to the *Conch* for ten years. These brothers—Bold, Batkhuu, and Battulga—quickly bought off the gangs and proceeded to transform the *Conch's* desperately poor residents into their private social experiment. While the core crew remains remotely aloof and in service to the Lhagva oligarch, the three brothers engage in a constantly shifting battle of power, making and breaking alliances, and using the population for their own purposes.

The *Conch* is currently drifting on the ITN on course to reach the Saturnian system in three months. The social order aboard the ship has devolved to feudal levels, with residents currently competing to stay in the brothers' graces to avoid being placed in a lottery that could see them "voted off the ship" via airlock.

## New Sarpalius

**Station Type:** Beehive
**Allegiance:** Planetary Consortium (Disputed)
**Primary Languages:** Arabic, French
**Population:** 4,000

This colony was the primary initiative of a new hypercorp seeking to establish a base for corporate research and mining operation just prior to the Fall. Built on a 65-kilometer-diameter centaur asteroid, it was largely populated by Algerian vacworkers. When the company management were lost during the Fall, the habitat's local managers decided to take control and run it as their own. The workers had other ideas, however, and a bloody but short strike and revolt saw the station declared as an autonomist outpost, named simply Sanctuary. Over the years, the colony took in refugees and established itself as an anarchist-oriented stopover for outer system traffic.

The situation took another turn just a few months ago, when a well-armed insurgency seized control of the habitat, renamed it, and declared its allegiance to the Planetary Consortium. A Consortium-backed mercenary unit took up a defensive posture around the station just a few weeks later, well before the nearest autonomists could rally support. A raging debate on how to deal with the matter is ongoing in autonomist circles; some are reluctant to act given that the coup seems to have had the support of a majority of the residents, many of whom had grown



## GETTING TO THE FRINGE

Rim habitats like Whiskey are a necessary stop-over for anyone egocasting to the Oort cloud without the benefit of qubits. Safe egocasting to the Kuiper Belt from within the solar system can take anywhere from 3 to 80 hours on average, depending on the point of origin. Egocasting out to the Oort Cloud, however, can be completed in no less than 11 days without risking serious ego corruption. Travel by antimatter couriers from the inner system to the inner Oort Cloud takes, at minimum, ten years. ■

disillusioned with local anarchists. Others point to evidence that the takeover has the hallmarks of a long-planned operation, possibly involving the transfer of hundreds of supporters to the colony over a period of years. Though this reeks of conspiracy, it does seem that an element within the Consortium has taken a keen interest in the affair, pouring substantial funds into supporting the coup. The question is: why?

### THUNDER ON THE HORIZON (10370 HYLONOME)

**Station Type:** Beehive and Track
**Allegiance:** Independent (Bioconservative)
**Primary Languages:** Burmese, English, Hindi
**Population:** 3,000

Ensconced on a 70-kilometer-wide centaur asteroid, this station was founded by a bioconservative faction with a nuanced outlook. Believing that death is a natural, meaningful, and desired thing, bringing more sanctity and reverence to life than immortality, they were still eager to avoid the frailty, loss of cognitive ability, suffering, and burdens to others that come with natural aging. In their view, the ideal life is one lived in full health for a respectable period of around 100 years, after which death comes as a lightning bolt out of the blue, suddenly and without the contrivance or social pressure that might come with a planned death. Known as "bolters," these moderate bio-cons deliberately install a system of whole-body apoptosis, or programmed cell death, so that they will simply and rapidly drop dead at some variable point in the future, with only a few minutes warning. Bolters also typically eschew uploading and resleeving and advocate a deliberate deceleration of technological progress to more cautious and safe levels, without holding the religious baggage or extremist views common to other bioconservative tendencies. Thousands of them are spread throughout transhuman society.

The founding bolter residents of Thunder on the Horizon took this a step further. Everyone who voluntarily enters this habitat must submit to an apoptosis system, no resleeving is allowed, and no one is allowed to leave without the express permission of the Governing Council, which usually only grants leave for missions vital to the habitat. The residents here are expected to live out the rest of their days peacefully and happily, until they suddenly drop dead at some point between now and the next 5 years. These particular bolters feel that transhumanity is moving so fast that they would rather "check out" early, before things get too weird, the TITANs return, or some other techno-disaster strikes.

A rumor currently circulating the mesh, however, indicates that some of the bolters who joined the habitat immediately after the Fall have now rethought their position on dying, particularly given that the TITAN threat seems to have subsided and transhumanity is growing more prosperous. The Governing Council is, however, refusing to allow these people to leave or resleeve.

## KUIPER BELT (30–55 AU)

Lying just past the orbit of Neptune is a disc of ice and dust known as the Kuiper Belt. It is home to over a hundred planetoids, including Pluto, Haumea, and Eris, and thousands of asteroids large enough to conceal a habitat. Most Kuiper Belt objects (KBOs) are a mix of ice and rock which pre-date the genesis of the sun. Though sparsely populated, most transhuman activity takes place in the "classical" Kuiper Belt, between 42 and 48 AU, where frozen volatiles, complex organic molecules, and rare minerals are more easily harvested.

Habitats here are sporadic and politically disparate. They are often carved from the inside of larger asteroids and use thick layers of ice for structural support and shielding from radiation and impacts. Vast distances between them necessitate complete self-sufficiency. The further a habitat is from the sun, the more dependent it becomes on mining to provide for fusion and chemical power generation. Heavy metals are scarce, limiting industry, conventional construction, and the adoption of new tech.

Duplex and high-density transmissions are limited by their range. A lack of effective communication has prevented political and cultural unification and created a wide variety of reclusive niches. Exhumans, criminals, anarchists, ultimates, out'sters, and brinkers have all found the isolation of the belt ideal to their pursuits. Piracy has grown in some corners, due to reliance on automated craft between poorly defended habitats. Social order is tempered with paranoia, and enforced through the barrel of a gun. Failed and abandoned habitats are relatively common, set adrift and left to rust among the frozen bodies of the belt.

## HAUMEA (35 AU)

**Station Type:** Beehive and Tin Can
**Allegiance:** Criminal (Măfēng gang)
**Primary Languages:** Cantonese
**Population:** Unknown

The glistening white surface of Haumea is marred by a massive red crater, the site of an ancient collision which sent the planetoid into a dizzying four-hour rotation. Bloody gouges around the interior of the crater mark a small mining camp. The camp is the home base of the Măfēng gang, a group of miners, pirates, and full-time opportunists. Măfēng scratches out a meek living from the rock, but its main interest lies in brutal raids against anyone unlucky enough to get close. In support of their operations, Măfēng has set up sensor stations and defensive batteries on both of Haumea's moonlets.

The dwarf planet's eccentric orbit, rotation, lack of reported mineral wealth, and presence of aggressive pirates has made it commercially unappetizing. It is rumored that Haumea is the location of the closely guarded argonaut stronghold, Markov, though the presence of the Măfēng gang makes inquiries difficult, and similar rumors of other KBOs have proven false.

## MARKOV

**Station Type:** Beehive
**Allegiance:** Argonauts
**Primary Languages:** English, French, German
**Population:** 3,000

The location of Markov is known only to the highest ranking members of the argonaut faction. The habitat is the faction's primary stronghold in the outer rim. Markov's secrecy and impressive computing capabilities have made it the home to a number of sensitive argonaut experiments, in both virtual and physical laboratories, in the fields of propulsion, Lorentzian manifolds, quantum mechanics, biomechanics, cognitive science, and other cutting-edge areas.

Publicly available specs indicate a series of coiled tunnels and caves, dug from the inner, rocky core of a large asteroid or planetoid. Most of the interior is flooded with a perfluorocarbon suspension, which hides the low-density characteristic of the habitat and provides thermal dissipation for the massive computer cores. Markov hosts the Library, the primary backup archives for the argonauts. The servers are also home to the Medean Apollo project, a massive data-gathering and pattern-matching predictive service that has earned the faction's paramilitary arm, the Medeans, a reputation for precognition.

The majority of Markov's population is made up of infomorphs and AGIs. Biomorphs customized for the cold can survive in the perfluorocarbon stew with only minor implants.

## HABITAT ON THE ROCK (35 AU)

**Station Type:** Cluster
**Allegiance:** Independent (Brinker)
**Primary Languages:** English, Mandarin
**Population:** 2,500

Addison Hütz's great dream was for transhumanity to experience the widest, most prized and unique collection of music, art, Earth paraphernalia, and exotic items in the universe (for a modest fee). Hütz's

## THE FUSSER DIAMOND

# Start Private_Room #
# Active Members: 2 #

- The crew is getting really nervous now. We fucked up two jobs after we got that damn diamond, and now power in the main hab is flickering on and off. Before you say anything, yeah, we checked it out. Generator, filters, circuits, software … everything is fine.
- I never took you for superstitious, Agon. Is this going to pose a problem?
- Of course not. But you didn't tell me I'd be dealing with something like this. There's only one presolar diamond this big, and it doesn't take an AGI to do a mesh search. Fuck that forged-in-the-breath-of-a-dying-star bullshit. How about the Nabokov, the Atlas, and the Sho-Ri?
- What about them?
- Let's start with the Nabokov then. Bunch of skimmers find the diamond, dust it off, ship it out to a buyer. A week later, the ship's guidance systems fail on re-entry and it makes a new crater on Hydra. And, get this, none of their egos could be resleeved. All corrupted. The buyer, some rich bastard looking to buy his wife's attention, has it sent to her ship. Turns out she's lubing up some geriatric and the guy goes nuts. He has her ship infected with a nanoplague. Guess who isn't showing up at the glitterati balls anymore? Mrs. Rich Bastard.
- That is simply speculation. Next you'll be telling me you put on your pants and now the stars are falling.
- Don't give me that. You and me both know what happened to the previous owners. That ain't speculation. But the worst is the Sho-Ri. A bunch of sc#$!——

/ Agon.Izer has been disconnected.
/ Agon.Izer has joined #Private_Room

- Fuck, another surge. This power problem is wreaking havoc on the computers.
- This is very disappointing.
- Look, we'll take care of it, just make sure to be there on time. So what if it does sink ships? What are you going to do with it?
- Hah, I suppose we'll just have to keep it on a planet. I'm sure nothing bad would happen then. ♣

## THE REYES SIMULATION

Firewall has recently received a distress call from a derelict out'ster ship, the Scylla. The message describes an experiment, started by the ship's owner Edward Reyes, which is currently active on the ship's servers. Reyes has created a diverse, sprawling, and extremely deadly series of simulspace environments. His intention was to evolve himself to his peak mental capabilities by using the fastest, simplest, and most brutal methods available.

Reyes uploaded himself into the environment and began the simulation. Every five days, egos within the simulation are forked four times, with each fork bearing a random mutation. The entire environment operates at maximum time acceleration and actively evolves and randomizes to present new threats. Reyes added a dirty twist to the scenarios: any egos that die in the environment are permanently deleted. It is not clear how long the simulation has been running, but it was one of Reyes's own forks who managed to hack the computer system and send the SOS signal.

The ship is believed to be completely uninhabited except for Reyes, and it is unknown whether or not he is still active in real space. The number of egos within in the simulspace house of horrors is not known, but it is speculated that the simulation has been running long enough for the population to be split into multiple competing factions.

Egocasting to the *Scylla* is not possible, limiting Firewall to a physical courier. Unfortunately, eight months of travel makes for forty years relative time. It is unlikely the original survivors will be alive by the time Firewall arrives, and it is not clear what may have evolved by then. ■

dream became reality in Habitat on the Rock. Part ice castle, part scrapyard, it is considered a work of art in its own right. As curators acquire new materials and architectural plans, Habitat on the Rock takes on its own life and sprouts further from its original asteroid foundation.

Most of the old-Earth collection is made up of quality replicas, many hand-made, but a few items have been validated as original artifacts. The exotic collection purportedly includes Factor and other alien cadavers, a zoo of genetic samples, fragments of the original K-T asteroid, and a captured TITAN. Vast libraries of digital music and simulspace environments are available to the public for free.

Habitat on the Rock is in the black and white markets for collectibles. Curators hire out to freelancers to collect specific targets. Outside of the museum grounds, the habitat is entirely off-limits to visitors. The area is well defended and luxurious, with an inexplicably high volume of traffic. The cost of maintaining the collection far outstrips its income. Analysts have suggested Habitat on the Rock either has a private benefactor or runs a secret secondary business.

### WHISKEY (37 AU)

**Station Type:** Torus
**Allegiance:** Independent
**Primary Languages:** English, Hindi, Mandarin
**Population:** 12,500

Whiskey is one of the last outposts of frontier capitalism. Residents say it is the farthest civilized station in the system, though both claims are questionable. Lax governance has grown industries around the making and loss of quick money. The runt habitat is crammed to the coil guns with polyglot marketplaces, back rooms, and the stink of poorly maintained morphs. Visitors know it for poker, prostitutes, and the privacy to enjoy both at the old Earth-style saloon, Terminal.

A score of hypercorps benefit from the relative peace and accessibility offered by the station, maintaining offices there. Whiskey is also a major node in Firewall, known to house several proxies and much of Firewall's local intelligence-gathering capabilities.

The habitat is surrounded by a cloud of free-floating gun batteries. Clusters of heavy communication equipment are stationed ten kilometers off either end of the habitat. Whiskey is maintained by an anonymous executive council, which works to enforce the habitat's independence. The Intelligent Design Crew and the locally grown Boulanger Family compete for dominance in the local markets. The executive council does not interfere with the conflict as long as collateral damage is kept to a minimum.

### FROZEN DREAMS (48 AU)

**Ship Type:** Zapotec-class Medium Mining Ship (Comet Chaser)
**Allegiance:** Independent (Brinker)
**Primary Languages:** English, Swahili

The comet chaser *Frozen Dreams* made headlines nearly a year ago, when it was found drifting in space, its crew missing. Investigators discovered remnants of a foreign nanoswarm with a structure alien to any known line of nanotechnology. Very little information about where the swarm was picked up exists, as the silicon and carbon in the ship's computer systems was chemically eaten out, rendering servers useless, and no other logs exist. Soon after the discovery was publicized by the argonauts, various factions laid claim to *Frozen Dreams*. For now, the ship is being held by



the argonauts for further study. Concerns over a possible second attack are pressuring researchers to shift the experiments from virtual to physical environments, though appropriate controls have not yet been fully established.

## PLUTO (48 AU)

The largest object in the classical Kuiper belt, Pluto is still small enough to fit in the space between Elysium City and Airy-0 Crater on Mars. The dwarf planet holds a few valuable nuggets of heavy metals in its rocky core, for anyone willing to mine through hundreds of kilometers of ice to get to it. Pluto is accompanied by Charon, broadly called its moon, but the two are a binary object, pirouetting around a shared point in space. Pluto and Charon support a small group of mining colonies, mostly independent, who alternate from allies to enemies and back again on the turn of the cosmic wind. Pluto has a small number of moonlets, which is where entrepreneurs go to die when they can't compete.

### TULIHÄND (48 AU)

**Station Type:** Cluster
**Allegiance:** Independent (Brinker)
**Primary Languages:** Estonian, Russian
**Population:** 9,000

Balanced between the tidally locked faces of Pluto and Charon is the private mining station, Tulihänd. The habitat oversees the largest mining and comet-catching operation on the outer rim. Massive crawlers strip-mine local planetoids and Kuiper Belt objects, extract ore, minerals, and organics, and launch them back to Tulihänd. After refinement, the raw materials are nano-forged into automated scows and launched to the next collection point. Despite automated defenses and secrecy around launch timetables and buyers, the scows leaving Tulihänd are popular targets for pirates.

Tulihänd residents have a reputation for bellicose saber-rattling and bluntness, but a strong work ethic. The persistent threat of insiders sabotaging operations for profit has made the inhabitants chronically suspicious. Conflicts between management and labor are common. A suggestion of wrongdoing is enough for invasive questioning and neural mapping by management. Agents operating in the area are suggested to undergo memory editing, to prevent the possible leakage of sensitive information. Despite expectations, outside threats have bound Tulihänd into a tight technosocialist republic.

## ERIS (55 AU)

Eris is the dark jewel in Go-nin's crown. Seized from the anarchist Ilmarinen commune, the planetoid is littered with the remains of several major battles over control of the Discord Gate. Go-nin, with the assistance of the ultimates, currently hold the dwarf planet and gate, though ownership is still a matter of contention. Go-nin manages the infrastructure and habitat, Torii, while the ultimates provide the military strength and orbital firepower to hold it.

The interior of the planetoid is worm-eaten with twisting tunnels. Most of the tunnels are believed to already have been discovered and mapped, but occasionally when parties are dispatched after disappeared personnel, new passages are revealed.

Other than a few trawling miners and automated roving surveybots, the surface of Eris is serene and abandoned. A net of orbital surveillance stations and ordinance watch the skies within

## SOLARCHIVE SEARCH: SILVER PINIONS



An engineered, silicon-based life form, silver pinions are the only known plant life specifically adapted to the Oort Cloud. Once a spore germinates on a compatible asteroid, the pinion sprouts long branches supporting parabolic, reflective, micron-thin leaves, focusing the distant light of the sun on a single point at the core of the organism. The mirrored leaves magnify sunlight by a factor of over a million. Mature organisms are kilometers across, converting the asteroid directly into life-supporting leaves. When space debris punches through the leaves, self-replicating spores may be carried to new environments. Preservationist groups have publicly protested the introduction of these invasive organisms, and several organizations have spoken out regarding the unintended consequences of seeding the solar system with weeds. As of yet, no one has taken credit for the development of the silver pinions or made any significant move towards eradicating them.

500,000 kilometers for anything larger than a baseball and for the tell-tale blaze of distant battleships.

### TORII

**Station Type:** Beehive
**Allegiance:** Independent (Hypercorp/Go-nin)
**Primary Language:** Japanese
**Population:** 20,000

Torii has sprung up around the massive crater where the Discord Gate originally exploded. The habitat is a spartan but sprawling web of underground caves designed to protect against threats coming from both without and within the habitat. The greatest threat comes from exhuman war parties intent on claiming the gate. It is also feared that other parties interested in controlling the Discord Gate have their eyes on Torii, hoping to exploit the tensions between Go-nin and their ultimate mercenaries.

Torii is tightly controlled by Go-nin security and squads of ultimate mercenaries. Go-nin struggles to balance the needs of security against those of commerce. The conflict has squeezed luxury and freedom in the middle. Personnel are subjected to constant hormone monitoring, black box transmitters, and frequent interrogations. Nevertheless, gatecrasher subculture thrives in the distant corridors of the habitat. Gatecrasher bazaars are active in some of the lower caves and around the spaceport, among bars and theaters. Despite security, corruption in the habitat is still too common to be ignored.

### DYSNOMIA

Dysnomia, Eris's only moon, hangs as a sword of Damocles over Eris. It is home to Pharos, a major stronghold of the ultimates, particularly their overhumanist faction, and is heavily defended against outsiders. It is the ultimates' primary defense grid for the area, carrying an arsenal of nuclear and antimatter missiles, and passes over Torii once every two weeks.

Its close orbit to Eris and its size has earned Dysnomia the nickname "Little Sister" by Go-nin employees. This is just one of the outward signs of the political tensions between the ultimates and their hypercorp employers.

### PHAROS

**Station Type:** Beehive
**Allegiance:** Ultimates
**Primary Languages:** English, Greek
**Population:** Unknown

The only visible features of Pharos are the massive weapons batteries that dot several of the known entrances. Not much is known about this fortress of the ultimates. All attempts at penetration have failed, sometimes gruesomely. Ultimates kept in captivity universally corrupt their own stacks and terminate themselves before a proper interrogation can be conducted. What is known is that its tunnels run the entire length of the moonlet, and are reinforced and defensible against siege.

### SEDNA (88 AU)

**Station Type:** Beehive
**Allegiance:** Independent (Criminal/Dead Eye Society)
**Primary Languages:** Arabic, Hindi
**Population:** Unknown

Sedna was once believed to be the furthest-reaching object in the solar system, with a highly elliptical orbit that takes it halfway to the Oort Cloud. Pre-Fall nations spent millions to plant a flag on it. After the Fall, Sedna was left a forgotten rock, commemorating a dead nation. Sedna was officially claimed by the Jovian Republic, though they did nothing but plant a new flag on it, and it was promptly forgotten about. In 6 AF, the planetoid and its antiquated research probe were re-appropriated by the pirate family, the Dead Eye Society. Under them, Sedna is aggressively mined for its heavy and unstable elements.

### HAVEN (120 AU)

**Station Type:** Torus
**Allegiance:** Independent (Brinker)
**Primary Languages:** English
**Population:** 1,000

Eight years after the Fall, the pirate craft *Shive* atomized a small anarchist habitat in the Neptunian Trojans, killing two thousand transhumans. Firewall agents captured the ship and tracked the design and production of the weapon back to the brinker habitat Haven, on the outer edge of the Kuiper Belt.

Haven was established in the heat of the Fall by the now-defunct deep-space mining corporation, EMC. After the TITANs attacked, EMC took their best and brightest, sealed themselves inside of their habitat, and put the rest of the system under quarantine.

Not much information has been gathered on Haven. The habitat blocks all wireless communication. They still deal with a few ships in the area, all people they've been working with since before the Fall. And they're still paranoid. From what we can gather, they believe the TITANs have won the war and have infected the entire inner system. Now they're designing weapons of mass destruction. Question is, do they intend to use them?

### THORNE (850 AU)

**Station Type:** Cluster
**Allegiance:** Argonaut
**Primary Languages:** Mandarin
**Population:** 570

The Thorne is a high-capacity radio telescope and transmitter, one of the foremost interstellar astronomy labs in the system. Located almost 5 light days from the sun, it is the largest observatory outside of the heliosphere. It supports a nanomesh collector dish with an additional cloud of micromachines, providing a reflective area in excess of thirty-five square kilometers. The Thorne is gradually canvassing the night sky and transmitting the data to public feeds for analysis. The Thorne is the subject of recent media hype due to the new craze of vanitycasting, where people egocast forks of themselves to the stars or into deep space in hopes of being retrieved by distant aliens. While it's acknowledged that the likelihood of a vanitycast being successful is low, the practice has won the argonauts a lot of positive reputation.

## THE OORT CLOUD

The Oort Cloud is a sphere of dust and asteroids that extends to the edge of the gravitational reach of the sun. The difficulties of life without infrastructure in the Kuiper Belt are compounded in the Oort Cloud. Because of this, the transhuman population in the Oort Cloud is less than 15,000, almost all restricted to a handful of ships and research outposts within the Inner Oort Cloud.

The Inner Oort Cloud, from 2,000 to 5,000 AU, marks the outermost expansion of transhumanity. Several millions of asteroids are documented, ranging from a few meters to 2,000 kilometers across. Resources include ice, organics, minerals, and, due to heavy exposure to cosmic wind, a number of rare elements including lithium and boron, though commercial mining is unfeasible.

The Outer Oort Cloud extends to 150,000 AU from the sun to interstellar space. The Outer Oort Cloud has been the subject of significant scientific scrutiny as the frontier for astronomy, physics, and space flight. Only three pre-Fall probes have breached the area; it otherwise remains beyond the reach of transhumanity. The Outer Oort Cloud is scanned by hundreds of thousands of professional and amateur telescopes, watching for the return of the TITANs or the arrival of Factor lighthuggers.

### WISDOM (2,500 AU)

**Station Type:** Beehive
**Allegiance:** Independent (Brinker)
**Primary Language:** Wu
**Population:** 350

Built around an abandoned habitat, Wisdom has a population of 350 egos, all identified as female, with a singular exception. The habitat holds Benevolent Husband Charles Lin as its figurehead, and the remaining population is officially made up of his wives. The number of wives has exceeded Lin's needs and abilities, but the marriage tradition has been codified into law by the habitat's de-facto ministers and enforced equally on residents and visitors. The unusual family structure has made Wisdom famous for its provocative social art and has produced a number of famous bloggers, Lin included, as they describe the struggles of a family surviving on the edge.

Because egocasting to Wisdom requires marriage, immigration is tightly controlled and decided by community discussion. Information leaving the habitat is heavily restricted. Firewall has recently taken an interest in Wisdom as the possible location of Captain-Doctor Lidiya Vorobyov and two of her executive designers, known to be TITAN-subverted agents and accused Fall criminals.

### THE NEST (3,000 AU)

**Station Type:** Beehive
**Allegiance:** Independent (Exhuman)
**Primary Languages:** Unknown
**Population:** Unknown

The Nest is an exhuman creation, infested with an ecosystem of arthropod biomorphs designed to survive deep space without the use of technology. Research has identified over forty individual genomes. Individuals have shown limited intelligence, but the complexity of the community suggests either a social intelligence or a dominant consciousness deeper within. All encounters with the Nest have been hostile. The Nest is hurtling away from the solar system at 40 kilometers per second. While this is far too slow to reach another system in the immediate future, the Nest has already spawned two children colonies on neighboring asteroids. Firewall is concerned this particular strain of exhumans may become a powerful presence in the Oort Cloud before transhumanity can establish a toe-hold here.

### EVANGELIUM (3,000 AU)

**Station Type:** Beehive
**Allegiance:** Independent (Brinker)
**Primary Language:** English
**Population:** 400

The primary hub for the budding Resurrectionist religion, Evangelium serves as a cathedral and science

lab. Researchers live, work, and worship on the interior of the 120-kilometer-wide asteroid, with the goal of "resurrecting" all humans and transhumans since the beginning of history into a simulspace version of heaven. Research studies on Evangelium center around quantum reconstructive ego retrieval. The Resurrectionists have achieved minor advances in egocasting techniques, but all outsider accounts indicate they have fallen short of their ambitious goals. Still, concerns have been raised over accounts that suggest Resurrectionist researchers have reduced safeguards in order to achieve their goals.

## ICS-201 Crystal Wind (4,000 AU)

**Ship Type:** Colony Seed Ship
**Allegiance:** Titanian Commonwealth
**Primary Languages:** English, Mandarin, Skandinavíska
**Population:** 8,000

The *Crystal Wind* is currently breaching the Inner Oort Cloud on its way to Barnard's Star. Funded by the Plurality and a small number of private investors, it was built at the Titan shipyards with a unique engine design that required millions of person-hours for construction. A single ticket on the seed-ship costs a small fortune, giving rise to speculation as to the identities of many of the anonymous passengers. Paparazzi and analysts have speculated that the forks of several major inner system figures are on board, perhaps hoping to establish themselves beyond the reach of Pandora Gates and TITANs.

The *Crystal Wind* is planned to be the third ship to arrive at Barnard's Star, following a Von Neumann machine and a processor locus ship of first-generation infomorph homesteaders in cold storage. The trip is anticipated to take around 800 years, during which all of the passengers will use either simulspace time dilation or hibernation. The passengers are celebrating their final few months in civilized space with a prolonged gala, including a long list of socialites and entertainers. As the ship passes beyond 5,000 AU, the over-sized recreation decks will be ejected and the secondary fusion boosters will ignite, pushing the ship beyond effective egocasting range.

## IOCC-226 Tycho Brahe (8,000 AU)

**Station Type:** Swarm
**Allegiance:** Independent (Out'ster)
**Primary Languages:** English
**Population:** 460

*Tycho Brahe* is the farthest known ship/habitat in the solar system. It was originally launched before the Fall as a versatile automated research probe. It was breached by the Gorillas, a group of anarchist hacktivists seeking to liberate it from government control. Following much scandal, funding for the project was cut. Access to the probe was bought and stolen many times, sometimes simultaneously, until the first homesteaders uploaded themselves directly into the computers and shut off access during the Fall. The out'ster colonists have since utilized the probe's nanofabricator to extract resources from several deep space objects and build additional ships and upgrades.

The swarm is made up of sixty-eight ships. The inhabitants live in simulspace environments or sleeve directly into the ships themselves. Due to the scarcity of power, ships normally coast, mostly disabled.

Even within the group, ships are highly isolationist. Fragmentary reports suggest the out'sters spend much of their time in simulspace worlds, in quiet observance of outer space, or in hibernation. Ego-mixing on ships is common, causing psychoses such as dissociative identity disorder, weak ego boundaries, false memories, and social disorders. Contact with the swarm is unusual, but has revealed a complex mythology orienting around the belief in an unknown intelligence active in the cloud.

## Níngjìng (30,000 AU)

**Ship Type:** Automated Probe
**Allegiance:** Jovian Republic
**Primary Languages:** None
**Population:** 0

The *Níngjìng* probe is the most distant artifact of pre-Fall humanity. It is currently 31,846 AU from the sun and is still semi-functional due to novel upgrades by software engineers and auto-repair systems. Its payload includes a suite of intelligence-gathering tools. The Jovian Republic somehow acquired the communication protocols and maintains tight control over the probe, with polymorphic encryption and military-grade anti-intrusion software. Communication with the probe has stepped up significantly over the past few months; Firewall investigations have failed to determine the source of interest.

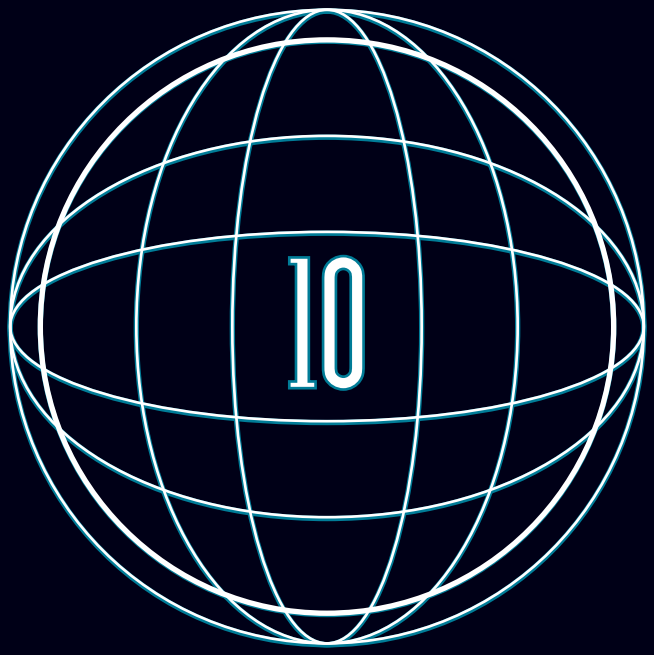
## Tyche (50,000 AU)

Discovered before the Fall, Tyche is a "cold Jupiter" that orbits the sun with a perihelion of 50,000 AU. Pre-Fall myths held that Tyche was the fabled planet Nibiru, believed by UFOlogists and end-time prophesies to be responsible for the end of life on Earth. Because of its remoteness, only a single probe has been sent to Tyche, and the results brought more questions than answers.

The planet challenges current categorizations of exoplanets. Its mass is four times that of Jupiter, but its volume is one fifth, with an average atmospheric temperature of –261 C. It is veiled in a heavy, murky ammonia atmosphere that blocks visual observations beyond a few hundred kilometers. Given its density, the core of the planet is believed to either be much larger than any previously discovered gas giant or containing an inordinate amount of heavier elements.

The planet is subject to near-continuous observations. Argonauts have sent a pair of probes, but neither will reach Tyche for several decades yet. Despite the attention, Tyche has kept its secrets well.

# AUTONOMIST ALLIANCE




## ANARCHISTS

At their core anarchists oppose social, economic, and political hierarchies. ■ p. 153

**Collectivists:** The majority of anarchists identify with this egalitarian movement. ■ p. 160

**Anarcho-transhumanists:** So-called "blue" anarchists use technology to further anarchist ideals. ■ p. 160

**Insurrectionists:** As long as inequality exists, insurrectionists think that anarchists need to go further to stop it. ■ p. 160

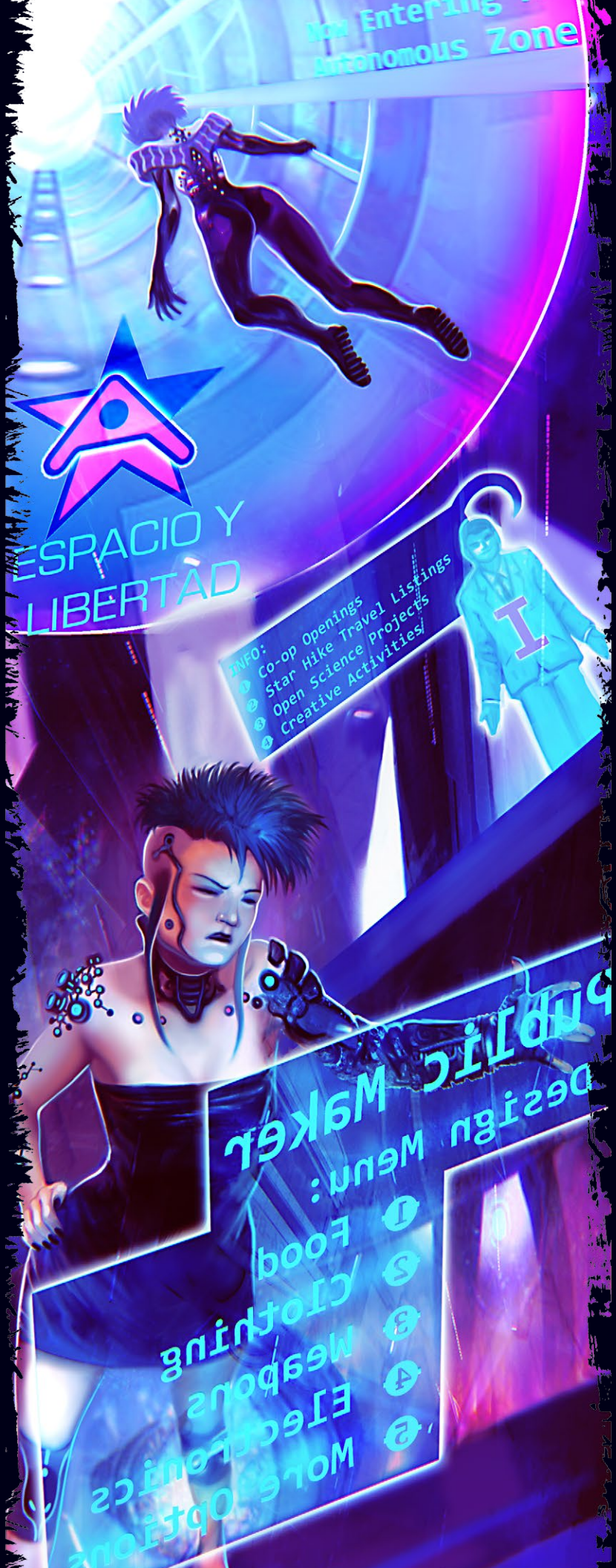
**Primitivists:** Industry and technology lead to opression; these extremists support population reduction and small-scale tribes. ■ p. 161

## AUTONOMIST ORGANIZATIONS

**Fissure Gate Task Force:** Along with the Love and Rage Collective, coordinates resources, projects, and personnel for extrasolar missions. ■ p. 150

**Open Science Initiative:** Creates educational tools, distributes research, and attempts to keep science in the hands of the people. ■ p. 152

**Contact:** Establishes protocol for alien contact. ■ p. 152




## AUTONOMIST ALLIANCE POINTS OF UNITY

These four points bind the Alliance's factions together. ■ p. 150

## EXTROPIANS

**Legacy:** Descended from the first transhumanists, Extropian beliefs fuse futurism, rationality, and free market ideologies. ■ p. 163

**Contractual Society:** In Extropian society, laws and security are a matter of contracts. ■ p. 164

## SCUM

**Dropouts:** How a culture of hedonistic drifters came to be. ■ p. 169

**Nomadic Black Markets:** The scum bring their illicit services and goods to anyone that will take them. ■ p. 171

**Freak Show:** Notable scum swarms. ■ p. 172

# AUTONOMIST ALLIANCE



**Posted by:** Lucida Parsons,
Firewall Proxy <Info Msg Rep>

To hear the Consortium media stooges tell it, anarchism, Extropianism, and technosocialism are passing fads, short-lived political "experiments" dreamed up by a handful of malcontents in the aftermath of the Fall to keep the "legitimate governments" of the system from making a smooth transition to ruling everything from Sol to Eris. But you know how it is with media stooges, they never met a fact they couldn't spin into a lie.

While it's true that autonomists weren't major players in solar affairs prior to the Fall, we're not newcomers by any means. While the oligarchs and CEOs were polishing their rockets and thinking up new ways to fork an indenture into a few more years of cheap labor, we were taking the new tech and discarded masses and figuring out ways of breaking down both to make a better world for everyone. Our goal was to build up a more resilient society that could deal with things like the Fall and come out stronger than before.

And that, dear listener, is what really scares the Consortium more than anything else. We were the big winners of the Fall. Nearly every other group found themselves diminished, weakened, or on the verge of extinction after the TITANs struck, but we were ready and able to take a disaster and turn it around, liberating millions and providing the basis for a strong and enduring confederation of societies among the most hardscrabble and desolate areas of the solar system. That scares them.

If we can take a punch to the gut like the Fall and not just stand back up, but punch back, and keep punching for another ten years, what does that say about old tired political and social systems like the ones you see on Mars and Venus, ones that are rent with division and on the verge of boiling over with rebellion? We're the bogeyman of the inner system for good reason: we are the future, the onrushing tide of change and liberty that will wash away the corruption and selfishness of the past, casting off the norms and shackles that have kept transhumanity down and prevented us from realizing our full potential. We represent the chimera of the future, that ever-changing, multi-headed beast that is adaptable and fierce. This is who we are, the future, and we're already here.

## AN ALLIANCE OF EQUALS

The first thing to understand about the Autonomist Alliance is that it is not a government, or even an alliance of governments. There's no one in charge, no standing military, no laws enforced on its members. There are no figureheads, no headquarters, and very little in the way of institutions. It is best described as a mutual aid and defense pact, a network by which any autonomist-identified habitat, group, or even individual can call upon others for assistance and protection.

### FINDING AUTONOMY

The seeds of the Alliance were already spread throughout the outer system before the Fall. The rimward areas were still very much frontier space, with vast distances between astronomical bodies and no encompassing legal authority. Various libertarian-minded entrepreneurs, adherents to the Extropian philosophy, were already laying claim to territories in order to found their own anarcho-capitalist utopias, free from taxation and other government restrictions. The availability of nanofabricators and fuel mass increased the survival viability of small habitats and stations even near the outermost planets. Disgruntled and idealistic employees, indentures, and convict workers went AWOL from their assignments, taking their employers' assets with them, confident that the costs of tracking them down over such vast distances would deter pursuit and retribution. Political dissidents and open source advocates funded small drone ships to establish robotic outposts, establishing the first darknets and infomorph/synthmorph data havens and brinker colonies. Their numbers were small, their resources limited, but these frontier settlers were just the first wave.

For the most part, the hypercorps active in the outer system were content to leave these rebels and outcasts alone. Resources and space were readily available enough that there was very little in the way of conflicting interests and engaging in hostilities was not exactly a good profit model. The same was true of the various nation-states from Earth, who were even further behind in their colonization, exploration, and resource exploitation initiatives, hampered as they were by ecological crises, petty wars, budget issues, and unruly populations back home. Most governments of the period took the long view, believing that they would slowly but surely conquer the solar system at their own pace, and so they could wait and reintegrate the various rimward settlers when the appropriate time came. They did not anticipate the TITANs ruining their plans.

MAIN BELT
JUPITER
JOVIAN TROJANS
SATURN
TITAN
URANUS
NEPTUNE
OUTER FRINGE
AUTONOMIST ALLIANCE
GAME INFORMATION

One of the few Earth powers (aside from the North and South Americans colonizing Jupiter) to buck the trend was the North Atlantic Consortium, an alliance of Scandinavian nations that launched an ambitious plan to colonize Titan. Bringing along a techno-socialist mindset, these early Titanians often found their interests more closely aligned with the various rimward radicals than the hypercorps or other Earth powers. Their habitats were one of the few locations where the various sub-factions all met to trade, share information and resources, and socialize.

As the Fall neared, however, tensions began to rise. More and more future-minded visionaries on Earth began to realize the opportunity the frontier presented. New projects were launched to establish yet more colonies, while more and more egos found ways to transmit themselves to outer system outposts. Though scattered and small, these autonomous outposts were growing in number and size and becoming less isolated. The defection of the Hydrogen's Promise habitat was the first sign of a major shift.

Hydrogen's Promise was a Reagan cylinder in orbit around Jupiter owned by an American multinational named Destiny Metals and Fuels. In 3 BF, the contract labor (many of whom were convicts from Earth) seized the station in a wildcat strike, claiming that Destiny had been shorting the crew on anti-radiation meds. Though Destiny claimed the laborers were just looking for a way to break their contracts, they did not have the means to immediately deal with the strike. By the time an American warship was dispatched to quell the uprising, the syndicalist worker's council established by the strikers had already signed a deal with an Extropian arms dealer, Nathan Samuels, who had outfitted the station with state-of-the-art defensive batteries. A few well-placed warning shots staved off the Americans, who were reluctant to simply bombard the habitat from a distance. Hoping to divert the incident from devolving into a tragedy, a group of Titanian settlers stepped in to mediate the conflict, bringing striker delegates and Destiny negotiators to the meeting table. Though the discussions were contentious, the Titanians managed to drag them out for several years—at which point the Fall occurred, Destiny ceased to exist, and the workers' ownership of the cylinder became de facto.

The Hydrogen's Promise incident is notable as one of the first situations when the various autonomist proto-factions united and worked together. It also served as a stark example of workers' power and the difficulties the hypercorps and governments had in keeping their remote outposts under firm control, sparking several similar strikes and rebellions in the years to follow.

When the Fall came, the outer system was largely spared by the TITANs, with the exception of their takeover of Iapetus and a handful of isolated outbreaks that were (mostly) contained. The crisis on Earth did serve to focus the attention of the states and corporations inward, however, leaving even more room for the burgeoning autonomists to grow, network, and solidify their infrastructure. More than a few remote outposts found themselves suddenly liberated as the governments and businesses that owned and controlled them simply ceased to exist. Others were seized by rebels confident they were too remote and inconsequential to face retribution.

The rimward autonomists also sprang into action, pushing their networks to the limit to accept infugees and refugees from Earth. Though the powers of the inner system were often reluctant to allow egos to pass and potentially swell the ranks of their adversaries, most habitats were already overwhelmed and had no choice but to pass off the excess. Rather than forcing these infugees into virtual slavery or cold storage, most autonomist stations did what they could to re-life their guests. Many of these re-instantiated people adapted eagerly to the autonomist economy, where they had all their basic needs met, were not forced to sell their labor to survive, and could pursue their interests at leisure.

Even as the TITANs disappeared and the dust of the wars on Earth was settling, the hypercapitalist oligarchs were already considering the threat this rag-tag network of radicals, free-thinkers, criminals, and drop-outs posed to their dominance of the solar system. The memetic warfare began almost immediately, with the autonomists demonized as a threat to the transhumans surviving the Fall thanks to their unrestricted technologies and anarchistic mindsets. Hysterical demagogues accused the autonomists of trading in intellectual property stolen from the struggling creatives, engineers, and programmers of inner system habitats. The former owners of rimward habitats that had liberated themselves came calling, demanding their property back. When the residents refused, mercenary units were assembled and the autonomists were threatened with military action. Financial liens were placed on infugees transmitted to autonomist habs for outrageous retroactive "farcasting fees." Embargoes and blockades were placed on stations that refused to comply with inner system economic demands. In many habitats in and around Earth, Luna, Venus, and Mars, left-wing activists and sympathizers were rounded up and accused of conspiring with outer system terrorists—or worse, the TITANs. Autonomists were often lumped together with uplifts and AGIs as a triumvirate threat to humanity's future by biochauvinists and bioconservatives. Tensions rose and sporadic conflicts flared.

It was at this point that various anarchist, Extropian, scum, brinker, and other stations established the mutual aid and defense pact that came to be called the Autonomist Alliance. A simple set of Points of Unity bound these often-fractious factions together, unified against the threat posed by inner system and Jovian powers. Though simple and direct, these Points

## AUTONOMIST ALLIANCE POINTS OF UNITY

- We demand autonomy, self-organization, and self-governance for all sapient beings.
- We support direct democracy and forms of organization where sapients collectively decide their own future.
- We promote mutual aid and reciprocating altruism between sapients.
- We affirm the right to engage in self-defense against oppression and coercive authority and stand in solidarity with sapients so attacked. ■

of Unity are notable for referring to "all sapients" rather than "transhumans" or "people," making it clears that uplifts and even AGIs were included in their vision of a free society.

The Alliance faced its first real test with the first Battle of Locus, when the Planetary Consortium directed a small fleet to seize the anarchist stronghold, allegedly to protect against claim-jumping in the Main Belt and to shut down a nexus of intellectual property infringement, but really in the hopes of weakening the autonomist movement. The anarchists had been expecting this for some time and had skillfully duped the Consortium's intelligence gathering efforts. The fleet met an unexpectedly heavy and sophisticated resistance and was forced to withdraw after several ships were severely damaged. Though the Consortium had been bloodied in the skirmish, everyone knew this was just the first move, and a much stronger response was anticipated. While there were many who felt the autonomists had no chance of standing against a coordinated military attack from the inner system—or the Jovians, for that matter—the outright aggressive nature of the assault sparked anger across the outer rim, spurring many autonomist groups to solidify their support for each other.

When the Consortium launched a second attack fleet against Locus a few months later, the battle was exponentially more brutal. The hypercorp ships were more numerous and better prepared after their previous defeat, but the anarchists had bolstered their defenses and gained a number of allies. Various anarchist, scum, Extropian, and even brinker crews from around the outer system had brought their craft, hoping to get in on the fight. They still would have been outnumbered and outgunned, however, if not for the arrival of the Titanian Fleet. Knowing that the Commonwealth would be targeted soon after the anarchists, the Titanian Plurality had chosen a side, officially becoming a part of the Autonomist Alliance. The Consortium fleet was routed, and a clear message was delivered that the Alliance would not capitulate easily.

### ALLIANCE GOALS

Being a simple sum of its constituents, and given the distaste most autonomists have for hierarchy and power, the Alliance has no set agenda or goals per se. There is, in fact, considerable resistance towards making the Alliance anything more formal or organizational than it already is. At best, one can point to implicit goals held by most Alliance factions and participants, such as securing and growing autonomist society, limiting the power of the Consortium, the Junta, and similar authoritarian powers, and so on. With the exception of a handful of Joint Resolutions, few of these are committed to in writing.

The Joint Resolutions are a set of statements the Alliance has put forth as "policy" in accordance with its Points of Unity. Anything may be proposed to the Alliance as a resolution, granted that it is backed (digitally signed) by at least 500,000 unique autonomists. Such resolutions are put forth to a public referendum vote via the mesh, in which any sapient agreeing to the Alliance Points of Unity may vote. A simple three-fourths (75%) majority of votes is required to pass (for voting purposes, alpha forks are only considered unique and separate sapients after 6 months of divergence; beta and lesser forks do not get a vote).

To date, only a score of resolutions have passed, and most of these did so with near-unanimous votes. The first Joint Resolution passed was a simple declaration condemning the imperialistic aggression of the Planetary Consortium after the Second Battle of Locus and calling on autonomists everywhere to express support and solidarity to resist its hypercorp expansionism. Similar resolutions have passed, condemning the repression of uplifts and AGIs and affirming their rights as sapients. Notably, a resolution to condemn indentured servitude as slavery was narrowly defeated by an organized Extropian memetic campaign. Not all resolutions have been condemnatory; in a nod to their radical roots, one Joint Resolution marked May 1st—May Day—as an official Alliance holiday. Another positive resolution threw Alliance support behind the Love and Rage Collective and their gatecrashing exploration, research, and colonization missions.

### AUTONOMIST ORGANIZATIONS

Several Joint Resolutions have led to the creation of task forces to carry out the declared decisions. Only a few such task forces exist, and they are all staffed by volunteers. Though they operate in accordance with the resolution's mandate, they have no distinct authority unto themselves.

One of the best examples for this is the Fissure Gate Task Force, which coordinates resources, projects, and personnel for extrasolar missions with the Love and Rage Collective. FGTG groups can be found on most major autonomist habitats where they recruit new

So you don't believe the Second Battle of Locus is what kept the Consortium from taking over the outer system?

Not for a second. They may have lost the battle, but they still retained far superior military strength. I've heard many people say that an anarchist society would never last because it would be vulnerable to outside aggression, to military action from states. Well, the anarchists are outgunned, but it doesn't matter, because there are other deterrent factors.

So what, in your opinion, is actually keeping the Consortium, or the Jovians, or even the Lunars or ultimates from claiming the outer system as theirs and seizing it?

I can think of several, but let me point out a few specific incidents that I think will highlight my points. First, you might remember there was another military action right around the time of the Second Battle of Locus, where hypercorp mercs went after the habitat Hydrogen's Promise.

Yeah, I recall that. They bombarded it, blew it up, didn't they? Killed thousands?

Sort of. The mercs actually won the space battle, though just like Locus, they weren't expecting the anarchists to be so well-armed—turns out a lot more mil-spec space defense blueprints ended up in liberated autonomist nanofabbers after the Fall than anyone realized. They actually seized the habitat, though resistance was so stiff inside that they were still engaging in house-to-house fighting over a week later, even after dropping the breathable atmo levels on day one. The kicker was, they never had as full control of the hab as they thought. When it finally became clear the cylinder was taken, the anarchists triggered a scorched-Earth policy. They nuked the whole damn thing. Destroyed the entire habitat, the merc marines, and a substantial chunk of the merc fleet as well.

Holy fuck. That's one way to make a statement.

It was a clear lesson on how super-empowering technology has changed warfare. The anarchists were willing to fight to the last and die, because they were backed up elsewhere. Even the smallest habitats could be armed with devastating weapons, thanks to unrestricted nanofab. Not only could they prevent the Consortium from seizing stations, they could make each and every military action an excessively costly affair. Conquering the rim wasn't an option, the Consortium could at best hope to destroy all the habitats from afar and kill all the autonomists, but then they would have to rebuild. And would they ever get them all?

OK, I can see how that would make them rethink their strategy.

There's more. Take a look through the news archives around that time, keeping a specific eye on incidents within the Consortium. There were a lot that stand out. An indentured riot and habitat takeover in Lunar orbit. The assassination by drone of a connected hypercorp CEO on Venus. Spacecraft sabotage in Martian orbit. A nanoplague released on Progress that targeted a specific designer line of morphs favored by Planetary Congress representatives. The hacker group Anon taking down the Planetary Stock Exchange for 2 days straight. I could go on.

So, lesson #2: the anarchists were bringing the war home.

That's right, there were clear signs that a protracted war with the outer system would have been largely unpopular and would have decreased stability and safety within core Consortium habitats.

OK, I can see that, but that might just be the cost of conquering the solar system. Once the autonomists were wiped out, they could focus on regaining control at home.

Possibly, but there's more. The same week as the Second Battle of Locus, there was an unusual incident in Jovian space. A private corvette was targeted and destroyed by Jovian fighters while making a slingshot maneuver around Jupiter. The Jovians claim the ship never paid the levy to pass through their space and ignored communications and warnings; Consortium records disagree on that point. Oh, and the corvette happened to be carrying Fa Jing's top rep to the Hypercorp Council itself. Whoops.

So the Jovians were sending a message?

That's my take on it. The Jovians stick to themselves on most affairs, and they don't like the autonomists of course, but they also don't like the idea of the Consortium seizing control of most of the system. Locus isn't too far off from Jovian space, so this may have been their way of telling the Consortium to stay out of their backyard. Or maybe, just maybe, even the Jovians realized that starting another war when 95% of transhumanity was just wiped out wasn't the best idea. Either way, they expressed their dislike for the Consortium's military adventurism.

Heh, I doubt any Jovian would ever admit to siding with the autonomists, but I admit to seeing the logic there. Even with all of these factors, however, I'm not fully convinced the Consortium wouldn't just go for it anyway.

Well, there are other potential considerations, but they are sketchy and unsubstantiated. I'm not sure they're worth taking into account.

This isn't that Factor conspiracy theory again, is it?

I think a lot of people are willing to believe that the Factors are meddling in transhuman affairs—and given some of the rumors, I honestly wouldn't be surprised myself. Sure, maybe they threatened to intervene if transhumanity started warring with itself, but I doubt it. I think it's more likely they'd simply step back and wait for a victor to emerge.

Oh, let me guess. Is it that other craziness, the meme about the alien doomsday weapon the anarchists found out beyond the Fissure Gate?

Ha, no I chalk that one up to anti-autonomist propaganda. No, the rumor I'm thinking of specifically has to do with a certain … group of rumored intelligences. Let's just say their name starts with "P" and rhymes with "TITANs."

I have no idea what you're talking about.

I hope for both of our sakes that is true. ♣

gatecrashers, coordinate research efforts, and acquire needed supplies for transfer to Chat Noir.

Another interesting example of a resolution-founded task force is the Open Science Initiative (OSI). This project's mandate is simple: put science in the hands of everyone. The OSI syndicate works closely with the argonauts around the outer system, creating new science education tools, spreading the results of recent research and new designs, coordinating research between different science teams, archiving science data on the mesh, and evaluating safeguards to prevent scientific projects from growing into x-risks.

One small but growing task force is simply known as Contact. Delegated to train transhumanists in astrosociology, exobiology, and first contact protocols, most Contact affiliates can be found at Chat Noir or Portal, working with various gatecrashing teams and prepared for the contingency of making contact with alien life. Contact teams also negotiate on behalf of various autonomist groups and habitats with the Factors on their semi-regular visits.

## SPECIAL OUTREACH

**To:** <encrypted>
**From:** <encrypted>
Everyone thinks the autonomists are too disorganized, too decentralized, to have their own spy networks. They are wrong. A leaderless initiative of cells exists throughout autonomist space, dedicated to keeping an eye on ideological enemies, archiving and correlating intel data, and sharing it with other autonomists that need to know. Some of them run sophisticated communication intercepts and network intrusion centers. A few dedicate themselves to going deep undercover and infiltrating hypercorp or government organizations. It is almost certain that these cells share data with CRAM and similar insurrectionist cells.

## AUTONOMOUS FACTIONS

There's a saying that among any 3 autonomists you'll find 4 separate factions. Though everyone knows that the anarchists, Extropians, scum, and Titanians are all part of the Autonomist Alliance, this is a simplified notion. In truth, each of these groupings is composed of numerous sub-factions, delineated by fine ideological positions that are sometimes opaque to outsiders. Some sub-factions are so distinct that they do not actually adhere to the Alliance's Points of Unity, though a lack of formal organization often makes this difficult to pin down except with specific individuals. There are also many self-identified autonomists who decry these factions altogether, sometimes counting themselves as brinkers, Barsoomians, or adhering to some smaller socio-ideological sub-set instead.



## INNER SYSTEM AUTONOMISTS

Not all autonomists live on the far side of the Belt. Squirreled away in the nooks and crannies of the inner fringe are a few small anarchist outposts, quietly doing their thing while keeping a low profile—and playing safe haven for anarchist travelers. More tolerated—and thus more in the open—are a handful of Titanian-allied stations and some larger Extropian colonies. Quite a few autonomist spacecraft also go about their biz, particularly scum swarms and Extropian merchants. These ships occasionally run into red tape and legal hassles, particularly if the authorities have reason to suspect any links to subversive activities. More than a few ships have been seized as a matter of "security."

Among the citizens of various core system polities, numerous self-identified autonomists live, work, and thrive. Most are careful about declaring their allegiances too openly, less they face extra scrutiny or worse. Public sentiment towards autonomist memes varies wildly from hab to hab, or sometimes just person to person. Consortium and LLA habs are known to restrict travel options for autonomist sympathizers, and anarchists especially are subject to the occasional "disappearance" or rendition, particularly if any saboteurs or guerrilla cells have been active lately.

Autonomists traveling to the inner system usually expect and prepare for the extra scrutiny and hassle they know they will face. Certain black market operators have a thriving biz in providing new identities and backgrounds for such folks—sometimes these are even legitimate, coming from stations that have very lax policies about citizenship.

One of the biggest challenges to autonomists visiting the transitional economies is simply adaptation. More than a few anarchists easily forget the fundamentals of that whole private property thing, so they end up in trouble for theft when they wander off with someone else's stuff. Autonomists also tend to be a bit naïve about crime—or expecting help from random passers-by—and are sometimes specifically targeted by gangs looking for an easy mark. ■

## ANARCHISTS

**Posted by:** Pablo Dolgoff, Anarchist <Info Msg Rep>

To the average citizen of the Consortium and other sunward polities, the anarchists are are the bogeymen of the rim planets, widely misunderstood and feared as terrorists and insurgents. This is to be expected, as anarchism rejects both capitalism and the state and so is as opposite of hypercorp ideologies as you can get.

What do anarchists believe? In simple terms, we are opposed to social, economic, and political hierarchies. At its core, anarchism is a critique of power and how it is used to exploit and oppress others. Anarchists therefore seek a social system that abolishes authority and power relationships to maximize freedom and equality.

### MISCONCEPTIONS AND REALITY

Thanks to capitalist propaganda over the centuries, the definition of anarchism has been distorted and anarchists demonized. So let's clear up some common misconceptions. First, though anarchism and anarchy are sometime used interchangeably, anarchism is not chaos. Anarchists do not defy organization; they seek horizontal methods of working together that minimize hierarchies and give everyone involved an equal say. They are not even opposed to rules, as long as such rules are collectively decided upon by those that

## OUTER SYSTEM CAPITALISTS

The rimward portion of the system is a helluva big place—more than enough room for autonomists and hypercapitalists to exist side-by-side without getting in each other's way. Despite the preconception that the rim is "autonomist space," thousands of hypercorps conduct business in the outer system, via both physical and virtual presences. There are also dozens of habitats that claim allegiance to the Consortium, the LLA, Morningstar, or their particular hypercorp overlords. The expanses of the rim are considered a nice remote place for oligarchs who like to make their private residences as far from the proles as possible, and the sights out towards the deep black draw roaming gangs of bored socialites looking for the next thrill.

Inner system folks are largely tolerated on autonomist habs as long as they respect local customs. They almost always require some hand-holding until they get a grasp on how things work. They might be watched more closely, especially if they have ties to certain intelligence-gathering or mercenary outfits. The attitudes they get from local autonomists will range from pity to curiosity to uncaring or loathing. The biggest stumbling block they face is lack of rep, and too few are willing to put in the effort to build up a good score. Most get by on low rep until they leave. ■

follow them, as opposed to being decreed on others from above. Anarchists do not believe in might-is-right, survival-of-the-fittest, anything-goes social disorder. They believe that cooperation is a better survival strategy among sapients than competition.

Detractors often like to say that anarchism looks nice in theory, but that it wouldn't work in practice. After all, someone will shirk their collective duties, or step in and take charge, or resort to murder and rape with no rules to stop them. Putting aside for a moment the numerous practical methods anarchists wield to collectively deter anti-social behaviors, this is a question of ethics and social responsibility. Anarchists do not rely on threats of punishment in Hell or violence from government thugs to back up their moral behavior, they simply recognize that as social creatures, it is in our own selfish best interests to treat those with whom we deal with the same respect as we wish from them. This is not idealism, it is a pragmatic approach to how most people already live their daily lives.

All that shit you've heard about human nature being selfish, self-centered, greedy, and generally willing to screw over our fellow being in order to get ahead? It's just that: shit. Your average hypercorp exec may like to wax rhapsodic about their favorite animal and how they're totally like that animal because they're the biggest, baddest apex predator out there, willing to cut the throat of the guy next to them for a handful of credits. Well, that sociopathic crap isn't how things really work. Humans exist as a species because we're able to cooperate, to share, and to communicate information with each other that helps us all out. Put another way, the core of the hypercapitalist inner system is a certain pessimism that people are bastards, rotten to the core, and will sell you out given a chance. I don't know about you, but this isn't the kind of world I'd want to live in. Our view is a much more optimistic one: people will, given even half a chance, help each other out and do what they can for each other. This isn't to say we live an idyllic life free of crime or want or hardship, but only that when these things happen we tend to aid each other, even when it's not our problem, because we know that when it is our problem, those other people will step up to help us out.

## FINDING OUR ROOTS

Anarchism in its various forms has a long history, going back well before the Fall. It helps to understand where we came from, the mistakes and the lessons of the past, and how we got to the here and now. Mind you, you don't need to know this history to be welcome among us. Hell, plenty of anarchists live in complete ignorance of our historical roots. There are also many different versions of the story I'm gonna tell you—that's part of what we are, a collection of stories all told from different perspectives. There is no one, singular true account of the past. It is always better to get your info from many sources, be skeptical of the tellers, and find your own path through the stories.

Anarchism as a concept has been around since ancient times, ever since the first peasant or thrall of some power-hungry lord or priest first thought "What makes him better than me?" Many primitive societies were in fact anarchistic, operating with gift economies or similar need-based systems. Both the Greeks and the Chinese had words for it, and even then those in power warned against "the masses." The idea that people could organize themselves without creating institutional inequality was something those ancient despots feared back in the days when all they had to retain order were groups of thugs bought off with extra privileges and irrational beliefs that some cosmic power barely within our ken had set forth an immutable order that decreed some should rule and others grovel in subservience.

For centuries, anarchism was an idea that frightened the monarchs who liked to use force to stamp on citizens who dared question their authority. Modern anarchism, as a fully realized political philosophy that questioned those basic assumptions of rule and power, grew up out of the death throes of the European monarchies in the 18th and 19th centuries. The other siblings of the revolutionary period—democracy, socialism, and communism—got more play in the years that followed, but anarchism too was growing and spreading its wings. Though anarchists seized the moment in many struggles—the Paris Commune, the radical unionism that brought the 8-hour workday, the Ukrainian peasant uprising in the Russian Revolution, the Spanish Civil War, the Zapatistas of Chiapas, to name but a few—it failed to hold ground for long. According to some, anarchism was too revolutionary for the times, too egalitarian for even the radical democrats of France and America, and too challenging to the authority of the ideologues and vanguardists of the various communist revolutions.

Working against the anarchists in these early years was that it was an age of technologies of expansion, growth, and immensity. The problem of the day was not finding out how to let small communities govern themselves, but how to link them in to ever-larger polities to harness the economies of scale. Capitalism was reaching an apex, promising a wave of economic prosperity that would raise all up with it to a new era of wealth. Against this rising tide, anarchism seemed quaint and backwards, unable to compete against capitalism's entrenched totality. Some anarchists even grew reactionary, turning against technology, blaming it for increasing human oppression and facilitating the pillaging and destruction of the natural world.

The decades before the Fall saw a shift back in anarchism's favor. The ongoing eco-catastrophes and crises within capitalism on Earth were leading to widespread inequality, social fragmentation, and radicalization. As governments failed and began to spiral out of control, citizens and communities rose up. Both

communism and democracy had been disgraced by past failures, turning many towards anarchism. The populist protests of these groups won them many recruits, but they also resulted in mass imprisonments, especially for the anarchists who were much more willing to use direct methods of confrontation.

Many of these convicts ended up as indentures on hypercorp space projects. There they found themselves working among scientists, engineers, and other technical professionals, many of whom had been happy to leave behind cultures on Earth that were still stifled by religious doctrines and social conservatism and were sympathetic if not supportive of anarchist ideals. Still other anarchists took to space as a new frontier for their projects that was outside of government/corporate control. Together, these groups laid the groundwork for anarchist habitats to come. Mesh and nanofabrication technology now made it easier than ever to live equally, without need, apart from government or corporate domination. A new way of life arose in the outer system, drawing many to it.

When the Fall came, these anarchists embraced everyone, turning no infugees away. Unlike the inner system polities, which are always seeking ways to control their populations, the anarchists promised new lives and new bodies to everyone—and they delivered. Though we've had our share of problems and growing pains—no system is perfect—most anarchist habitats have flourished.

## From Each, To Each

Many travelers from the core habitats are taken aback by the nature of anarchist habitats. Though we are often dismissed as utopian, our ways are not the capitalist ideal to which many of them aspire. We have no private habitats that are paradises for the privileged few, where the stinking masses are kept out. Our practices are an inversion of the way most non-anarchists are taught to think about the world. We do not idealize wealth and power, the acquisition of rare goods, or the ability to make others do your bidding whether they will it or not. Those beliefs, the ideologies of the inner system, hold that we are all in competition and the only way to get that better life is by crushing your peers beneath you, climbing ever upwards, leaving your lessers behind. They are the philosophical basis for a system that elevates a lucky few to dizzying heights of wealth, risen to the level of celebrities to lord their riches over the rest, held forth as aspirational models to the less fortunate. These people are the enemy, the opposite of everything we believe in.

Instead we look not up but down, to those who have less. We measure the worth of our society not on the wealth and opulence of the richest and most well-to-do, but on the least fortunate, the least able, and those who have had to do without. In our habitats everyone eats, everyone has a place to sleep, everyone has work that they do, not because they must, but because they want to. Everyone has a body if they want it, oxygen if they need it, and freedom as long as they don't oppress others. Our medical clinics and educational resources are available to all. This is the basis of our society, and anything less would be a barbarity, the stripping away of human dignity for the benefit of a few. We gladly do without jeweled trinkets and rare mineral-encrusted status symbols so that everyone may fabricate the essentials.

The new anarchist credo, "From each according to their imagination, to each according to their need," is an old quote by Marx reworked and repurposed for the times we now find ourselves in. What this means is that within anarchist spaces, the basic needs of everyone are provided for: shelter, clothing, food, water, air, education, healthcare, and security. Nanofabrication and other advanced technologies make this automatic and readily available. On anarchist habs, community nanofabbers are everywhere and unrestricted. This leaves us to use our time to follow our desires in creative endeavors.

It is a common fallacy among capitalists that anarchists are lazy. They are right in that anarchists reject work—that is, the compulsory devotion of life to production and consumption, the prostitution of our labor in return for a small percentage of what it is worth. Instead, anarchists voluntarily pursue their own interests, "working" on projects that they find personally fulfilling, creative, or supportive of others. Many devote their lives to expertise in a particular field, proving that the desires to create, excel, and to devote themselves tirelessly to projects are not unique to societies which force people to work. Without the need to increase production and profits, of course, most anarchists only "work" for a few hours a day, dedicating the rest to leisure. Those that do "work" often game-ify the process to make it more entertaining.

What about menial work? Thankless jobs that no one wants to do? Who gets to clean out the sewage filter traps and scrape the barnacles off the habitat's hull? That's what AIs and robots are for, my friend. If a sapient's involvement is required, there's usually someone willing to do the grunt work voluntarily, or more commonly, a group of volunteers will rotate an assignment. Such a sacrifice is almost always rewarded with positive reputation boosts.

With everyone on an anarchist habitat having everything that they need, money and similar systems have been abolished. All property beyond the level of personal possessions is considered to be communally owned. If something is in limited supply, its use is rotated among people that need/desire to use it (with a simple AI handling the schedule). If you need to jump the line to get access to something rare in an emergency, or need to use something that's important to the community as a whole (like taking a shuttle or spaceship), your rep will be a large factor in whether the locals decide to fulfill your request or not.

## STAR HIKE

Star Hike is the mesh service that facilitates travel between anarchist habitats, especially in local neighborhoods of space. Via Star Hike, you can easily hook up with a spacecraft crew that is going your way. If you're taking a shuttle on a one-way trip, Star Hike is an excellent resource to ensure the shuttle has return passengers and isn't heading back to its home station empty. ■

### NO GODS, NO MASTERS

So, how does it actually work? Who makes decisions? Who calls the shots? Who enforces the rules? Simply put, we all do. Everyone affected by a decision has a say in it. This may sound like a nightmare, but it's simply an organizational issue, easily facilitated by the mesh and our muses.

At the smallest level, anarchists organize themselves in groups appropriate to the location, interest, or project. Community assemblies, worker's councils, project co-ops, affinity groups, various collectives, and similar bodies are each composed of their participants. Everyone in these groupings is on equal footing; there are no formalized hierarchies, and informal hierarchies are intentionally discouraged. Leadership positions are sometimes granted, particularly in situations where quick decision-making is essential or a coordinating person is needed, but these are only enabled by universal vote and their decisions are subject to immediate critical peer review and possible recall. When interacting with other groups, delegates are elected to convey the groups' decisions. Such delegates are not representatives, meaning that they are not empowered to make decisions on the group's behalf, and must similarly answer to their peers.

Decisions within groups are made most often by a consensus process that seeks out unanimity, though some groups settle for two-thirds or even simple majority on contentious issues. Objections to a stated proposal are discussed, potentially leading to amendments that reflect such concerns. Those with minor disagreements are often content to let a proposal pass, as long as their dissident views are reflected in the record. Major disagreements that are unable to be resolved can sometimes lead to a division within a group, with those objecting leaving. This sort of split is considered a feature, not a bug—when such divergent opinions are held, it is often better for people to go their separate ways. Proposals, discussion, polling, and voting are quite often handled entirely online, in real-time. Many anarchists have trained their muses to respond to these matters automatically according to their preferences, to provide them with regular summaries, and to notify them only of major issues that deserve closer personal attention.

On a larger scale, these small bodies network together in a decentralized, confederated fashion. When a decisions affects an entire syndicate, confederation, or similar assembly of groups, the individual groupings and members are polled in the same manner as local decisions. The algorithms and programming for these decision networks are very sophisticated, enabling anarchist groups across the solar system to coordinate efficiently and quickly—quite often more rapidly than hierarchical command structures.

### CRIME AND JUSTICE

So you've arrived in your first anarchist hab and, like most first-timers, you may be put off by the fact that there are people wandering around with weapons hanging from their hips or that the corner fabber's menu lists "Molotov" under its directory of cocktail choices. Or maybe you're visiting a scum barge and are offered a cutting edge narcoalgorithm right as you step out the airlock. Or your muse gets pinged with the newest Experia OS, the one that's still in beta back on Venus, and you may get to wondering, "Is this legal?"

Anarchism doesn't mean "do whatever the hell you want." We have rules—not laws, but rules, guidelines, suggestions for behaviors. The difference is, unlike a law, they are mutable and often change from situation to situation. Also our rules are something we have arrived at by consensus, unlike the laws of many other habitats, which are often made by those in power to protect their interests without any feedback from the people who will be subject to those laws. Everyone in an anarchist habitat has had a say in the rules that will affect them.

With no money and no need, there is no motivation to pursue many of the crimes that are common in inner system habitats, such as theft. With no laws, there is little in anarchist habitats that counts as crime. Nevertheless, there is occasionally "rule breaking" and anti-social behavior. Interpersonal violence is, of course, frowned upon, though small scale scuffles, such as a fight between friends, are surprisingly tolerated and viewed as a private personal dispute. Sometimes, people just need to brawl to get it out of their system. Murder or other savage attacks are taken more seriously, as is any sort of large-scale destruction. Most anarchist habitats have collectively decided to ban WMDs out of simple common sense.

As a general guideline, anarchists consider ego crimes to be far more serious than violent offenses. Forknapping, non-consensual psychosurgery, cyberbrain or infomorph hacking, involuntary mental manipulation—these are the sort of things that will get a mob of angry locals on your neck right quick.

Who responds when infractions occur? The community does. With no prohibitions on weapons, your average anarchist tends to be fairly well armed, and many will intervene if they see someone needing help or some other antisocial activity in progress.

Most anarchist areas have volunteer militias that can be quickly mustered when needed to act in the community's self-defense, backed up by a complement of heavily armed and armored security drones. Similarly, volunteer collectives also man the weapon systems that defend their colony from outside aggression. Most anarchist stations also practice transparency in public areas, enabling locals to keep an eye on potential problems. You might be able to print up some plastic explosives at that corner nanofab, but the entire local community will be alerted to the fact that you are doing so.

When it comes to crime and conflict, anarchists also have a much different take on resolution. The most immediate thing is that pissing off other anarchists can very quickly tank your rep score. "Punishment" for crimes is largely considered a barbaric holdover from the past. If someone is acting in an anti-social manner, odds are there is a reason for it and they need help. A typical anarchist response will be to select an impartial group of peers from the affected community to assess a situation, with rehabilitation and conflict resolution overseen by volunteers from a community crisis center as the preferred method of handling offenders. Justice is also held as important, and the opinion of the person who is the victim of a crime is strongly considered. Anarchists have no prisons, so an offender is expected to comply with a community's judgment of their own free will. Those that don't—or who are repeat offenders—will be rewarded with a quick ticket off the habitat and temporary or permanent exile. Some stations are known to ban those exiled from allied colonies. Only in the most extreme cases—mass murder, treason, slavery—have some anarchist communities been known to condemn someone to permanent death.

## Daily Life of an Anarchist

So what's day-to-day life like in an anarchist colony? Pretty much the same as it is everywhere else, except you won't have a boss breathing down your neck, rent to pay, or cops staring you down. We work less, play more, treat each other like equals, and have largely forgotten about weird fetishes like consumerism. There are other ways in which we diverge from inner system lifestyles, but many of them are subtle and nuanced.

Sex does not suffer from the social stigmas and guilt that still linger in the inner system, nor is it commodified. People are fairly open about their kinks and desires. Relationship-wise, most anarchists tend towards polyamory. Marriage is rare, though some couples still opt for long-term monogamy. Group relationship arrangements are growing more common.

Skill and expertise are still valued among anarchists, though it doesn't come with the elitist privileges common elsewhere. Being good at what you do might get you more rep and prestige and probably means people will listen to your opinions more, but it doesn't give you wealth, nor does it give you authority over others unless they grant it.

Creative expression is more common in our habitats, a benefit of more leisure time. Our walls are covered with artwork, murals, or simply graffiti because many of us feel that blank walls equal blank minds. Sculptures, entoptic designs, and eclectic AR sensory feeds abound. Impromptu theater and musical jam sessions are not an uncommon occurrence in public areas. Flash mob pranks, MARGs, and other group games are popular and widespread.

Private residences are not bought, but are assigned by a housing AI according to availability. Most stations feature common living areas for travelers and itinerants. These range from bunk-bed barracks to coffin capsules to individual quarters depending on available space.

You won't find the private sensor nets common elsewhere, of course, but ubiquitous surveillance is common and transparency is the order of the day. In our society, there aren't any big secrets regarding day to day stuff. Most people's lives are open books. If you're the sort of person who craves privacy, keeps to yourself, and carefully constructs a false persona to display to the world, you're going to have some issues. While most of your neighbors aren't really going to obsess over where you go and what you do, if you present one account and then try to hide or lie about the truth, it's going to get around and make people suspicious, and also make them wonder what else you may be lying about. It's not that we don't have privacy, but we don't have it in the way you do in the inner system. You can keep to yourself, but that only goes so far, and attempts to lie or falsify your actions usually come back to bite you in the ass.

You'll likely see a bit more variety among morphs, bio-mods, and accessories in anarchist habs. Individuality is prized over uniformity, so you won't see as many of the cookie-cutter cosmetic looks. There's also no stigma to running around in a clanker or unusual chimeric design. In fact, synthmorphs are incredibly common due to their versatility. One major change from the inner system is that many biomorphs here are modified to be equipped with cyberbrains rather than biological models. This enables easier forking and resleeving.

Forking also doesn't suffer from inner-system limitations. Many people fork for days or simply keep a fork companion on hand for all purposes. Alphas are not considered property and forcing one to re-merge against its will is considered offensive. Most anarchists, however, do not consider beta forks to be fully sapient—though this is challenged by some, and some stations treat betas as they do alphas.

Uplifts and AGIs are both considered sapients and treated as equals in anarchist societies. Though there is some lingering AI paranoia from the Fall, most AGIs find they are accepted and treated as people on anarchist habs. In recent years, there has been an

influx of both AGIs and uplifts to the positive environments of the outer system.

## Problems with Anarchy

Though we paint a rosy picture of life in anarchist colonies, we'd be remiss if we said it was perfect. We have our share of problems and difficulties, though most of these are at least acknowledged and addressed rather than ignored or institutionalized.

Foremost among our challenges is the creeping nature of informal hierarchies. Even though we create organizations designed to counter the accumulation of power, sometimes we grow lax, or fall back into old habits ingrained on Earth, or simply fall prey to deceptive persons. Sometimes this enables individuals to amass a sort of social leverage over others. On a recent trip to another hab, I had the pleasure of dealing with an unhappy man who had entrenched himself in the local bureaucracy to the point where he was exerting influence over the morphs available for new arrivals to resleeve in. The bastard actually had the gall to try to coerce me into committing some dirty work for him before giving me the morph I requested. I did it, and then I exposed him. While he took a rep hit, I fear that the locals failed to take it seriously, and he still holds on to that position.

The same problem occasionally pops up with people who have accumulated a high rep score—particularly if it shot up overnight. Some of these take the rep boost as an invitation to act like jackasses since they can get away with it a lot more easily; it just goes to their head. Thankfully, the problem is usually short-lived and self-correcting, as their rep eventually gets trounced.

Second is integrating outsiders—particularly short-term visitors. Some inner system socialite brats have made a fun game out of visiting anarchist habs under fake identities and taking advantage of the lack of laws and police to act like complete hooligans and create some sort of ruckus before quickly leaving. Even if they get caught, they usually just get expelled anyway. While a nuisance, the same problem occasionally pops up with other outsiders who take advantage of how our society is more open. This is basically a failure of accountability—among anarchists, we can keep tabs on who's a jerk in our communities and exert social pressures to keep them in line. With outsiders, that recourse is gone as soon as they leave. We don't want to treat every non-anarchist that visits as a potential problem, but we've learned to collectively keep a closer eye on them, give the infiltration of Stellar Intelligence agents and hypercorp saboteurs.

We face other challenges too. Since our habitats are often physically isolated and focused on communalism, local residents sometimes develop cliquish



behaviors towards outsiders. Confined to the rim, without armies of indentured slaves at our disposal like the capitalists have, we sometimes run short on fuels, metals, or other critical resources. Lacking any central authority to force agreement, local schisms sometimes escalate into larger conflicts. These issues are widely recognized, discussed, and worked against.

Finally, there's the ever-present challenge of super-empowering technology. Since we don't restrict tech like the hypercorps do—and in fact, with our open science programs, make it even more available to everyone—there's always the chance that someone will endanger those around them. On the positive side, since the tech is more widespread, it also enables us to collectively enact countermeasures more quickly, though this usually just limits the damage. To some degree, our tech enthusiasts, experts, and scientists all police themselves, but the environment we foster has occasionally attracted exhumans, singularity seekers, or other sociopaths.

## Anarchy for Everyone?

Even we admit, anarchism is not for everyone. There are plenty of people for whom this type of life sounds like a version of hell, and honestly we'd just as soon not have them here either. When you get down to it, we only really want people who want to be here. Unfortunately, many people grew up under capitalism and can't hack the paradigm shift or have other … behavioral issues that would just make them perennial flies in our otherwise communally harmonious ointment.

First among those who have trouble adjusting to life among the anarchists are egos that were born into privilege and entitlement. They quickly learn that we don't give two fucks about any of that shit and acting like you know better or are better is a quick way to a rep dump. A lot of us toiled under shitty economic systems prior to the Fall and remember the way we were treated by our "betters," so many of these spoiled brats are lucky if all they encounter is a lack of sympathy.

Equally self-entitled are those whose upbringing or culture instilled in them a sense that they were better due to their gender, ethnicity, sexual preference, or physical ability. Welcome to the future assholes, none of that shit matters anymore. That you were born a fully able hetero cis white male in the States doesn't mean dick to me or any of the rest of us. It's not who you were, or what you're used to, but how much you're willing to contribute to the collective. Tolerance for prejudice of any sort is thin on anarchist habs.

There are others that don't fit in. People that just can't get over the need to hoard things, even when it's more than they can possibly use themselves. People that get off on ordering others around. Sociopaths. Misanthropes. Loners. We have our own outcasts that live on the fringe, getting by with meager rep scores and as little participation in collective affairs as possible. They are tolerated, and sometimes pitied, but as long as they don't mess with others, they are left alone.

It sometimes takes new arrivals—recently unarchived infugees, escaped indentures, exiled criminals—some time to fully grok how we anarchists do things and adjust to the collectivist lifestyle. We try to smooth over their integration with orientation sessions and helper AIs. Some collectives and syndicates go out of their way to "adopt" the noobs and show them the ropes. Some of them are afraid their past lives will make anarchists reject them, particularly if they were a cop, banker, or criminal. For the most part, we try to give everyone a chance to start over. It's only how you act and who you present

## Anarcho-Fascists

By Ji Ligong,

Posted to *Your Opinion: Your Voice, Experia News Net*

"Fuck them, fuck 'em all. Those anarchists? Yeah, they talk a good game about freedom of expression and the rights of individuals but, really, it's all bullshit. And, no, this isn't just sour grapes because they kicked me out, alright? I wasn't doing anything wrong but apparently I got their panties in a bunch because they accused me of anti-social crimes and of violating the rights of a sapient. Over a fucking fork? Can you believe that shit?

OK, so yeah. Let me start over, tell you how it went down. First thing you gotta know is that I know that I'm a deviant. Yeah, yeah, I like what I like, that's why I didn't bother trying to even apply for citizenship on Mars or somewhere else, I figured it would just be a matter of time before I got scooped up and thrown in prison. But I heard the outer system was different, like anything goes there, you know?

So I found this little hab, run by some ex-scum, and you know how they like to party, yeah? So I figured it'd be right up my alley, my kind of pervert right? But, no, turns out that if you're the kinda guy that likes to take forks of people and turn them into virtual pleasure slaves, that's not OK. So much for anything goes! And, like I said, they're forks! Not even real goddamn people! Who the fuck cares if I do sick shit to your fork! Of course I wasn't going to ask them for the fork, I'm not stupid, I know I'm a sick fuck. But I figured, hey, anarchists, they're anything goes sorts. Not so much as it turns out. The fact of the matter is that they've kinda got a real stick up their asses about rights and self-determination and that kinda shit.

So fuck 'em. They're just as bad as some of those moral communities you see popping up on the hinterlands of Mars. ♣

## OF ISMS AND PRIVILEGES

Anarchism has always been critical of the various "-isms": racism, sexism, homophobia, classism, speciesism. It has also drawn connections between these prejudices and the larger oppressive institutions of hierarchy and power (government, capitalism, patriarchy, religion, etc.), and noted how certain segments of society were granted privileges in order to keep the less privileged strata down. Though uploading, genehacking, and resleeving technology broke through many of these prejudicial attitudes, most anarchists remain cognizant of the lingering effects. For example, anarcha-feminists point out how egos in male morphs find it easier to adopt leadership roles and tend to be extended more privileges—in a subtle, but measurable way—than egos in female morphs. In certain cultures, morphs with specific ethnic features are treated differently due to lingering racism, and so on. Though no anarchist would ever call for non-consensual psychosurgery, some anarchists have deliberately opted to attempt to excise these biases from their own minds. Experimentation with other morphologies, to "walk a mile in their shoes," is common practice. ■

yourself to be among us that we care about. If you're leaving behind a corp job or a life as a Martian ranger and you want to start over with no one knowing? Good for you, we won't hold it against you.

## ANARCHIST SUBFACTIONS

As you might expect, anarchists are an opinionated bunch. Though most of us work as a united front, there are a few distinct groupings within our big extended family identified due to their outspoken stances on a handful of issues.

### COLLECTIVISTS

The vast majority of self-identified anarchist habitats are collectivist in ideology and practice. Also known as anarcho-communism, libertarian socialism, anarcho-syndicalism, or just plain anarchism, collectivist anarchism argues in favor of egalitarianism and the abolition of hierarchies, money, property, and wage labor. Though various tendencies exist within the collectivists, they mostly boil down to minute differences in organization and focus (syndicalists favor ordering society around the workplace, for example). The black flag or red-and-back flag is their symbol. Most anarchists who don't favor broad-scale collectivism have gravitated towards the scum or mutualist Extropians instead.

### ANARCHO-TRANSHUMANISTS

Along with being collectivists, most anarchists, if pressed, would probably espouse something close to what is now called blue anarchy, or anarcho-transhumanism. They believe broadly in using anarchist principles along with transhuman technologies to structure a new, more equal society. Blues see the current proliferation of anarchist habitats as realization of this new anarchist dream, and the increasingly ubiquity of cheap, easy-to-use fabrication technologies as the means to spread it to more willing habitats. The anarcho-transhumanists and anarcho-primitivists hold opposite and hostile viewpoints.

### INSURRECTIONISTS

The prevailing consensus among anarchists is that they should be continuing to actively fight for the liberation of everyone—in particular, those who are still living under the oppressive regimes of the core planets, the Jovians, and elsewhere. Anarchists across the solar system provide material aid when possible to free unions, worker's cooperatives, mercurials, hacktivists, and other anarchist and lefty groups that are working for social change in their respective polities—particularly those that seek to set up a dual power structure, laying the groundwork for a new society in the shell of the old. While they support social struggles elsewhere, however, rimward anarchists are wary about actively entering into direct conflicts with these governmental powers. Some argue a fine line must be trod between solidarity and putting the existing gains they have made at further risk. Clandestine support and memetic campaigns are preferred to open warfare. According to some viewpoints, it is the duty of the oppressed to liberate themselves.

The insurrectionists go further. They think the current focus of anarchists everywhere should be in liberating the people living under hypercorp domination. They believe that as long as any inequality exists, no anarchist should be content with the gains that have been made. They also consider the system to be in a state of undeclared war between the inner and outer factions, and to that end they rail against the core planet powers, the Jovians, and the ultimates, constantly agitating for overt direct action against the oppressive regimes that are still in existence in addition to ongoing covert efforts. They point out that this is not just a matter of liberating others, but of protecting the Alliance itself from inevitable aggression by their militaristic and autocratic neighbors. Many are also critical of the Titanians for being too hierarchical and the Extropians for exploiting people with their capitalist enterprises.

### PRIMITIVISTS

The primitivists believe that all of industrial and technological society is coercive and oppressive. They argue that hierarchy and domination began with the invention of agriculture itself and cannot be eliminated until we return to a small-scale society of hunter-gatherer tribes. Though they abhor the TITANs and the destruction of the Fall, they believe that transhumanity's population reduction is a positive step that needs to be taken even further. Most primitivists seek to establish colonies of like-minded people on habitable exoplanets, or work with the reclaimers to re-take the Earth. A few, however, actively agitate for the destruction of both the Planetary Consortium (and other governments) and the Autonomist Alliance. These extremists are responsible for numerous acts of sabotage and terror around the solar system.

## ANARCHIST GROUPS OF NOTE

A few collectives, networks, and other anarchist formations stand out.

### ALL QUEER

All Queer is a network of anarchists that pinpoint their gender and sexual identity as outside of the confines of straight, binary norms. An outgrowth of radical queer groups that countered oppression before the capability to resleeve created a massive social shift, All Queer argues that biases still exist against people that have non-binary gender identities or sexual orientations outside of the mainstream. More than just countering phobia and privilege—in both autonomist and capitalist societies—All Queer opposes assimilation and instead promotes the idea that all of transhuman society needs to be—and is well on its way towards being—thoroughly genderfucked. All Queer activists have been instrumental in designing morphs, bio-mods, and psychosurgical hacks that explore a wide range of sexual biology, orientation, and practical activities.

### BLACK MARSHALS BRIGADE

Notorious within the inner system, this syndicate had a humble beginning. It started as a simply named Volunteer Adjudication Collective, composed mainly of people trained in psych backgrounds and social work who offered themselves as a third-party conflict resolution service. They were of particular use for incidents when two or more collectives had a dispute where an outsider opinion was needed. Over time, they developed an investigatory capacity, as they were frequently called in to handle a dispute that could not be settled internally or that was muddied by contradictory information or missing facts. They developed a rep for satisfactorily resolving a number of high-profile mysteries and disputes.

Much like a police investigator, only volunteer and with no legal authority behind them, members of this group are brought in to ferret out the most accurate account of any given situation and then present their finding to the collective(s) with whom they are working. If asked to, they will also supply a resolution to the groups or people that brought them on.

What really set this group apart, however, was their willingness to hunt down and capture people that had fled to inner system polities. They have on several occasions captured egos that were wanted on suspicion of being hypercorp saboteurs. These operations often turned messy as the Marshals were not adverse to inflicting significant damage against hypercorp assets in pursuit of their targets. This led to the group developing a reputation that was fanned by sensationalist inner system media exposes. In response to these reports, the syndicate adopted the name of the Black Marshals Brigade.

One secret to the Marshals' success is that many of them come from backgrounds where they worked for hypercorp security or mercenary groups. As an offshoot of their other projects, the Brigade also assists in training anarchist collectives on maintaining a good security culture. According to rumors, the Marshals work with Special Outreach, maintaining a database of suspected hypercorp informants and infiltrators within anarchist space.

### BLUE ROSE

Blue Rose is an informal network of experienced insurrectionist anarcho-transhumanists, most of whom were active militants fighting to liberate anarchist spaces in the outer system before the Fall. Having seen many of their dreams realized, they have turned their minds towards fostering revolution in the inner system and Jovian Republic. Though rarely involved in direct action anymore (with a few notable exceptions), their intellectual efforts are exerted towards undermining the memes of their opponents, analyzing the current state of the authoritarian polities for weaknesses, and developing actual revolutionary strategy to overthrow them.

Several members of Blue Rose are also prominent chrome advocates, a fact that unsettles some supporters (and other members).

### THE CHARCOAL TOWER

This loose confederation of intellectuals, scientists, and think tanks operates the largest informal open educational project in the system. They have programmed thousands of tutor AIs, training programs, and skillsofts. Unlike traditional education systems, they do not focus on standardized tests and abstract learning; most of their programs are designed to create a hands-on, practical learning experience that requires interaction with real-world situations and enables a student to learn at their own pace and along their own primary areas of interest. The Tower also publishes a number of abstracts, theses, and studies that counter the more established intellectual efforts of the Consortium and the Junta's think tanks. The Tower has close ties with the argonauts.

### Cienfuegos Revolutionary Anarchist Movement (CRAM)

CRAM is the largest insurrectionist network, composed of anarchist groups embedded within non-autonomist polities and their supporters in anarchist space. These groups employ a wide range of open-source insurgency tactics, encouraging dissent and revolution as appropriate to the local situation. Sometimes this amounts to little more than supporting existing social movements, spreading memetic campaigns, lending material support, and doing what they can to turn up the heat. In others it involves actively establishing anarchist-oriented counter-institutions and unions, building an infrastructure for the new economy while cultivating a culture of resistance to the transitional/old one. Along with these efforts go tactics such as militant demonstrations, labor strikes, sabotage efforts, hacktivist campaigns, and other creative but illegal actions. In a few instances, CRAM groups have engaged in armed struggle, including bombings and assassinations, though they seek to limit the casualties to their actual enemies and don't just wage indiscriminate attacks, which could mean losing popular support. CRAM is officially outlawed in the Consortium, Jovian Republic, and Lunar-Lagrange Alliance. They have significant influence on both Mars and Luna and are in good standing with Barsoomian groups.

### Company of Equals

A band of refugees and political dissidents from mainland China started this assembly of collectives on Mars before they were ousted by the Consortium. Now scattered across the solar system, they are notable for their melding of anarchist and Taoist thought, seeing the natural order of the universe as being simultaneously harmonious and in a constant state of change due to the flux of opposing and dynamic forces. Most Company collectives make it a point to live in non-anarchist habitats, and so they often serve as crash space, local guide, and general waystation for anarchists traveling to other polities and in need of assistance. Likewise, they have also helped to funnel indentures, dissidents, uplifts, and AGIs out to seek asylum on anarchist stations.

### Jovian Anarchist Cells (JAC)

This underground group operates in Junta space, quietly seeking to be a thorn in the side of the Jovian regime. If Jovian media feeds are to be believed, JAC members are regularly arrested and imprisoned. The JAC makes a great bogeyman for propaganda purposes, something the anarchists willingly embrace. Their logo, an impish figure holding a candle to a burning Jovian Republic flag, is a common—if temporary—sight on spray-bombed habitat walls, along with the slogan "JAC up the Junta!"

## LOUIS LINGG'S WORDS

I repeat that I am the enemy of the "order"of today, and I repeat that, with all my powers, so long as breath remains in me, I shall combat it. I declare again, frankly and openly, that I am in favor of using force. I have told Captain Schaack, and I stand by it ,"if you cannonade us, we shall dynamite you." You laugh! Perhaps you think, "you'll throw no more bombs;" but let me assure you I die happy on the gallows, so confident am I that the hundreds and thousands to whom I have spoken will remember my words; and when you shall have hanged us, then—mark my words—they will do the bomb throwing! In this hope do I say to you: I despise you. I despise your order, your laws, your force-propped authority. Hang me for it! ■

### Lingg's Words

Another insurrectionist network like CRAM, but smaller and with far less local involvement, Lingg's Words is an insurrectionist cadre cell network active around the solar system. The Words, however, focus on fighting battles that aren't being fought by anyone else, especially in situations where the anarchists can take risks that local oppressed populations cannot. They target the corporations, government officials, and military assets they consider to be the most oppressive or an active threat to anarchist holdings. Though less numerous and active than CRAM, Words cells have pulled off a number of devastating attacks and pioneered the modern tactic of fork "suicide" bombing. Citing the ubiquity of backups, they have no qualms with collateral damage.

### Love and Rage

The guardians of the Fissure Gate, this group works extensively with the autonomist Fissure Gate Task Force to expand anarchist/autonomist exoplanet operations.

### Sabaté Swarm

Though there is no official anarchist space naval force, the Sabaté Swarm is the next best thing. Effectively a volunteer militia of anarchist spacecraft crews, drone operators, and sensor specialists, the swarm stands ready to be called into action should an anarchist colony come under attack. Lacking a centralized organization, the swarm adheres to Tielhard Liu's Doctrines for its space combat strategy and tactics. Among their ranks are a few military ships that survived the Fall, with their crews either mutineering afterwards or simply finding themselves without a government to serve. More recently, a group of AGIs defected from their work in a Starware shipyard in the Belt, bringing a recently constructed frigate with them

to join the swarm. Observers are still watching to see if Starware will attempt to repossess their ship.

### Zerzan's Brood

The most famous bioconservative anarcho-primitivist tribe, this group has claimed responsibility for a number of attacks on nanotech facilities, mesh servers, and bio labs. They have stated their hatred of all things technological and seem willing to target anarchist scientists and engineers just as quickly as hypercapitalist ones.

## Anarchist Views on Others

Broadly speaking, most anarchists are friendly but critical of the other autonomists—with the exception of the non-mutualist Extropians, who are widely loathed. The Titanians are considered a benevolent neighbor that needs to be watched closely lest they turn. The scum are kin in spirit, though their hedonistic ways and lack of organization and accountability are critiqued. The mutualists are viewed positively, if quaintly. Most anarchists consider the term anarcho-capitalist to be an oxymoron, believing capitalism to be inherently oppressive.

Outside of the Alliance, most anarchists take no issue with the rank-and-file populations of other polities, unless they happen to be conservative or bigoted. The leaders, officials, and elites of these other factions are viewed as parasites that eventually must be removed if transhumanity is ever to be completely equal and free.

# Extropians

**Posted by:** Mizar Alcor,
Firewall Sentinel <Info Msg Rep>

Let's face facts. Most of the other members of the Autonomist Alliance don't like us much and, honestly, we're none too fond of y'all either. For the most part you see us as capitalistic sleazebags who'd sell our own mothers for a cut in a high yield mining operation. Yeah, there are certainly some Extropians who are like that. In general, though, we prefer to see ourselves as realists, people who recognize that neither the flawed hypercapitalism of the inner system nor the foolishly optimistic collectives of the anarchists really work. Instead, we like to think of ourselves as exploring a more pure form of capitalism, a truly free market that also has a care for the happiness of people and is not solely built upon the assumption that for some to profit others must suffer. The degree to which happiness, self-determination, and lack of suffering are stressed express themselves in slight differences internal to our faction. The fact of the matter is that we have a long tradition of philosophical debate regarding these matters, so it's natural that this history expresses itself even internally and despite the advances we've made.

## The First Transhumanists

While author FM-2030 may have been the first to really identify the concepts behind transhumanism, it was Dr. Max More who defined the term and created an ongoing dialogue with others through his Extropy Institute, mailing list, magazine, and conferences. Dr. More defined "extropy" as the opposite of entropy, or "the extent of a living or organizational system's intelligence, functional order, vitality, energy, life, experience, and capacity and drive for improvement and growth." Early extropians developed a futuristic outlook based on the proactionary principle, emphasized rational thinking and optimism, and were acutely interested in the possibilities of life extension, AI, nanotechnology, cryonics, space exploration, robotics, uploading, and more. The vast majority of these early transhumanists held a libertarian or anarcho-capitalist political viewpoint, though the transhumanist movement soon expanded and developed a more technoprogressive agenda.

Among the hypercapitalist CEOs and management who pushed our species' expansion into space were a number of self-described libertarian transhumanists. A dedicated group of these idealists, including prominent libertarian billionaires Hayek Taggart and Petra Thiel, united forces and established a new corporation, Extropy Now, with the explicit intent of establishing the first independent outpost in the solar system. Diverting many of their personal assets, they staked a homesteading claim on the asteroid 44 Nysa, previously mined and recently abandoned by Triple Peaks Prospecting, one of Taggart's many Belt resource exploitation ventures. Naming it Extropia, in honor of those early thinkers and activists, they established a society that operated entirely on a free market basis with interactions mediated by social contracts. Over time, numerous other Extropian outposts were founded. Extropia remains the largest, and to this day serves as an ideological neutral zone between the inner and outer system factions.

## Extropian Factions

While Extropianism continues to be dominated by libertarian-minded folk, there are a number of smaller factions that are deserving of note.

### Anarcho-Capitalists

The dominant libertarian/anarcho-capitalist tendency among Extropians has a few central tenets. First, it is opposed to government intervention (as well as collectivist systems, which they claim defy individual liberties). In their view, the free market is the ultimate self-guiding force. Rather than taxation, social services are provided by voluntarily-funded competitive businesses. Laws are replaced by private legal services that regulate social and economic activity. Anarcho-capitalists embrace the non-aggression principle, which states that any sort of threats or violence against another violates that person's right to self-determination.

Though left-wing on economics and government, many anarcho-capitalists swing to the right on social issues. The prejudices against AGIs and uplifts, for example, are common among libertarians, as are views on forking.

### Mutualists

Also known as free market anarchists, mutualists hold the strange position of being pro-free market but anti-capitalist. Ideologically, most mutualists are closer to anarcho-communists than anarcho-capitalists, except that they believe in private property and money. They oppose the monopoly that banking systems have on issuing credit and the way banks profit by charging loan interest on money that never belonged to the bank in the first place. The core of their system relies on mutualist cooperative banks. These banks are owned by their customers, with each person having an equal share and one vote. These banks issue an alternative currency called mutual credits (m-credits). M-credits are created and issued for each transaction—essentially acting as an interest-free loan. Most mutualist banks place a cap on how low a negative balance can go, to ensure that no one runs one up and then leaves; those that leave a negative balance for too long are also likely to suffer a reputation hit. These banks exchange m-credits for regular credits on a 1:1 basis, enabling the mutualists to interact with the larger Extropian economy.

Mutualists tend to act as intermediaries between libertarian Extropians and collectivist anarchists. Mutualist banks often work deals with anarchists who need credit in exchange for rep, favors, or other resources. Likewise, mutualists often broker deals between Extropians and anarchist habitats. As a rule of thumb, they often refuse to work with non-Extropian capitalists. Mutualist collectives often operate free clinics on Extropian habitats for those who are down on their luck.

### Objectivists

If there's one group within the Extropians that even most Extropians don't like, it's the objectivists. Taking self-interest to extremes, they often rub most people the wrong way due to the fact that their brand of libertarian philosophy stresses extreme self-interest and seems to encourage the active screwing over of anyone and everyone.

An objectivist will tell you that they're simply doing whatever makes them happiest; unfortunately, this means their happiness often comes at the expense of others, making them hard to get along with. Perhaps unsurprisingly, objectivists don't tend to find themselves outside of Extropia or the inner system. The reputation-based habitats do them no favors and they tend to find the very idea of a reputation-based economy that depends upon cooperation and community values to be offensive.

Within Extropia, the objectivists are often pushing for closer ties with the inner system powers and expanded hypercorp involvement on Extropia. They also maintain quite good contacts with the ultimates, seeing them as slightly misguided fellow travelers.

### Utilitarians

Not to be too biased here, but as someone with utilitarian tendencies I tend to think we get it the most right when it comes to the particular combination of liberty, determination, and happiness. The way we see it is that our natural inclination is towards trade and exchange, barter and competition. We do what we can to maximize our pleasure while limiting pain, making these decisions along rational lines based upon our experiences. Trying to suppress our natural rational interest in pleasure and happiness, whether with talk of collectives and sharing or forcing others to serve our will against their own, violates our natural desires and inclinations.

Utilitarians would never consider forcing our will upon others, so we tend towards a policy of neutrality when it comes to both our anarchist cousins and the hypercorporate robber barons. Our sympathies do tend to ally us more towards the anarchists, however, since we see them as merely deluded in their assumptions about human nature. The hypercapitalists on the other hand are well aware that they are robbing others of their natural rights to self-determination and happiness but seem to care not at all. They are the sorts that give capitalists a bad name, so we hope that by allying ourselves with the Autonomist Alliance we can gently influence others by our example.

### Isolationists

The loners of our little crew are happiest when they are left alone and allowed to do what they want. Probably the most libertarian in the traditional sense of the word, all they want is to be left alone to do whatever their little hearts desire. Of course, this can often mean dangerous acts that put others at risk, but that pretty accurately sums up daily life on Extropia. Among the Extropians, they are most often silent on internal matters, preferring to settle business with a minimum of fuss. The one area they do feel strongly about is our membership in the Alliance—they argue that we should abandon it and go on our own. Similarly, many also argue for their own Extropian currency that is separate from the credit of the inner system.

## Contract Economics and Security

Similar to anarchist habitats, we Extropians have no government, no police, and no laws. We are not collectivists, however. Central to our philosophy is the sanctity of self-ownership and private property. Everyone owns themselves and what they make. Along with this is the right of original appropriation. You may

occupy any place that is not already occupied and in use by another, and you may transform it as you wish.

The foundation of our society is one of free contracts. Individuals are free to enter into any contractual agreements that they see fit, as long as all parties are participating voluntarily and without coercion. Social services that would normally be provided by a government (in capitalist polities) or available to all (in anarchist zones) are instead handled as contractual business arrangements, facilitated by the free market. Insurance, healthcare, education, protection, transportation, backups, and just about everything else are privatized and available at market-determined prices. Many other aspects of life, from social relations to employment, are also handled as contracts.

At the core of this system are free-market legal systems and private courts. Every contract specifies the legal code by which the signatory bodies agree to abide and the courts to which they grant judiciary authority.

This state of affairs is sometimes confusing to non-Extropians, so let me give you a few tips. The first thing anyone should do upon arriving at an Extropian habitat (preferably before you step foot upon it) is subscribe to a private legal service. This policy will protect you from torts (damage claims) and other legal matters. If you dent someone's bot, steal their maker, shoot their dog, get shot by them, or break a contract, your private court and their private court will get together and pass a judgment settlement that both of you are expected to observe.

Easy, right? Well, that's just the legal side. You also want to make sure you protect your ass with private security, health emergency, and backup coverage. Our entry portals are bombarded with AR adverts offering all manner of services, but your best bet is to do some online research and contact a provider with a good rep. You also want to score a provider with complete coverage. While most security and emergency services have quick-response drone silos all over a hab, on larger habitats you sometimes find smaller or newer services that only cover a specific neighborhood.

## PRIVATE JUDICIARIES

Each Extropian habitat has a number of commercial legal services that may be employed. Each of these private courts has their own legal code, with its own fine interpretations of various aspects of Extropian legal principles, so it's important to pick one in line with your outlook. They also provide insurance against tort claims and legal damages, which is usually the largest expense—spurious micro-torts are a common and notorious hazard in Extropian spaces.

Almost all judgments handled by a free court are facilitated by an AI (and sometimes AGI or infomorph). Given that most legal proceedings take place via the mesh, micro-torts are typically handled in a matter of seconds with longer criminal charges taking only as much time as evidence acquisition and discovery entails.

Most freelance judiciaries are part of larger legal associations such as the Extropian Legal Guild, the Free Bar Association, or the Mutualist Code. The law firms in these organizations usually adhere to the same legal code, though some participants hold their own distinct judicial viewpoints on certain matters. These groups also have pre-set arrangements with each other for handling common legal disputes and different interpretations. This makes it an easy matter to resolve cases even when two parties subscribe to different free courts.

As always, a few exceptions exist. Some private judges have rather esoteric takes on some legal matters. Though amicable resolutions with other courts are usually made, it sometimes takes longer and may rely more heavily on an individual's rep. A few outlier law firms exist that refuse to recognize any legal codes but their own. This can be problematic in arbitration, as Extropian custom is that both individuals must voluntarily agree to a court's authority; and some jerks just refuse to recognize any but their own. The private court Evolutionary Apex, for example, refuses to grant legal recognition to uplifts, and so draws a biochauvinist customer base. Hardliners like this usually find their reps take a hit if they push it too far.

Legal conflicts are typically resolved with financial restitution penalties and an accompanying rep score slap. More serious matters can result in forfeiture of property. Extreme crimes (brainhacking, torture) can result in indentured servitude, exile, or even time in a virtual prison. This latter option is rare, but several private prison concerns have contracts with legal services on the larger Extropian stations.

If one party in a legal arbitration refuses the judgment settlement, all bets are off. Most private courts and security contractors will refuse to protect a client or property that has an outstanding judicial order against it. Legal services will subcontract with a bounty hunter and authorize an arrest or property seizure. Even if the subject flees the habitat, they may find themselves hunted if the penalty is severe enough.

## SECURITY CONTRACTORS

On Extropian colonies, security services are your private police force. In addition to being on call via the mesh, the better contractors have security bot nests strategically placed around a habitat, able to respond to an emergency within minutes or even seconds. There are no limitations on the firepower these services can deploy, though they are of course liable for collateral damage. If you're wealthy, can afford the premiums, and don't mind being buried in post-incident litigation, however, some services offer protection plans that will literally hold nothing back in your defense.

Extropian habs are actually fairly safe—we do follow the non-aggression principle after all—but if you start wreaking havoc, you can bet someone will return fire.




We absolutely believe in self-defense. Most security contracts have a provision that enables other customers of that service to come to your aid if you are attacked. Mess with one person, and you might quickly have a whole armed neighborhood after you, on top of the security bots. Sure, you can try to bury any posse interventionists with torts later, but unless you have a god-like judicial AI on your side, you are unlikely to have any luck with that.

In addition to reactive protection, most security providers will investigate any harm done to your person or property after the fact. This includes seeking retribution in conjunction with your private court.

Word to the wise: it's dangerous to go without a security policy. A few criminal gangs are known to scan visitors to Extropian habs and target those who they determine lack protection.

## Emergency Medical/Repair Services

The last thing you want is to end up bleeding out in some back alley with no medical services on call—though you can usually arrange a contract quickly in an emergency, why take the risk? If you get incapacitated or killed and haven't arranged for someone to look after you, you better hope a good samaritan comes along, otherwise your corpse will simply get scavenged by whomever finds it. In some cases unclaimed bodies/possessions are remanded to a judiciary service that will hold you for a short period to see if anyone wants to claim your stack/possessions (for a fee, of course), before they simply liquidate you and your stuff or return it back to the finder.

## Employment Contracts

In Extropian stations, anyone is free to sell the fruits of their physical or intellectual labor. Everyone is a freelancer. Work services are almost always contracted with specific terms and conditions laid out. Depending on market conditions, employment benefits can range from almost nothing to substantial.

Some contracts are essentially equivalent to indentured servitude. Though rare, these are sometimes embraced by individuals in serious debt or in need of large sums of money. Some indentures result from contract violations, as settled by private courts. Other autonomists—particularly anarchists—are highly critical of these forms of voluntary slavery. Most fail to see that indentures still have legal protections as outlined in their contract. Plus, that whole voluntary part.

## Free Banking

Extropian banks—and even individuals and businesses, for that matter—often issue their own currency, backed by whatever standard they choose to put forth (qubit distribution being primary, with the Planetary Exchange, energy credits, antimatter production, and others sometimes used). The amount of different micro-currencies currently active within our habitats can be staggering. Thankfully, our AIs excel at exchange rate calculations, making transactions mostly seamless. Occasionally, however, you may run across a currency that does not exchange well in the local environment or has been suddenly and catastrophically devalued, so be careful what you trade in.

## OUTLAW ECONOMICS

The Consortium and inner system polities portray Extropian stations as hotbeds of criminal activity. From their point of view, this is certainly justified. Violation of intellectual property rights is a major concern to transitional economy hypercorps, and they go to great lengths to mitigate piracy and counterfeiting. Extropians not only take the opposite view, but they actively protect and promote IP infringement. Numerous Extropian individuals and corporations cooperate and work with groups that are outlawed in many inner system habitats. Reverse-engineering and counterfeit goods minifacturing are successful business models, as are the smuggling operations that get these products into inner system habs.

The shadiness attributed to the Extropians also extends from their willingness to trade in markets that are considered black or gray. Arms, drugs, narcoalgorithms, hacking software, AGI programming, pod manufacturing, questionable genetic mods—these are commonly produced in Extropian freeholds, far from legal restrictions that would make them economically unfeasible. This alone would not be a problem for the inner system, except that these products have an unnerving way of finding their way into distribution channels across the sunward planets. ■

### INTELLECTUAL PROPERTY

Anarcho-capitalists have some stringent disagreements about copyright and patents at times, but the current trend prevalent in most of our habitats opposes them as stifling to innovation. This means that you are unlikely to come across a legal service that attempts to enforce IP controls, though there are some stations that are exceptions to this rule. For businesses, this means they must be on the ball to properly exploit their new developments before some leaner and more eager contender tries to steal their thunder.

The IP issue is one of the main stumbling blocks that keeps many non-Extropian hypercorps from doing business on our habitats. Ventures based on piracy are rampant in our colonies, and the inner system oligarchs fume about our unwillingness to place controls on these activities. Many inner system criminal cartels specifically take advantage of Extropian environments to facilitate their counterfeiting and piracy operations, hosting them where the hypercorps cannot reach them.

### RUNNING THE HABITATS

One question that arises about Extropian holdings is: who handles the essential habitat functions that normally fall under the purview of government authorities or communal control? Specifically, who owns the habitat itself, who runs life support, manages space defense systems, maintains the hull, and so on?

Most Extropian habitats follow the model established by Extropy Now when it founded Extropia. Technically speaking, Extropy Now claims ownership of 44 Nysa and simply rents space and air to those that live there. It manages the habitat itself, charging a moderate rent to any individuals and companies that use space within for housing, business, or other purposes. Visitors are also charged a minor entrance fee, covering 3 months of these services, and repeatedly billed on a monthly basis if they stay longer. To avoid claims of holding government or monopoly control over the habitat, Extropy Now's charter and rental agreements ensure viable living conditions and habitat security for a century. Furthermore, the charter places a lien against the company's other assets should Extropy Now fail to meet its commitments to the habitat denizens. On top of that, the majority of the habitat maintenance and life support services are contracted out to other businesses. This has served to create a stable free market environment with enough trust to draw other anarcho-capitalists to the colony.

Numerous variations on this rental model exist across the solar system, with one or multiple corporations contracting for the necessary services. In a few isolated cases, the habitat is owned outright by a single individual rather than a business entity.

### NOTABLE EXTROPIANS

Whereas anarchists downplay figureheads and leaders, we Extropians recognize the success and influence of some of our more prominent citizens.

#### HAVEK TAGGART

Taggart comes from an old-school industrial dynasty on Earth. His family made billions in oil extraction and refinement operations. They were often vilified for their involvement in environmental damage while they poured money into the coffers of lobbyist groups and think tanks that denied climate change and fought against industry regulations and eco protections. Taggart left these industries—and the world they poisoned—behind, becoming an early entrant in the field of asteroid mining and one of the first of the hyper-elites to own his own private habitat (a small Cole bubble, still operational in Earth orbit). Raising his already massive wealth to staggering levels, Taggart continued to fund libertarian groups and opposition to restrictions of offworld hypercorp operations.

After a falling out and protracted legal battle with his brother, Charles, Taggart teamed up with Petra Thiel to fund Extropy Now. Though Taggart has played a prominent financial role in Extropia's founding, he has left Thiel to take much of the spotlight. Taggart continues to be involved in business affairs throughout the solar system, though he takes care to avoid any public involvement. Both anarcho- and hyper-capitalists criticize Taggart for playing both sides of the fence, while others consider this a wise move. He is believed to reside in a private station elsewhere in the Main Belt.

### Petra Thiel

A venture capitalist and hedge fund manager, Thiel invested in numerous hypercorp start-ups and played a key role in expanding transhumanity's presence in the solar system as well as capitalizing on breakthroughs in various transhumanist technologies. After founding Extropy Now, Thiel brought in other investors and hatched the plan to establish Extropia.

Thiel has infamously claimed that the inner system is a lost cause, pulling most of her investments from non-Extropian corps (burning several bridges with former hyperelite allies) and increasing her stakes in numerous Extropian technology corporations. She has recently taken an active interest in extrasolar exploration, but remains a visible figurehead and active participant in Extropia's affairs. She has raised some controversy by claiming that the male sex is no longer needed in transhuman society, arguing that male aggression and patriarchal tendencies are a detriment to our continued development as a species. She also regularly criticizes other autonomist tendencies and has had several heated public arguments with Carson Tucker about the uselessness of being part of the Autonomist Alliance.

### Carson Tucker

For many decades before the Fall, Carson Tucker was the preeminent mutualist philosopher and economist, laying the intellectual groundwork for how a free market society would work. Seeing an opportunity with the founding of Extropia, Tucker convinced a sizable number of mutualists to emigrate there, establishing free market anarchist enclaves alongside the growing anarcho-capitalist capital. Despite ideological differences, Tucker contributed significantly to the core legal foundation upon which most free courts base their judicial codes. He was also influential in gathering widespread Extropian support for the Autonomist Alliance, despite some vicious public debates with Thiel and other prominent anarcho-capitalists that oppose it. He remains vocal and active in Extropian matters, though he is considered somewhat of a firebrand by his libertarian peers for his continual memetic assault on the shortcomings of capitalism.

## Extropian Corporations

Most Extropian legal philosophy is based on the sovereignty of the individual. Corporations are legal entities, but only so far as they are a contractually bound association of individuals that have pooled their capital. Corporations have no legal protections from torts or other special privileges; any damages assigned are applicable to all of the individuals that own/comprise the corporation, according to the terms of their contract.

The lack of legal and IP protection scares off most non-Extropian hypercorps from conducting business on Extropian habs—leaving some markets ripe for expansion. On the other hand, the risks are considered worth it as a trade-off for the lack of taxation and freedom from restrictive legislation found in some other polities.

### Extropy Now

The hypercorp behind the formation of Extropia and the de facto owner of 44 Nysa, EN's primary purpose is to maintain, protect, and profit from the habitat. Rumors indicate that EN is currently looking toward establishing a new major Extropian settlement on an extrasolar world, though it remains unclear what gate would be used to connect or if a location has already been chosen.

### Gorgon Defense Systems

Gorgon began as an Israeli-South African arms venture that later profited heavily from providing "collision defense" systems to other hypercorps for spacecraft and habitats, allegedly to protect against meteors. One of the initial businesses to assume residence on Extropia, the corporation quickly moved their headquarters there (and made sure to arm it well). Before the Fall was even over, Gorgon was offering service contracts to suddenly leaderless military units and quickly snapping up physical military assets on the cheap. They have since established arms factories, shipyards, storage depots, and training facilities across the solar system. While their gear and personnel are solid, their pricing is often undercut by sleeker competitors.

Gorgon's Medusan Shield subsidiary is likely the most widespread private security contractor across the far-flung Extropian stations.

### InSec

Despite a low public profile, InSec has a notorious reputation as one of the most productive zero-day exploit vendors. InSec contracts with several teams of highly skilled hackers—many of them infomorphs—to research and find previously unknown and unpatched software vulnerabilities, which it then sells off to governments and corporations at premium rates (currently starting at 100,000 credits and going up, depending on the particular exploit). Critics decry this service as helping authoritarian regimes oppress

their populations, not to mention increasing overall mesh insecurity by not reporting software flaws to be patched.

### Mutual Credit

Mutual Credit is the largest mutualist bank, with over 150,000 customer-owners. This bank recently suffered a massive and nearly-devastating assault on its computer systems that would have crippled it had they not had top-notch backup and security practices. Though no one has claimed responsibility for the assault, some claim it was an attempt to undermine support for mutualist practices. If true, the attack has had the opposite result, as the mutualist movement has rallied support behind one of their most important institutions.

### Privateer Print

Privateer is brazenly open about their business model: breaking the encryption on trademarked blueprints sold by Consortium corps and reselling them for cheap to everyone else. Sporting the jolly roger in their logo, Privateer contracts several top-notch cryptographers, codebreakers, and programmers. Some cracked designs are sold publicly, others are sold direct to other hypercorps or criminal cartels to minifacture counterfeit goods. Several inner system corporations and business associations have singled out Privateer as the flagship for pirate and counterfeiting activities, declaring war on the Extropian corp. Privateer offices have regularly suffered viral mesh attacks, direct physical sabotage, and even two cases of cognitive nanoviruses targeting their core staff.

### Scrye

This software-driven data intelligence firm is a descendant of one of Thiel's earlier corporate ventures in integrating and analyzing massive data sets. That particular project, contracted by several governments and corporations for data mining and intelligence purposes, was co-opted by the TITANs during the Fall, who used its resources against Earth's population. According to some insider accounts, Scrye makes use of numerous breakthrough techniques copied from the TITANs, particularly in the way of predictive analytics, though the hypercorp publicly denies this. Scrye is currently contracted with a number of Extropian corps to keep a close eye on the finances, resources, and activities of their inner system hypercorp rivals.

### Skinthetic

Skinthetic is known for their cutting-edge and unusual morph designs, particularly those that push the boundaries of taste and utility. Lesser known is the fact that Skinthetic employment contracts are harsh even by Extropian standards—their genehackers are typically bound to lengthy employment periods, virtually isolated working conditions, and strict non-disclosure and no compete clauses. On the other hand, Skinthetic design labs are considered one of the most creative and intense places a biogenetecist can work, and the genetic archives at their disposal are massive, so the trade-off is often considered worth it.

## Extropian Views on Others

Extropians believe that both the hypercapitalists and the other autonomists restrict freedom. In our view, the hypercapitalists do not practice true free trade, and their governments are based on force and lies. The collectivists, however, also impinge on individual freedom by abolishing property and requiring everyone to make sacrifices to the collective. The exception to these views are the mutualists, who are more akin to anarchists in their perceptions of others.

# Scum

**Posted by:** Spam del Psycho,
Scum Engineer <Info Msg Rep>

We scum are the x-factor of the Alliance. Primarily anarchist in character, our politics lean more towards individualism. We take more of an anything-goes, fuck-'em-if-they-can't-take-a-joke attitude towards life, the universe, and … well, just about everything. Internally, we are probably more fractious and conflicting than any of the other autonomist factions. We rarely pose our own Joint Resolutions, though we've supported most of those raised by others.

Among the autonomists, we scum enjoy a rather unique position. Like the Extropians, we are a bridge between the outer and inner system. Where the Extropians are more of a gateway between cultures, however, many of our scum flotillas spend months or years traveling the inner system, hopping from habitat to habitat. This gives us a unique perspective not shared by the rest of the Alliance members. It's not just the sunward part of the system that we wander, either—we have more direct contact with other factions than probably any other. Because we often operate outside of official channels, we also get glimpses into the inner workings of many habitats and cultures that no other outsiders come close to. A lot of people think the scum are losers, but they have no idea how much dirt we've collected on the rest of you.

## Growing in the Cracks

The scum have been around since well before the Fall. Our roots stem from the very first group of orbital workers that decided they didn't want to go back down the gravity well when their contract was up, but they didn't want to work their asses off for some crappy corp gig neither. These scrappy types found a way to survive in the niches of Earth orbit's booming space economy, usually by freelancing odd jobs and scavenging anything they could get their mitts on.

Given the restrictions a lot of the corps put on gear taken into orbit, a black market economy was inevitable. Some of them got ahold of their own spacecraft, others set up their own hideaways—which eventually drew others. As we expanded outwards, these drifters, itinerants, smugglers, and wanderers followed. Before long, we had space crusty punks, homeless vagabonds, and cut-throat opportunists wandering all over the solar system—just because they could.

Our defining moment came just a few years before the Fall. A group of 20 or so indentured Chinese vacworkers—all former convicts—were simply abandoned out in the Belt. The asteroid they were left on was mined out, the valuable equipment already lifted away, and the corp that owned them simply decided they weren't worth the fuel mass to pick up and relocate. They weren't even left a fabber to survive on. Lucky for them, a small drifter ship stopped by right about the point they were getting ready to murder each other for the last few days' worth of food. The drifters strained their own life support resources to haul the vacworkers to the next nearest mining operation—a two-week, hellish trip. When they arrived, the manager in charge flat refused to let them in, infamously proclaiming "I will not let you scum on board!" The numerous miners underneath him—many of whom were itinerant vacworkers—took one look at each other and shoved the manager out the airlock. The manager's recorded message, and the story along with it, went viral among workers and wanderers throughout the solar system. The scum meme stuck, and before long, drifters everywhere were using the term for themselves among their own kind. Soon, everyone was using it.

When the Fall came, we scum stepped in and pulled our weight when it came to getting people off Earth. We were already experts at MacGyvering space ships, habitats, and functional systems out of whatever was available. If it weren't for our help and expertise, thousands would have fallen back into the atmo when their engines failed or suffocated in space. Our ranks were also swelled by the massive amount of refugees. Entire ships full of survivors were being denied entry to every habitat they went to—some habs went so far as to destroy those that attempted to dock anyway. With nowhere else to go, thousands had no choice but to group together, share what meager resources they had, and wander about scrounging for more. Anything that could be converted into living space—ship wrecks, pieces of shattered habitats, discarded fuel tanks or supply modules—was salvaged, converted, and attached to a tug for towing. Many ship crews also found that the governments or CEOs they had formally worked for no longer existed; these too drifted aimlessly.

Over time, these refugees accumulated into a number of swarms. Many were already accompanied by self-identified scum, and soon they too were integrated into our nomadic lifestyle. Others simply adapted to the times, and through frequent contact with other scum travelers, transformed into scum on their own. Today there are hundreds of scum flotillas around the solar system—no one can say for sure how many. Dozens of these are huge, with hundreds of ships. Many others are small, composed of simply a dozen or so.

## SCUM SOCIETY

Scum society is best described as tribal, with each ship crew an individual tribe. On larger ships or LaFrance rigs, the population tends to be divided among different groups much like families or clans. Though anarchistic, we are not as collectivist-minded. We are egoists that pursue relationships that are in our personal self-interest, and we abandon them when they no longer suit us. The communalist obsession with organization is far too stiff, static, and formal for our affairs. We live for ourselves, in the now, without rules that require sacrifices or bind us to others. Among our kind, we don't tolerate bullies, despots, or anyone that wants to control others, but beyond that, it's each for their own.

The various tribes, crews, clans, families, and other groups are tied together by common interests, and sometimes by blood. Our social systems are otherwise ad hoc. Many crews elect a leader, but their authority rests on their ability to convince the others to respect it. Others will operate collectively, but only as long as we have a common purpose. We tend not to waste too much time hashing out disputes. If they can't be settled by heated words or spilled blood, we move on. Reputation handles the rest.

There are some things that no scum will tolerate. Coercion. Mental manipulation. Torture. Rape. Brain hacking. Slavery. These are offenses that will get you airlocked, and no one is likely to bother with your backup.

## GONZO LIFE

When you're living a meter from vacuum with limited resources and surviving on your wits and chutzpah, you gain a solid appreciation for the good things in life. In fact, you live the fuck out of your life, because your homeworld just got overrun by machines and you might pick up a brain-melting nanoplague tomorrow. Plus there are these nifty mind-bending drugs and wares available from your neighbor, the "clinic" down the corridor will do almost anything you want to your body, just to see if they can, and the morph you're sporting makes almost everyone around want to have sex with you—quite possibly at once.

Body modification is one of the hallmarks of scum culture. Remember that many of our early trailblazers were corporate indentures, often convicts. Bad prison tattoos of the non-nano variety were a common sight, and many original scum still keep them as a badge of honor. The liberty to adorn our bodies as we pleased came hand in hand with the freedom we granted

ourselves to roam and live apart from authority and mainstream society. Morphological alterations for living in micrograv were common and useful—and why stop there? As our collective resources grew, the options for modifying ourselves increased. Extreme and unusual body-mods became a source of pride, a rejection of the bland, lifeless, consumer-focused corpse of a society we all came from. What was taboo or poor taste in sterile corporate habs became celebrated in our swarms. You didn't need to be a skilled genehacker to modify a morph on our ships, you just experimented. If it failed, you went back in the vat and tried again. We embraced individuality and diversity, goaded each other towards more extremes, pushed the available technologies to the limit. What most outsiders don't realize is how much of our efforts are focused not on resleeving into new exotic morphs (though this is, of course, explored ad nauseam), but on modding the skins we have. Because many of us were refugees from Earth and we do much of our traveling the old-fashioned way (without egocasting), a surprising number of us scum still have our original bodies—though you might not guess from looking at them.

We didn't stop with our bodies. Our minds are just as fair game. Mental adjustment is a far trickier prospect, however, too dangerous to play with as a hobby, unless you really enjoying cranking through forks. Skilled psychosurgeons have a hallowed place in our ranks, they are our shamans, our priests. Along with them come the chemists, programmers, and assorted drug-dealers that provide the tools for altering our minds and expanding our perceptions. Finding new ways to get high and new ways to experience the world is our culture's favorite participatory sport.

Our libertine attitudes are enmeshed in all aspects of our society. The way we live together, fuck each other, communicate, socialize, play, and work—all are open to experimentation. Everything is possible, nothing is prohibited. Cross-species relationships? Mass forking? Group orgies? Male pregnancies? Vacuum raves? Consensual multi-ego merging? Indescribable fetishes? You'll find it all, and more.

Can't you wait to dive in?

## Scum Economics

Among our swarms and tribes, we do not use money. Most basic resources are public and shared. People keep private property in varying degrees. As a unit, however, we watch out for each other. No one starves, no one dies from want or suffers from lack of aid or attention. Like other autonomists, one's reputation matters in major dealings.

When it comes to outsiders, we handle things differently. Non-scum must pay us for goods and services, or barter in kind. Because our flotillas survive by trading between habitats, we are always on the lookout for things that will be valuable elsewhere, whether that's a unique piece of art, an illegal weapon, or rare element feedstock for nanofabbers. We supply and serve the black markets that thrive between habitats.

Much of the credits, resources, and favors we gather is turned right back around and spent in ways that benefit the swarm. Repairs, new ships, fuel mass, new tech: we buy what we need and move on.

## Nomadic Dealings

The arrival of a scum swarm in nearby space is cause for celebration or alarm, depending on your point of view. Even—or perhaps especially—in the most conservative and repressed habitats, people look forward to the excitement and culture we bring. Every scum swarm has troops of musicians, performers, artists, and exhibitionists of every stripe conceivable that are always looking for new audiences. We bring the party like no other, and everyone knows it. Even normally isolationist brinker stations welcome us; on the fringe, it's nice to see a crowd of new faces every once in a while.

Even more than the carnivals, our customers relish the goods we bring. New drugs, brainbenders, XP, morphs, bio-mods, pirated blueprints, prototype electronics, bots, weapons, information, and even ships—we have it all. Our services are also in high demand: programming, hacking, psychosurgery, protection, thuggery, companionship, sex, kink play, dwarf tossing; the list is endless. The bureaucrats and officials condemn our "contraband smuggling" and "black markets," but illegality is relative. We have no laws to break and owe allegiance to no authority. Anyone is welcome to do do business with our swarms. Getting whatever you buy back onto your station, past the watchful eyes of your police and overlords, however, is your problem—though we can often help with that too. Truth be told, many habitats turn a blind eye to traffic to and from our fleets; we provide a much-needed safety valve for societal pressures, after all. The people in power also find us useful for their own purposes, so they are willing to keep security lax to deter eyes on their own affairs. Each colony is different, of course. For every station with open arms, there is another that goes into extreme lockdown when we come near. The most repressive regimes have too much to lose by letting our kind near their populations. This is why no swarms bother to venture near Jovian Republic colonies.

Perhaps the most significant currency we trade in is favors. We scum are fantastic social networkers, and we offer many things that our clients would prefer others not to know about. This allows us to rack up credit with people all over the solar system, which comes quite in handy when we need to bypass certain legalities, cut through red tape, or acquire things of importance for our swarms. It also helps us to recruit people to act as fronts for our interests—in this way we can strike deals via middlemen with the

third party never knowing they were negotiating with the scum.

When a scum fleet enters the regional proximity of a habitat or world, we typically egocast representatives ahead of time to establish contact, set terms, and negotiate events and deals. If officially unwelcome, we will use darknet channels and link up with the colony's more open-minded residents. As the swarm draws nearer, shuttles and small spacecraft begin making trips back and forth, transferring people and physical goods. It is far too costly in fuel terms for our larger ships to actually stop and dock at each habitat, so instead we simply fly by. This usually leaves a window of about a week for craft to easily and economically travel back and forth. For larger worlds and moons or important habitats, the swarm may sometimes enter a parking orbit and stay longer, but usually our visits are brief and intense.

## Traveling with the Scum

Our flotillas offer a chance to travel "off the grid." Though slow, the payoff in anonymity and being able to carry any cargo you like is worth it to many parties. Some passengers simply prefer taking the leisurely road, and the company is good. The nomadic lifestyle is also a great way to experience the solar system and its diversity of habitats.

Getting a lift with a swarm is simply a matter of finding a crew willing to take you on board. If you have skills, be they practical or creative, it is often easy to work your way. Scum are not particularly picky about passengers; new faces are a welcome change. Stiff corporate types, biocons, and ultimates may face a challenge, but even these can usually find a crew that will take their cred. Discretion is customary; no one will pester you about your past or activities, though we love to hear a good tale.

Almost every scum fleet has an overcrowded larger ship or barge-towed LaFrance rig that is open to anyone who can find a way on board. The tricky part is usually finding someplace to sleep and stash your stuff; almost all of the good and comfortable places have long since been claimed. If you're lucky or have a solid rep, you'll score a recently vacated common room berth and a storage locker. Otherwise, you'll be getting used to sleeping with the whine of the air circulation fans or the septic smell of the overworked recycling systems.

It's not uncommon for habitats to dump their unwanted convicts and outcasts on a passing swarm. We take all types, and they usually fit right in. Heck, we sometimes do the same to them.

Cargo shipments are as common as travelers. We'll haul just about anything, for a price, no questions asked. Most fleets have standing arrangements with various cartels, smugglers, and even clandestine hypercorps to move their goods along certain routes.

## Notable Scum Fleets

Scum ships and swarms tend to take names that are more akin to phrases. While each fleet has its own distinct character, a few specific ones are worth mentioning.

### Carnival of the Goat

The flagship for hedonism and creative body switching, the Carnival is known even among the scum for the sexual deviancy of its residents. This swarm has attracted some of the most artistic biosculptors in the system, who compete with each other to devise outlandish and interesting bio-mods. While you can find morphs with two penises or a pair of extra tits on the back in any swarm, the Carnival's bod-modders scoff at such lack of inventiveness, and will point you towards their latest creations with their stream of auto-erotic, self-penetrating, multi-orifice, unending orgasm, and distance ejaculation features. Morphs have been sculpted to enhance and explore

## RED MARKETS

The capitalists have black markets; autonomists have red markets. Given the lack of laws among anarchists, Extropians, and scum, there is no illegal merchandise or services to incite a demand. There are, however, goods and intangibles that are uncommon, unpopular, or proscribed by local custom: experimental technology, bioweapons, secrets, violence, rep network gaming, blackmail material, private sensor nets, ego trading, personal privacy hacks, certain hard drugs, and so on. Since autonomists find many of these things distasteful or threatening, those that trade in red market products do so secretly so as to avoid a backlash, hit to their rep, or worse.

Red markets are often perpetuated by the same cartels that operate in black markets elsewhere. Many red marketeers even conduct their transactions with credits, though favors and simple barter-ing are also used. Guanxi reputation is predominant in red market deals, far more so than @-rep. Most notably, violence—or the threat of violence—is what backs most deals. Bad faith trades almost always result in violent retaliation, rather than more traditional autonomist methods of accountability. Failing to damage those that cross or cheat you is much more likely to hurt your reputation than doublecrossing or cheating someone yourself. ■

almost every conceivable fetish, plus a few inconceivable ones. Carnie scum are prolific resleevers, many trying out a new skin on a daily basis. Some go even further, experimenting with multi-ego cohabitation, ego-merging, and similar mind and body games.

The Carnival circulates primarily through the Main Belt, occasionally veering out towards Mars or the Jovian Trojans. Residents rotate through various leadership positions for the swarm, ensuring that no one accumulates too much authority.

### Fool Me Once ...

Winding a meandering path among the rimward planets, this swarm had a reputation for interest in artificial intelligence, having accepted a sizable number of exiled former AI researchers into their ranks after the Fall. Though many of the scum scientists openly declared their desire to learn from the mistakes in previous AI research, it was clear that others were eager to continue delving into areas that other factions had made illegal or socially unviable. Drawing a number of AGI refugees and singularity seekers to their ships, the fleet had a sudden and disastrous split in their ranks just a year ago—one that left a sizable portion of the fleet disabled or destroyed after serious fighting. The battle saw a third of the survivors leaving the swarm. Rumor is that the exiles have formed their own exhuman outpost in the Neptunian Trojans.

### Get Your Ass to Mars

Endlessly circling between Mars and Titan, flying by a variety of habitats in between, this swarm is known for hosting the yearly Scum Olympics. Scum, spectators, and anyone brave enough to throw in egocast to the fleet for a rotating mix of eclectic games such as hull running, void jumping, keelhauling, micrograv soccer, gangbangs, crowd surfing, fork boxing, mech wrestling, capture the flag, and missile riding.

### Glitter in the Dark

Roaming in the outer system, the Glitter fleet is notable for actually towing a small functional Bernal sphere with them, possibly making it the only scum swarm with a majority of residents that live with gravity. The majority of this swarm's residents are infugees from Indonesia and other former Southeast Asian and Micronesian states, including a sizable number of members of the Bugis tribe, who recognized five gender identities in their culture even before resleeving made fucking with gender notions par for the course. With the Bugis leading the way, the Glitter scum embraced experimentation and have taken exploration of alternative gender and sexual identities to a new level, going further than many other elements of scum and genderqueer anarchist culture.

### Lick Me I'm Delicious

This fleet has the stated goal of visiting every planet, moon, and habitat in the solar system. Having visited a significant percentage of inner system stations, they are now working their way to a few remote outposts before hitting the Martian Trojans. The swarm's founder, Gremlin Jane, has an impressive XP collection of herself posing on the hull or surface of every station they have passed with a black flag in hand.



### There's No Going Back

This flotilla is home to a group of scum called the anachronauts, who attempt to recreate a variety of historical settings or, more accurately, alternative interpretations of these past visions. Each ship is dedicated to a specific theme. For example, the *Gear Knight* recreates Arthurian medieval culture, but with synthmorphs. The *Ronin* explores the days of the Japanese shogunate, but with cyberpunk-noir cybernetics. The *Sassy Wench* is predictably pirate themed, but with only women. Their LaFrance rig, *The Keep on the Borderlands,* is designed as a fantasy RPG dungeon, with the residents taking on roles as specific monster tribes. The anachronauts take their character personas very seriously, and expect visitors to play their roles appropriately.

### Scum View on Others

The scum view towards almost everyone else can be summed up in one sentence: Get the stick out of your ass. The anarchists are generally an OK lot, except when they get all moralistic or get off on one of their collective responsibility riffs. Everyone else needs to drop their hang-ups and their pants and learn how to party. There are too many experiences to be had to waste time on maximizing profits or finding all of the answers. We already have everything we need to live life to the max, all the way until the heat death of the universe.

## Titanians

**Posted by:** Magnus Ming,
Proxy <Info Msg Rep>

I've written extensively on Titan and its history and political makeup for Firewall before, so I will simply summarize the most relevant points here.

The Titanian Commonwealth is the only hierarchical, government entity among the Autonomist Alliance's four main factions. Our technosocialist viewpoint simply holds that a cooperative economy—that is under the direct democratic control of the population, mind you—is the best way to manage social ownership of our resources, and that a duly-elected government and judiciary are more efficient for managing and protecting such a system.

Make no mistake, like other autonomists, we Titanians have learned to be critical of authority and people in power. That is why the legislative branch of our government is controlled by all of us. Every single Titanian is part of the Plurality, and we each have a vote in the decisions that shape our society. All of our decisions are vigorously discussed and debated in the Plurality's online public forums, with votes scheduled several times a week. While we do grant authority to the members of the Ministry, our elected executive branch, their operations are confined by the legislative limits the Plurality places upon them. Our ministerial officials are more equatable to sanctioned bureaucrats than privileged elites; they are not under the influence of money or even political party platforms.

Like our anarchist and scum allies, Titanians largely share resources and everyone has what they need. The difference is that we do have a monetary system, of sorts. Rather than self-organizing into collectives, co-ops, or syndicates as the anarchists do, we Titanians initiate projects as self-organized microcorps. Any Titanian may petition the Plurality to start a microcorp and ask for resources, measured in kroner. Every Titanian working for a microcorp is "paid" a salary in kroner, but the sole purpose of this social currency is to reinvest in other microcorps and other Commonwealth-backed projects. In effect, the productive activity of our society's workers, in total, determines the government budget, and each worker then allocates their share of that budget as they see fit. Thus our society's resource investments are tied directly to the labor and interests of our people.

Unlike our allies, we Titanians have laws—and police and courts that enforce them. As our laws are determined by the direct majority vote of our population, however, they serve our people's interests. We have no rich elites or privileged upper classes to manipulate the legal system and police in support of their agenda.

Despite our differences with other autonomists, we stand solidly behind the Alliance's Points of Unity. The new economy and new society of our rimward alliance is the key to transhumanity's future; we stand united against the conservative and capitalist interests of the old world.

### Military Strength

The Commonwealth is the only Alliance entity with a standing military. Though our naval forces are small compared to what other polities can field, we are certainly capable of playing a decisive role in engagements, as the Second Battle of Locus proved. Though other autonomists are critical of the potential danger of a centralized military force, our populace is understandably cautious about its protection and safety given recent events in transhumanity's past.

### Titanian Views on Others

We Titanians hold the view that we are the bedrock for transhumanity's future. The experimentation of the scum and anarchists has its uses, but eventually we need to get down to actually building a popular and progressive future. In the meantime, the bioconservatives, hypercapitalists, and pseudo-fascists pose an imminent threat that we must be vigilant against. Eventually, most likely sooner rather than later, technological progress will force even more changes to their societies, bringing them on par with our own enlightenment.

# OTHER AUTONOMISTS

**Posted by:** Lucida Parsons,
Firewall Proxy <Info Msg Rep>

Outside of the main factions, there are many smaller groupings that align themselves with the Autonomist Alliance's Points of Unity, ranging from individuals to spaceship crews to groupings of allied habitats. The range of socio-political diversity is actually quite striking, given the intentionally loose spectrum covered by the Points. The rimward edge of the solar system has cultivated a number of political and social experiments, and these continue to grow in number.

Here are a few interesting and notable examples of Alliance supporters that fall outside of the anarchists, Extropians, scum, and Titanians:

## COMMON SENSE NETWORK

This network of small habitats and outposts is scattered throughout the solar system. Each continues to operate as part of the transitional economy, but with a basic income guarantee for their residents. This enables them to interact seamlessly with hypercorps and travelers from transitional or old economy polities, without sacrificing their economic freedom. Common Sense habitats are individually governed by a directly democratic local council, in keeping with autonomist principles. Most of these stations are small enough (usually a few hundred residents or less) that they have a small-town feel.

## NOVO CARAJÁS POPULAR SOCIALISTA

Until recently, this small Cole bubble in the Main Belt was the headquarters of Carajás Mineração e Metalurgia (CMM), a formerly Brazilian asteroid mining hypercorp. CMM was noteworthy for its heavy use of indentures, many of them sleeved into cheap case morphs. CMM had a policy of not giving their indentures freedom, instead offering them the option of relocating to the Carajás bubbleworld to be resleeved into flats, where they continued to slave away as an underclass to the corporate elites. These policies came back to bite them in the ass, and in 9 AF a vanguard group led a communist insurgency in a general strike and revolt, seizing control of the habitat and airlocking the company's board of directors. The colony as well as the corporation's mining operations have been re-organized under communist leadership, with a Three-Year Plan underway to transform everything over completely to the new economy. Though the Carajás Communist Vanguard has proclaimed adherence to the Autonomist Alliance's Points of Unity and pledged to relinquish their authority once their plan is completed, many autonomists are concerned that popular Vanguard Leader Gisele Vargas may decide to extend the plan—and her authority—in a bid to keep power.

## PANARCHIST FEDERATION

The Panarchist Federation is a grouping of eighteen mid-sized and small habitats in the Main Belt, Jovian Trojans, and Neptunian Trojans. The panarchists employ a system where each resident and visitor chooses the government system to which they wish to be bound. Typical choices include Consortium cyberdemocracy, Titanian technosocialism, Queen Xenu's Galactic Monarchy (a local favorite), modern shariah (given a sizable Muslim residency), mutualism, or anarchy, though choices will vary from station to station. Each type of government (or lack thereof) provides protection and other services to its citizens and is considered to functionally overlap in the same jurisdiction with the others. A Political Bureau keeps track of each person's membership and sorts out any jurisdictional conflicts. Though some habitats have naturally evolved enclaves for each of the major government types, they usually intermix.

## STAR CRYPT

This crypto-anarchist venture is the most technically sophisticated and well established data haven in the solar system. No one knows where Star Crypt is located, but it is widely assumed to be hosted on a wandering spaceship, most likely somewhere in the Main belt. Star Crypt utilizes a network of communication link buoys scattered around the solar system to obfuscate its encrypted communication channels. Star Crypt is dedicated to archiving data of all kinds, no matter the source, without censorship. Its databases include an impressive amount of pre-Fall information from Earth, backups of the Mesh Leak archives and similar services, and a constantly growing assortment of other information, from confidential hypercorp files to gatecrashing logs to undeciphered Factor communication intercepts.



# BARSOOMIAN AUTONOMISTS

Some people lump the Barsoomians in with the Alliance. It's certainly convenient for boardroom types on Mars to conflate their primary opponents with each other for equal opportunity mud-slinging. Truth is, the Barsoomian Movement is far too disorganized and umbrella-like to really say. There are plenty of Barsoomians that just want a Mars free from hypercorp control, but that doesn't make them collectivists. Sure, there are some anarchists and others in the Movement that align themselves with the Alliance's Points of Unity and wave the red-and-black flag, but the Movement is far too diverse and varied to go any further than that. The two are on good terms, however, particularly since various Alliance groups make a habit of supplying their Movement friends with material aid. ■

# REPUTATION ECONOMIES

**Posted by:** Lucida Parsons,
Firewall Proxy <Info Msg Rep>

There's a saying on anarchist habitats: "No one is wealthy but everyone is well off." This, along with the liberties granted to uplifts, AGIs, indentures, and other stigmatized populations, is why we continue to grow and prosper. As recently as even forty or fifty years ago anarchists, Extropians, and other radicals were tiny minorities, numbering perhaps a few million egos all together. We lacked the critical mass to make our ideas a reality and to build the kinds of sustainable communities that our past detractors derided as pipe dreams or worse.

It was not as though people were all that better off in the old economies, but there is a certain social inertia to stick with what you know, even if it means living in crushing poverty. Everyone else is doing it, and hey, your neighbor's sister's daughter knows someone who won the lottery just last year and has moved to one of the uptown enclaves, so people do get out of their miserable slums. At least that's what we told ourselves. Plus the anarchists would come through and try to stir people up and all they ever seemed to get for their trouble was jail or shot. It's awfully hard to go against people's natural aversion to getting shot.

When those first few habitats went online out past the Belt, though, the ones with the convicts and crazies and dreamers, they had a chance to put in place something new, something we'd talked about but never really been able to try. Part of it—and sure, the anarchists will try to tell you all of it—was a grand social experiment to test out these ideas in a wild new frontier. But a large part of it was also practical.

Those first habs had no banks, no financial institutions, no money, and no one in the inner system was going to do business with them. What they did have were needs for basic staples at first, and then entertainment and socialization later. So they developed a crude barter economy and welded a social networking platform on top of it to keep track of who was honest and who was a cheat, of what was owed and what had been freely given.

## REPUTATION 101

**Posted by:** Professor Whuffie, Faculty at the Open
Autonomous Teaching Lab <Info Msg Rep>

Right-o, so I've been asked to explain the "new economy" to all you poor degenerates who have been living in the backwards-ass inner system under hypercorp crony capitalism and also for those of you who have just recently been reborn into our brave new world. So, for both groups I have some good news and some bad news.

The good news is you don't need your money anymore, and that your good deeds will be rewarded. Spiffy eh? The bad news? Well, not so bad as it turns out: you'll no longer be able to buy your way out of any old scrape or legal entanglement. If you're an asshole, it has definite repercussions, but since I'm willing to think the best of most people we'll just assume that you're not the sort of people who'd do such things in the first place.

If you're not familiar with our way of doing things, this little primer course should help you avoid any major pitfalls and trashing your rep to the point you're no longer extended life support privileges in a hab.

Now there are several kinds of rep, but for our purposes I'll mostly be talking about @-rep since many, if not most, of the habs out past the Belt use it for determining privileges. A lot of what I have to say applies to other rep networks too, though.

Almost all social networks will quantify your reputation as a fluctuating numerical value. The actual scale used varies from network to network, but the same basic principles apply: when you get positive feedback, your rep score will go up; when you get negative, it will go down. So to build your rep, you want to do things that will get people throwing positive feedback at you and avoid being a dick or otherwise trashing your score. Simple, eh?

## REP: WHAT IS IT GOOD FOR?

Now, right away, you need to purge the idea from your head that your rep score is just another form of currency. This isn't digitized social credit we're talking about here, you don't "spend" your rep score like money. Your rep score is simply a metric by which others will judge you—particularly if they don't know you personally. If you're asking for a favor, looking for info on a mutual acquaintance, claiming an emergency need to jump in line, or asking for use of a collective or community's limited shared resources, your rep score will play a factor when it comes to questions of if, when, and for how long.

Let's get down to the practicalities. If you're in non-Extropian autonomist space (mutualists aside, Extropians are excluded from this example since they normally still use money), most of the basic things you need can be gotten for free, no matter what your rep. Food, clothing, and even basic tools, electronics, and weapons can be acquired from publicly accessible makers, common cafeterias, community storage lockers and warehouses, and upcycling centers. As long as your rep isn't non-existent or so low that people view you with suspicion, no one will bat an eye at you taking what you need. If it looks like you're hoarding or up to no good, though, someone might ask some questions.

Now, if you're in need of something that's beyond a basic, daily need, you can probably still get it, but possibly not right away, especially if it is particularly

complex, unusual, useful, large, or rare. For example, a station's vacsuits are often scheduled for use, pre-reserved by people using them for work or a walk under the stars. Heavy machinery or specialized lab equipment might be in use for an ongoing project, meaning you have to wait until they're done. This usually just means your name goes on the list and you wait your turn—and also that you are expected to pass it on to the next person in an appropriate time frame. For high-demand goods, however, an AI might be assigned to evaluate the weight of each query for use. This is where your rep can matter. If you're a high-rep tech specialist with numerous ongoing projects, odds are you can get away with requisitioning some particular gear more often and far longer than some mid-rep hobbyist who wants to use it on stage for his punk band's next gig. Your rep can also be useful if you want to slip past the queue in these situations. If you're claiming a pressing need, you better have a solid rep to back it up, otherwise people likely won't be too keen on letting you squeeze in out of turn.

Now, you may have heard it said that we're a post-scarcity economy, which is partially correct. We're working on making it completely correct, but for now there are a few things that are in short supply: habitable space, bodies, manufacturing-intense things such as spacecraft, and exotic things like antimatter and qubits. Certain hand-made and artistic works also fall into this category.

As a collective unit, we autonomists have always supported the principle of a body for each mind. That means we aim to let everyone who wants a body to have one. Circumstances matter, however, so this may not always be an immediate thing, nor does it mean you will get the body you want. The way we swing it, everyone gets at least processing space for their ego, so if you're happy being a disembodied infomorph, then no problem. Processing resources are trivial at this point and we can easily and cheaply make more if the need arises. But if you want a body and a place to lay it down at night, you may very well be adding your name to a waiting list. If you want a special or customized morph, that waiting period can stretch even longer.

Now now, all of this sounds much worse than it is. Right now there isn't much of a crunch any more to get a decent morph. Hell, most autonomist habs have racks of splicers, bouncers, and synths on hand for just about anyone, along with common room space for you to crash. The difficulty comes when you want something fancier. See, your everyday ordinary anarchist doesn't have much need for the wild and crazy specialized morphs of the inner system, especially luxury models like sylphs. Getting anything non-standard can be a challenge, particularly if the habitat is small. Specialized morphs are often allocated by a local collective for special duties, so if you're looking for something specific you may have to use your rep to pull some favors. If you're looking for something customized with unusual enhancements, then you're essentially asking a favor from the modders at the local biohacking space, and so are subject to their whims, ongoing project demands, and so forth. Alternatively, you can try and connect with someone that has the morph you want and talk them into switching out for you; again, your rep will matter. This is another reason so many autonomists go for biomorphs with cyberbrain mods, though—makes for quicker and easier resleeving.

One problem the Alliance has is that a lot of folks hear that we are giving away morphs for free, which, in a way, we are. When they pay their last dime to egocast out here, however, they find they're not well suited to the anarchist lifestyle and they can't build up the rep to get sleeved in something they want, so they get pissed off and complain that we're running a scam. Really, all we're doing is making sure the people we rub elbows with every day in our little tin cans are people we know are good neighbors, people we can get along with.

When it comes to other scarce items, well, these things are usually considered the communal property of the local residents. In order to use, borrow, or take it, custom is that you need to convince the locals of your need. This may mean that you need to wait for them to poll through a collective decision, particularly if you're an outsider. This is where your rep will really matter—if you're running in the lower digits, odds are you will get refused. Specifics will of course matter. Plan to bring it back soon? Putting it in harm's way? Using it for a good cause? You may get what you want, but it may come with restrictions. And if you don't follow through on your commitment, you may have a whole habitat come hammering at your rep.

You won't always be relying on your rep for things either—the barter of specialized information, favors, and other intangibles relies heavily on how others view you. This may seem shocking, but if you're the jerk who never helps clean up the hab, never helps your friends move, and is generally known as a lazy lout, you will find that others are less inclined to go out of their way on your behalf.

## Pings and Dings

The bulk of reputation comes from tiny little micro-interactions we all go through on a daily basis: talking to someone in a corridor, sharing a ride in a lift, waiting in line for lunch, or just playing a game over the mesh. All of these are chances for someone to make an impression, either favorable or unfavorable.

For the most part, the vast bulk of our daily interactions go unremarked upon. A few instances each day, however, we make an impression, positive or negative, on someone else. This then gets posted as feedback to our online public profiles. If you do something polite, kind, helpful, creative, or interesting, it may impress someone who decides to ping your profile,



raising your net positive rating by a tiny amount. On the other hand, if you are rude, inconsiderate, lazy, boring, etc., that too may be noticed and your profile may get dinged, which will lower your net rating by a tiny amount. People sometimes intentionally post positive or negative feedback, but usually the process is handled by our muses, which have long been trained to reward or reprimand as appropriate.

The actual process of pinging and dinging is instantaneous via the mesh, with the resulting changes viewable by anyone in real time. You don't actually need to know the person you are affecting, you just need access to their network profile, which most people broadcast publicly. Most networks allow you to anonymously register your up or down vote, partly to avoid retaliatory dings. In theory, this is meant to allow bystanders to reward or punish relatively minor everyday occurrences. The desired effect is to encourage good, polite, rewardable behaviors and curtail the anti-social selfishness and rudeness that is seen as maladaptive to anarchist society.

These everyday rep changes are minor—it takes literally hundreds to make a significant effect on your reputation—but over time they can add up. Obviously the point is that we behave in generally pro-social ways in order to reap the rewards of our good behavior on our reputations, and the threat of negative sanctions should keep all but the most reprobate from acting in a completely antisocial manner.

It's worth noting that each social network has different methods of weighing positive and negative feedback, partly to avoid efforts to game the network. Some allow pings and dings in various levels of severity. The amount of gain or loss inflicted from a single person is usually limited over a certain time period. Likewise, pings and dings from people that are within your close social circles usually carry less weight than people you interact with rarely or never, to counter friendship biases. Networks like Fame rate feedback from high-rep sources more heavily than low-rep ones, in line with their classism and elitism.

Another thing to consider is that in these times, with our constant surveillance and deep but searchable archives, our past history can continue to impact our reputation even years down the line. Those that have provided great public services to the Alliance, and whose deeds have been spread widely, enjoy significant good reputation wherever they may find themselves, even years after the fact. On the flip side, our past errors can often follow us for a long

## GAMING AND GRIEFING

It was inevitable that someone would find a way to exploit and misuse the reputation economies. A range of abuses were in fact expected and controlled for, but an ongoing back and forth continues between social network programmers and various parties interested in undermining the system—particularly when profit is involved.

The most sophisticated rep network attacks involve widespread hacking of member accounts, usually via sophisticated AI-managed botnets. These unsuspecting users are then manipulated into pinging or dinging a target's rep, usually according to an algorithmic scheme that helps avoid detection from the social network's fraud detection AIs. A number of criminal cartels and hacker groups (and more rarely, government/hypercorp spooks such as Stellar Intelligence) run mass infiltration schemes particular for this purpose, even marketing rep boosts towards socialites, public officials, and others that benefit greatly from maintaining high scores. These rep botnets are also rented out to boost support for specific memetic campaigns. Some cartels also pay off willing unscrupulous people to provide feedback according to their direction in exchange for microtransaction kickbacks. A few go so far as to mass create fake AI-managed "sock puppet" accounts that go to great lengths to interact with each other as real people would. Though much harder to set up, these sock puppet networks are exponentially harder for social network security to ferret out.

The practice of "griefing"—an extended form of online harassment—has become an especially pernicious danger. The same hacker and criminal networks used to boost someone's score can also be used to drive a target's rep down. The most expert of these campaigns bleed the target slowly and intermittently over a long time frame. Larger scale operations may also involve a full-on smear campaign using multiple media feeds in an attempt to cause a rapid crash. Intense campaigns might also involve hacking the accounts of the target's friends and allies, then using these to offer increasingly negative testimonials, achieving the double goal of causing a reputation drop and making the target feel as though their closest friends and allies are abandoning them.

Many proponents of the reputation system would have you believe that griefing is something only made possible by the old school capitalist economies. They claim that once these economic systems wither and die, the process of griefing will disappear as well. There may be some truth to this, given the monetary incentive behind most griefing campaigns, but there will doubtless be antisocial and maladjusted elements that continue to grief even after capitalism has disappeared. ■

time, and continue to drag on our reputation. Even publicly repudiating past bad acts can take time to filter through the mesh.

## TESTIFY

Of far more importance to your reputation are the long-form testimonials that come from others. More than a simple up or down vote, testimonials can provide significant insight into why someone chose to boost or slap your rep. These provide more details about your deeds as well as the reasoning inspiring those to reward or punish you.

Every social network handles testimonials differently. Some (such as Fame and RNA) only allow testimonials to be posted by those within your immediate social circles: your friends, co-workers, family, and neighbors. Others allow anyone to post, providing a glimpse of one's interactions from the perspectives of complete strangers. These more disconnected views are sometimes less prominent, requiring more effort to dig up, especially if they are negative. Some testimonials can also be hidden from anyone who isn't explicitly given privileges to view them.

The vast majority of testimonials are positive in nature, but they can also be shockingly negative, especially if you've done something naughty, or really screwed over one of your friends. The positive comments count for much less positive reputation gain than you'd think, though they still contribute quite a bit to your positive rep. Negative testimonials on the other hand can be quite damaging and cause rapid and permanent drops in reputation.

## FACTION MATTERS

This may seem obvious, but disparate groups and cultures perceive things through different lenses. If you go off and publicly ridicule a hypercorp CEO, your @-rep is bound to get a boost, but your CivicNet score might well tank. If you pioneer a new chemical process certain to help in terraforming, the feedback from other scientists you get on RNA is bound to be good, while the preservationists on EcoWave are bound to take a more hostile view. Even within factions, reactions may vary. Your Extropian friends may upvote your @-rep when you sign that deal to buyout an inner system hypercorp, but the anarchists in your social circles are bound to give you a hit for your capitalist ways.

## FOAF

Finally, there is the friend-of-a-friend process (FOAF), which uses the close relationships you have to build an aggregate measure of reputation based upon those relationships. Basically, your reputation is affected by the company you keep. If you normally socialize with the kinds of people who wouldn't be welcome at most anarchist habs, then your rep is going to be affected correspondingly. If you keep company with those who are good and helpful citizens, you will benefit from that association.

More accurately, what the FOAF aspect of the reputation system does is tabulate a measure of centrality for a given individual based upon the eigenvectors of the relational ties in any given relationship. This also means that your reputation is not just affected by your immediate friends, but also by the FOAF effects of their friends, and the friends of their friends.

This means that a sudden precipitous drop in reputation for a single individual can spread outwards like a ripple, negatively affecting the reputations of thousands indirectly connected to them. The opposite is also true, with sudden celebrity or notoriety having a halo effect on those with a tie to the suddenly famous ego. The downside of this, especially on other reputation networks such as CivicNet and Fame, is that a sudden drop in reputation may result in a chain reaction of de-identification with formerly close associates, dropping the now unpopular ego out of their reputation network to block the contagion of negative feedback. Unfortunately, this in turn causes a further decline in the initial ego's reputation.

FOAF does illustrate an ongoing problem with rep systems, in that people who are socially awkward tend to be penalized. Some systems (@-list and RNA) try to account for this, but networks like Fame consider it a feature, not a bug.

## I DON'T CARE ABOUT MY BAD REPUTATION

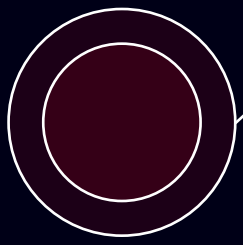
A lot of inner system visitors have trouble with the idea that their rep actually matters and that money isn't worth shit here. While most people don't have trouble keeping a good rep—after all, it only really requires that you act like a decent person—some people find it challenging not to express their innately antisocial behavior patterns. For these people, spending time aboard an autonomist hab can be a major pain in their ass. Some of them cease to care. These drop-outs can continue to eke out a life on the outskirts of our communities, but I doubt it is a fulfilling one.

There are dangers to running with a low or negative rep score, especially on small habitats. If local morph availability happens to run low, the local community may decide that whatever skin or shell you're walking around in should be reclaimed and redistributed to an ego that will be a more productive member of their community. Even as infomorph, a low rep score may mean that you're confined to mesh areas where you won't bother other egos and where you have minimal control of anything outside of your own processes.

Sounds harsh? Maybe. But we're not interested in indulging the selfish whims of petulant spoiled hypercorp execs here. This is a collective society, which means everyone pitches in, and everyone is equal and expects to be treated that way. If you want special treatment, you're going to be waiting a long time, likely in mesh isolation, until you can get some non-autonomist hab to accept your immigration request.

## NEW MORPHS

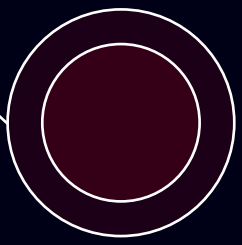
Harsh and varied locales require specialized morphs. ■ p. 185

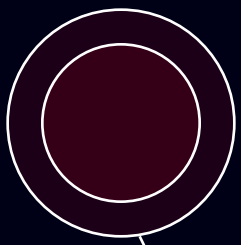


# GAME INFORMATION

## LONG-DISTANCE TRAVEL

This far out, physical travel is measured in months or years. ■ p. 182





## ENVIRONMENTAL HAZARDS

Asteroids, hostile atmospheres, radiation, the carbon haze of Titan—
The outer system is not kind to the unprepared. ■ p. 183

# 11



# GAME INFORMATION

This section provides rules on environmental hazards, new morphs, and new gear relating to the areas described in *Rimward*.

## TRAVEL TO THE OUTER EDGES OF THE SOLAR SYSTEM

Quantum farcasting transmissions (p. 314, *EP*) travel roughly at the speed of light. It's possible to send a message almost anywhere in the solar system in at most half a day, and usually just a few hours or even minutes. Transmitting from the sun to Neptune, at the edge of the Kuiper Belt, a distance of ~30 AU, takes just over 4 hours. Transmitting from the inner edge of the Kuiper Belt to the edge on the opposite side of the sun takes just over 8 hours. These are minimum times for a one-way transmission, however, and do not account for message size, retransmission of corrupted data, (de)compression algorithms, and time lost to route around sources of radiation interference.

The Egocasting/Farcasting Time table lists minimum farcast transmission times. Egocasting via quantum neutrino farcaster uses the same minimum time frames, but given the size and complexity of ego transmissions and other mitigating factors should on average take 10 times as long. An egocast from the sun to Neptune, then should take ~40 hours, not 4. For truly fast egocasting, expensive QE communicators must be used (p. 315, *Eclipse Phase*).

Spaceships take considerably longer to reach the furthest edges of the outer system. Travel between points in the inner system and the Main Belt is relatively swift and easy, averaging between a week and just over a month. A journey from Luna to Saturn only requires 23 days by an antimatter-powered courier or a bit over 12 weeks via a standard transport. Out beyond Saturn, however, travel times stretch into many months or even years.

The Ship Travel Time Table (p. 183) provides rough distances (in AU) and travel times (in days) between the main points of the solar system. They were calculated given average distances between the two points when they are at right angles to each other in relation to the sun. Gamemasters should be extremely flexible with these numbers, given the needs of their campaign. Orbital variations could easily double these values or reduce them by half and could fluctuate over the course of a campaign. For the more slow-moving orbits of the outer planets, however, travel times are unlikely to change significantly in the time period encompassed by a campaign.

The calculated values assume the ship takes the time to accelerate up to a good velocity, coasts along for most of the trip, and decelerates near the end point. A ship that is already moving at high velocity, such as pulling a slingshot maneuver at the starting point, will have a slightly reduced travel time. The same also applies to ships that do not need to decelerate and stop at the end point, simply passing it by. Ships that burn fuel all the way through the trip (half to accelerate, half to decelerate) will also arrive more quickly. Likewise, ships that must manage their fuel resources more carefully, burning less to increase/decrease velocity, will take longer.

The default travel times listed on the table are for standard transports (p. 349, *EP*). Fast Transports (p. 194) and destroyers (p. 348, *EP*) make the same journey in roughly half the time. Antimatter couriers (p. 347, *EP*) reduce the time down to a quarter, but antimatter is quite expensive, and couriers can only carry small amounts of cargo. One major advantage of traveling via a courier is that passengers are safe from pursuit or attack until they near their destination. This can be especially useful when traveling to Neptune or Eris, since the combination of being untouchable for several months and the immense distances involved means that only the wealthiest and most dedicated enemies are likely to attempt to continue to pursue a fugitive on one of these vessels. However, cargo transport is far more common than passenger travel. Given the distances and expense involved, cargo that is transported over long distances is likely to be both rare and valuable. Qubits, antimatter, unique artifacts, and various rare elements or difficult-to-manufacture materials are the most common items shipped to the edges of the solar system. For this reason. raiders

### EGOCASTING/FARCASTING TIME

| JOURNEY | DISTANCE (AU) | MINIMUM TIME |
|---|---|---|
| Sun to Mercury | 0.4 | 3 minutes |
| Sun to Venus | 0.7 | 6 minutes |
| Sun to Earth/Luna | 1 | 8 minutes |
| Sun to Mars | 1.5 | 13 minutes |
| Sun to Main Belt (Center) | 2.7 | 23 minutes |
| Sun to Jupiter/Jovian Trojans | 5.2 | 43 minutes |
| Sun to Saturn/Titan | 9.6 | 1 hour, 20 minutes |
| Sun to Uranus | 19.2 | 2 hours, 40 minutes |
| Sun to Neptune/Neptunian Trojans | 30.1 | 4 hours, 10 minutes |
| Sun to Eris | 55 | 7 hours, 40 minutes |

1 AU = 8.3 light minutes. Distance and times are approximate and subject to orbital variations.
For standard egocasting times, multiply the listed time by 10.

occasionally strike ships venturing out beyond Saturn. Since even the stealthiest raiders cannot hide, most raiders take comfort in the fact that unless they become too costly; they are simply too far away for pursuit to be practical.

Slow vessels like bulk carriers and scum barges take a much longer time to cross the same distance as a standard transport. As a general rule, gamemasters should double their travel time. These slow ships are rare outside the orbit of Saturn, because such vessels would take several years to reach Uranus and more than a decade to reach Eris.

# Environmental Hazards

The particular environments of the outer system can pose some interesting challenges to characters.

## Asteroids and Small Moons

Small bodies in space can be difficult to traverse. The terrain of asteroids and small moons can vary from thick regolith dust to rocky craters to an icy mud slurry and is often littered with craters, ridges, and rocky debris from past collisions with other objects. Small bodies can be composed of rubble and ice loosely held together by gravity, making for treacherous footing. Unseen crevasses and caves can pose a danger to unwary travelers. At the gamemaster's discretion, walking over challenging terrain should apply a –20 modifier, as if running. Particularly difficult areas may require a Complex Action and a Free Fall or Freerunning Test to cross, with failure meaning the character falls or is stuck.

These small bodies have minimal gravity and so are considered a microgravity environment (p. 199, *EP*). This means that falling is usually not a dangerous affair and so unlikely to inflict damage. Any sort of running or jumping on the surface, however, runs the real risk of a misstep sending the character off into space at terminal velocity, requiring a Free Fall Test to stay rooted to the surface.

Dust can be a real issue on asteroids, particularly during a mining operation or when operating a vehicle. Any sort of activity that stirs up the regolith can result in a cloud of dust that impairs visibility (a –10 to –30 modifier), clings to sensors and surfaces, chokes moving parts, and generally coats everything and becomes a nuisance. This dust is also extremely abrasive and can easily ruin slight or sensitive equipment. Attempting to move without stirring up dusk requires an Infiltration Test (–20 if running). Dust clouds can take anywhere from seconds to hours to settle, depending on the size of the asteroid/moon. Dust must be carefully removed before entering a habitat, as it can damage a biomorph's lungs if breathed. Dust sometimes accumulates in pools that can fill trenches and crevasses, up to several meters deep and wide. Escaping from this thick, clinging soup would require a Climbing or Free Fall Test with an appropriate modifier.

The moons of Saturn, Uranus, and Neptune, as well as numerous outer-system asteroids and comets, are primarily composed of—or at least covered in thick layers of—ice. This ice is usually mixed with dirt, rock, clay, and metals. This ice is sometimes porous, however, and more unstable than a rocky mantle. Geological activity on moons like Io, Europa, and Triton can cause stress fractures in the ice as well as create extremely chaotic ridged terrains that are difficult to pass.

Given the small diameter of asteroids and moons, the horizon on them appears very close. It is easy to lose line-of-sight over short distances.

## Distance from the Sun

From Saturn on out, the distance from the sun makes solar-powered energy impractical. Devices that rely on sunlight to (re)charge will not regain power. Likewise,

### SHIP TRAVEL TIME

| JOURNEY | MERCURY | VENUS | EARTH/LUNA | MARS | MAIN BELT | JUPITER | SATURN | URANUS | NEPTUNE | ERIS |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | — | 0.8/18 | 1.1/21 | 1.6/25 | 2.8/36 | 5.2/56 | 9.5/94 | 19/176 | 30/271 | 68/580 |
| Venus | 0.8/18 | — | 1.2/22 | 1.7/26 | 2.8/36 | 5.2/56 | 9.5/94 | 19/176 | 30/271 | 68/580 |
| Earth/Luna | 1.1/21 | 1.2/22 | — | 1.8/27 | 2.9/36 | 5.3/57 | 9.5/94 | 19/176 | 30/271 | 68/580 |
| Mars | 1.6/25 | 1.7/26 | 1.8/27 | — | 3.1/38 | 5.4/58 | 9.6/95 | 19/176 | 30/271 | 68/580 |
| Main Belt | 2.8/36 | 2.8/36 | 2.9/36 | 3.1/38 | — | 5.9/63 | 9.9/97 | 19/176 | 30/271 | 68/580 |
| Jupiter | 5.2/56 | 5.2/56 | 5.3/57 | 5.4/58 | 5.9/63 | — | 11/107 | 20/185 | 30/271 | 68/580 |
| Saturn | 9.5/94 | 9.5/94 | 9.5/94 | 9.6/95 | 9.9/97 | 11/107 | — | 21/193 | 31/280 | 68/580 |
| Uranus | 19/176 | 19/176 | 19/176 | 19/176 | 19/176 | 20/185 | 21/193 | — | 36/323 | 71/627 |
| Neptune | 30/271 | 30/271 | 30/271 | 30/271 | 30/271 | 30/271 | 31/280 | 36/323 | — | 74/652 |

The first value before the slash is the average distance in AU.
The second value after the slash (in red) is the average travel time in days.
Times listed are for standard transports. For destroyers and fast transports, divide the time by 2. For antimatter couriers, divide by 4.
Distances and times are averages, subject to current orbital positions.

plant life will not acquire enough sunlight for photosynthesis. This distance can sometimes be compensated for with large focused mirror arrays, but it is usually easier to rely on other power and food sources.

## Gas Giant Atmospheres

The thick atmospheres of the system's gas giants pose a number of hazards. Winds can reach up to 400 kph on Jupiter, 900 kph on Uranus, an impressive 1,800 kph on Saturn, and a near-supersonic 2,100 kph on Neptune. Massive cyclonic storms are common on all of the planets. Attempting to fly a ship, drone, or morph through these atmospheric disturbances should require Pilot Tests with heavy modifiers. Lightning strikes in these atmospheres can be devastating, inflicting heavy damage and possibly disabling electrical systems.

An unprotected biomorph in a gas giant's upper cloud layers would suffer from from the toxic atmosphere (p. 201, *EP*) and severe cold. The deeper ones goes, the more the atmospheric pressures and temperatures increase, eventually becoming unbearable. A biomorph delving down into a gas giant's high-pressure layers may suffer from afflictions common to deep sea divers: nitrogen narcosis, oxygen toxicity, and high-pressure nervous syndrome. If they ascend too quickly, they may also suffer from the bends.

It is important to keep in mind with these dangers, however, that a disabled craft or morph will sink into the atmospheric depths where it will be certainly crushed by the pressure. Heavy winds and storms should therefore be used to encourage the drama of a mission of a scene, with failed rolls resulting in problems that must be fixed, rather than delegating an entire team to death because of a missed roll … unless they're really asking for it, of course.

## Jupiter's Magnetosphere

The radiation from Jupiter's magnetosphere poses a major threat to biomorphs and even synthmorphs, vehicles and spacecraft that travel within its boundaries. Unshielded transhumans can become dangerously irradiated in a matter of days or even hours, depending upon location. This remains a long-term danger with lightly shielded craft and habitats. For information on the magnetosphere's effects, see *Magnetic Fields,* p. 200, *EP,* and *Radiation,* p. 201, *EP.*

## Subsurface Oceans

The undersea oceans of Ceres, Enceladus, and Europa are noteworthy for their incredible pressures, and temperature ranges, and complete lack of natural light.

The waters of these subsurface depths are crushed under the weight of the ice above them (ameliorated by the lesser gravity). Pressure starts as high as 200 atmospheres at the top of these oceans, reaching as high as 2,500 atmospheres at the ocean floor of Europa. The deeper seas of other moons see even greater pressures. Biomorphs with hydrostatic pressure adaption (p. 188) can operate in these conditions indefinitely, at least at the upper ocean levels, down to a pressure depth of 500 atmospheres. Synthmorphs with the adaptation can sustain regular operation down to 2,500 atmospheres.

The real danger, however, is sudden changes in pressure. A biomorph dropped from a normal transhuman environment (1 atmosphere of pressure) into the subsurface depths would be crushed, and even a synthmorph might be damaged. To properly transition, the biomorph must be slowly acclimated to increasing pressure levels. This process is lengthy, however, taking about 1 day. For this reason, most undersea habitats cater to a specific environment; only synthmorphs such as the cetus (p. 185) have an easy time transitioning between the two. In habitats with mixed environments, resleeving facilities are often set up so that an ego can be transferred into a morph already situated in the other pressure environment.

Unlike Earth's oceans, these subcrustal oceans are colder at the top, just above freezing (around –20 C, given the salinity), and warmer at the bottom, as they are heated at the ocean floor by geothermal vents (around 10 C). "Warmer" in this context, however, still equals quite cold by human terms. Water also draws heat away from the body much more than air, making even standard temperature tolerance mods ineffective. Any biomorphs operating in these frigid deep water environments require temperature tolerance (improved cold), detailed on p. 166, *Sunward*. Synthmorphs handle the temperature without issue.

Ceres, Enceladus, and Europa are the only bodies with subsurface oceans that have been colonized, however, they are not the only planetoids/moons with deep water. Callisto, Eris, Ganymede, Oberon, Orcus, Pluto, Rhea, Sedna, Titan, Titania, and Triton are all thought to have subcrustal oceans, heated by radioactive decay and tidal stresses. These waters are found below the crust at depths of over 100 kilometers, however, and in some cases over 200 kilometers down. No transhuman missions have yet visited these dark waters—at least, none that have been publicly announced.

## Titan's Carbon Haze

Titan's thick atmosphere blocks light so thoroughly that imaging the surface using light is impossible, even from orbit. Communications gear based on lasers, including laser-based quantum farcasters, can't signal from ground to orbit on Titan. Within the atmosphere (on the ground or in flight), any device relying on light to gather or communicate information or to generate an effect has its range and area of effect reduced to 1/10th. This includes light-based weapons like dazzlers, nanoswarms controlled by laser links, laser-guided munitions, and even exotic threats like vision-based basilisk hacks.

Because of this, almost all devices microfactured for use on Titan rely on radio signals instead of lasers. Assume that any gear whose description gives a choice between using lasers and radio for communication

employs lasers. Gamemasters may wish to have players specify whether their character's gear uses radio or laser systems prior to adventures on Titan, particularly if they acquired their gear offworld.

Tight-beam laser communications offer greater security than radio because they're directional. Secure facilities and military ships in the Titanian sphere compensate for this by making extensive use of fiberoptic lines, microwave links, VPNs, quantum communications, stealthed signals, and active monitoring. All Titanian capital ships carry tight-beam neutrino communicators. The Commonwealth has a reputation for government transparency, but Fleet's bleeding-edge neutrino-band security protocols are among its handful of vigorously guarded state secrets.

The combination of thick atmosphere and low gravity on Titan make even human-powered flight very easy. Aircraft, personal transporters, and smart wings are common and popular methods of getting around on Titan.

# NEW MORPHS

This selection of morphs includes designs customized for rimward locales. At the gamemaster's discretion, these may be allowed during character creation.

## CETUS (SYNTHMORPH)

The cetus, named after a mythological sea monster, was designed for deep sea activity and is capable of operating under extreme pressure and cold. It is a favored morph for use in the undersea domains of Ceres and Europa. Capable of moving quickly underwater, the morph can also operate outside of water in the atmospheric portion of habitats. Cetus morphs are slightly smaller than arachnoids.

**Enhancements:** Access Jacks, Basic Mesh Inserts, Chemical Sniffer, Cortical Stack, Cyberbrain, Direction Sense, Echolocation, Enhanced Hearing, Enhanced Vision, Extra Limbs (8), Headlights, Hydrostatic Pressure Adaptation
**Mobility System:** Submarine (4/36), Walker (4/20)
**Aptitude Maximum:** 30
**Durability:** 40
**Wound Threshold:** 8
**Advantages:** 8 Limbs, +5 COO, +5 SOM, +5 to one other aptitude of the player's choice, Armor 8/8
**CP Cost:** 45
**Credit Cost:** Expensive (minimum 40,000+)



CETUS SYNTHMORPH

## COURIER (SYNTHMORPH)

This synthmorph was specifically designed to fly between the many moons and habitats in the Saturnian system. It is used by both couriers and smugglers throughout the outer system. This morph appears to be a roughly humanoid head and torso set on a conical base, with a total height of 1.5 meters, that makes it look rather like a four-armed chess piece. This base contains both the morph's ionic propulsion system, which doubles as a plasma sail in space, and an internal rocket. This miniature metallic hydrogen rocket is specifically designed for low thrust. It provides an acceleration of up to 0.25 g, allowing the morph to take off and land on all moons and other small bodies in the solar system. This engine can operate for a total of one and a half hours before it requires refueling. The morph's four slender arms fold flat against its torso when it is in flight. Its extensive sensor suit is useful for both navigation and various covert purposes.

**Enhancements:** Access Jacks, Basic Mesh Inserts, Chemical Sniffer, Cortical Stack, Cryonic Protection, Cyberbrain, Direction Sense, Enhanced Vision, Extra Limbs (4), Grip Pads, Headlights, Hidden Compartment, Internal Rocket, Lidar, Magnetic System, Mnemonic Augmentation, Plasma Sail Implant, Radar, Retracting/Telescoping Limbs, T-ray Emitter.
**Mobility System:** Ionic (12/40), Thrust Vector (8/40)
**Aptitude Maximum:** 30
**Durability:** 30
**Wound Threshold:** 6
**Advantages:** 4 Limbs, +5 COO, +5 INT, +5 REF, +5 to one other aptitude of the player's choice, Armor 6/6
**CP Cost:** 70
**Credit Cost:** Expensive (minimum 40,000+)

## FENRIR (SYNTHMORPH)

Named for the monstrous wolf of Norse legend, the fenrir is one of the most imposing combat morphs ever developed. It is found only in the armed forces of the Hyoden city-state on Callisto (though black-market blueprints/copies are rumored to be available elsewhere). A massive, squat quadrupedal morph designed to be operated by up to six egos simultaneously, the fenrir is more akin to a super-heavy tank than a regular morph. It is possible that a single ego could fill all six ego slots at once through the use of alpha forks, but this has never been tested. The most common weapons mounted are linked HEAP and/or plasmaburst seeker launchers, exoatmospheric plasma beam bolters, and machine railguns loaded with AP rounds.

**Note:** This morph is unique in that it allows more than one ego to use it at the same time. Ego Sharing may be purchased for this morph an additional four times, for a total of five additional egos.

**Enhancements:** 360-Degree Vision, Access Jacks, Anti-Glare, Basic Mesh Inserts, Cortical Stack, Cyberbrain, Direction Sense, Ego Sharing (1), Enhanced Hearing, Enhanced Vision, Extra Limbs (4), Heavy Combat Armor,Lidar, Mnemonic Augmentation, Pneumatic Limbs, Radar, Structural Enhancement, T-Ray Emitter, Weapon Mount (External, Articulated, 8)
**Mobility System:** Walker (4/20), Thrust Vector (4/12)
**Aptitude Maximum:** 35
**Durability:** 70 (80 with Structural Enhancement)
**Wound Threshold:** 14 (16 with Structural Enhancement)
**Advantages: 4 Limbs,** +5 REF, +5 COO, +10 SOM, +5 to one other aptitude of the player's choice, Armor 16/16 (32/32 with Heavy Combat Armor)
**Disadvantages: Large target (+10 to hit)**
**CP Cost:** Not available at character creation
**Credit Cost:** Expensive (rare and restricted; minimum 100,000+)



HAZER BIOMORPH

## HAZER (BIOMORPH)

Hazers are tall, fine-boned morphs, lightly muscled but heavily insulated against loss of body heat. Even with all of their augmentations, hazers can't survive exposure to the frigid atmosphere of Titan—but they can handle it slightly longer than other morphs. Hazers tend to be fair and slender, with chiseled features. Some have features so angular or elfin that their beauty is alien and unsettling to other human phenotypes. Striking Looks and Uncanny Valley are both common morph traits.

**Implants:** Basic Biomods, Basic Mesh Inserts, Cortical Stack, Enhanced Vision, Radiation Sense, Respirocytes, Temperature Tolerance (Improved Cold; p. 166, Sunward)
**Aptitude Maximum:** 30
**Durability:** 35
**Wound Threshold:** 7
**Advantages:** +5 COO, +5 WIL, +5 to two other aptitudes of the player's choice
**CP Cost:** 35
**Credit Cost:** Expensive

## HULDER (BIOMORPH)

Hulder are engineered for survival in the Titanian wilds. In silhouette, their bodies resemble a long-legged great auk, though viewed up close, the resemblance to a bird ends. Hulder have no feathers, but rather smooth, rubbery charcoal or black skin covering a thick layer of nano-augmented blubber. What resembles a thick bill from a distance is actually a seamless protrusion of the face, packed with sensory augmentations. Hulder stand 2 meters tall and weigh on average 135 kilograms. Their sensory organs, webbed feet, and fingers are all cybernetic.

Hulder can only tolerate temperatures hospitable to baseline transhumans for short periods of time. In the open, they must balance their bodies' chemical reservoirs with other hulder and caribou once per month or with a chemical reserve pack. A typical band of 2–6 hulder and 10–20 caribou can go about a year before having to visit a hab or a station like *Huvudskär* to replenish chemical reserves.

**Implants:** Basic Biomods, Basic Mesh Inserts, Bioweave Armor (Light), Cortical Stack, Digging Claws, Direction Sense, Enhanced Vision, Long-Term Life Support, Oxygen Reserve, Radiation Sense, Swim Bladder, T-Ray Emitter, Temperature Tolerance (Cryonic)
**Aptitude Maximum:** 30
**Durability:** 40
**Wound Threshold:** 8
**Advantages:** +5 SOM, +10 WIL, +5 to one aptitude of player's choice
**Disadvantages:** Temperature Intolerance (Warm)
**CP Cost:** 50
**Credit Cost:** Expensive (Minimum 40,000+)

## HYPERBRIGHT (BIOMORPH)

This morph is an attempt by a research team on Bright to create a successor to the menton, making it the

most intelligence-enhanced morph ever created. Work on the hyperbright morph has been plagued with difficulties, as the designers attempt to push technical limits, creating a morph that can work at peak efficiency without distraction for long periods of time. In an effort to create a morph that proves their design and earns some positive reputation for their project, the creators took short cuts that caused the morph to have several distinctive and potentially annoying quirks, including an inherent need for drugs to stabilize its exotic neurochemistry. The result is a morph that is instantly recognizable by the brightly colored bony crest along the skull that helps cool its brain. Despite its quirks, the hyperbright has gained a small following among a number of scientists and engineers, especially since it has been optimized for use in the low-g environments of the outer system. When created or used on Bright, this morph is usually also fitted with the parallel processor nanoware (p. 189).

**Implants:** Basic Biomods, Basic Mesh Inserts, Circadian Regulation, Cortical Stack, Eidetic Memory, Endocrine Control, Grip Pads, Hyper-Linguist, Math Boost, Mental Speed, Prehensile Feet
**Aptitude Maximum:** 40 (COG and INT), 30 (all others)
**Durability:** 35
**Wound Threshold:** 7
**Advantages:** +15 COG, +10 INT, +5 WIL, +5 to one other aptitude of the player's choice
**Disadvantage:** Addiction (minor, to comfurt), Fast Metabolism (p. 165, *Sunward*), Uncanny Valley
**CP Cost:** 70
**Credit Cost:** Expensive (Minimum 40,000+)

## Ring Flyer (Biomorph)

Designed for use in Saturn's magnetic field, this exotic biomorph is also occasionally used around Jupiter, Uranus, and Neptune, as well as having limited use in the Jovian Trojans and Main Belt. Easily recognizable with its slender limbs and round-backed torso, this morph can survive indefinitely in space, acquiring oxygen, water, and trace organic materials from the particles of Saturn's rings. It can also maneuver around any planet with a magnetic field, flying swiftly and easily in any of these environments.

**Implants:** Basic Biomods, Basic Mesh Inserts, Bioweave Armor (Light), Cortical Stack, Enhanced Respiration, Enhanced Vision, Gas Jet System, Grip Pads, Hibernation, Long-Term Life Support, Medichines, Oxygen Reserve, Plasma Sail Implant, Prehensile Feet, Radiation Tolerance, Temperature Tolerance (Cryonic), Vacuum Sealing
**Aptitude Maximum:** 30
**Durability:** 30
**Wound Threshold:** 6
**Advantages:** Bioweave Armor (Light, 2/3), Limber (Level 1) trait, +5 COG, +5 COO, +5 REF, +5 to one other aptitude of the player's choice
**CP Cost:** 70
**Credit Cost:** Expensive (Minimum 40,000+)

## Savant (Synthmorph)

This morph was developed on Ilmarinen as proof that synthmorphs can also be useful to scientists and engineers. This strangely elegant morph lacks the disturbing mimicry of humanity found in synth and steel morphs. Instead, the ovoid head with its elegantly minimalist face looks more like an artistic sculpture than a metal version of a real human head.
**Enhancements:** Access Jacks, Basic Mesh Inserts, Cortical Stack, Cyberbrain, Eidetic Memory, Hyper-Linguist, Math Boost, Mnemonic Augmentation
**Mobility System:** Walker (4/20)
**Aptitude Maximum:** 40 (COG and INT), 30 (all others)
**Durability:** 40
**Wound Threshold:** 8
**Advantages:** +10 COG, +5 INT, +5 SAV, +5 SOM, +5 to one other aptitude of the player's choice, Armor 8/8
**Disadvantages:** Social Stigma (Clanking Masses) trait
**CP Cost:** 65
**Credit Cost:** Expensive (minimum 40,000+)

## Selkie (Biomorph)

Selkies look like a human-seal hybrid, and in fact their genetics are aquanaut with heavy splices of seal traits. Their arms are standard human-shaped, but their legs are fused into a pair of hind flippers for powerful swimming. On land, they can stand but have difficulty moving, as they must flop, roll, or hop like a seal. They are adapted for the lack of air, deep cold, and crushing pressure of subcrustal seas.

**Implants:** Basic Biomods, Basic Mesh Inserts, Cortical Stack, Echolocation, Enhanced Hearing, Enhanced Vision, Enhanced Respiration, Gills, Hydrostatic Pressure Adaptation, Swim Bladder (p. 152, Gatecrashing), Temperature Tolerance (Improved Cold; p. 166, *Sunward*), Toxin Filters
**Aptitude Maximum:** 30
**Durability:** 40
**Wound Threshold:** 8
**Advantages:** +5 COO, +10 SOM, +5 to one other aptitude of the player's choice, +10 Swimming skill
**Disadvantages:** Movement Rate of 1/4 on land
**CP Cost:** 55
**Credit Cost:** Expensive

## Outer System Morph Variants

Many morphs previously described in other *Eclipse Phase* books are used in outer system environments, often tailored with modifications specific to the locale.

### Biomorphs with Cyberbrains

The cultures of the outer system are far more accepting of forking and regular resleeving. For this reason, many biomorphs in the outer system are equipped with cyberbrains rather than organic brains by default. This makes the resleeving process quicker (less than a minute as opposed to an hour) and makes

it substantially easier to fork. The drawback is that cyberbrains are vulnerable to hacking (p. 261, *EP*).

Biomorphs with this option have Access Jacks, Cyberbrain, Mnemonic Augmentation, and an optional Puppet Sock. Increase CP Cost by 5; Credit Cost remains the same.

### Cerean Variants

Biomorphs on Ceres must be capable of handling the ammonia content in the water in addition to the pressure.

**Cerean Aquanaut:** As the aquanaut biomorph (p. 150, *Gatecrashing*), but equipped with hydrostatic pressure adaption (p. 188). CP and Credit Costs remain the same.

**Cerean Neo-Cetaceans:** Neo-cetaceans modified for survival on Ceres also have gills, hydrostatic pressure adaption (p. 188), temperature tolerance (improved cold; p. 166, *Sunward*), and toxin filters. Increase CP Cost by 10; Credit Cost remains the same.

**Cerean Octomorph:** Favored by the Hidden Concern, Cerean octomorphs are equipped with eelware, hydrostatic pressure adaption (p. 188), temperature tolerance (improved cold; p. 166, *Sunward*), and toxin filters. Increase CP Cost by 10; Credit Cost remains the same.

### Europan Variants

Various biomorphs have been adapted to survive in the intense pressures and deep cold of the subsurface Europan waters.

**Europan Aquanaut:** As the aquanaut biomorph (p. 150, *Gatecrashing*), but equipped with hydrostatic pressure adaption (p. 188). CP and Credit Costs remain the same.

**Europan Uplifts:** Neo-cetaceans and neo-octopi are natural fits for the Europan environment. Any of these morphs (including the takko) can be modified for survival on Europa, adding hydrostatic pressure adaption (p. 188) and temperature tolerance (improved cold; p. 166, *Sunward*). Increase CP Cost by 5; Credit Cost remains the same.

**Europan Orca:** The greatest success to date is the Europan orca, a cetacean uplift that upgrades the neo-orca with carapace armor, eelware, enhanced vision, hydrostatic pressure adaption (p. 188) and temperature tolerance (improved cold; p. 166, *Sunward*). Increase CP Cost by 10; Credit Cost remains the same. These are especially useful as undersea guards or mercenaries.

### Outer System Synthmorphs

Given that social attitudes toward cases and synths (and similar low-end shells) are not as prejudiced in autonomist and some other outer system cultures, gamemasters may wish to disallow the Stigma: Clanking Masses negative trait in campaigns based primarily in these areas. To balance this out, gamemasters may require these morphs to take the Uncanny Valley negative trait instead.

### Titanian Variants

Commonly encountered morphs on Titan include:

**Titanian Fliers:** Lunar fliers (p. 162, *Sunward*) augmented with temperature tolerance (improved cold; p. 166, *Sunward*). CP and Credit Costs remain the same.

**Titanian Olympians:** Often used by athletes and outdoor workers, these are standard olympian biomorphs augmented with temperature tolerance (improved cold; p. 166, *Sunward*). CP and Credit Costs remain the same.

## New Negative Morph Traits

The following Negative traits may be available to starting character morphs at the gamemaster's discretion.

### Temperature Intolerance (Warm) (Morph Trait)

The morph is adapted for extreme cold and has difficulty dissipating body heat in temperatures tolerated by normal transhumans. When exposed to vacuum or temperatures above 5 C for more than 10 minutes, the character suffers a –10 modifier to all actions. At 10 C, increase the modifier to –20. At temperatures above 25 C, the character may suffer 1d10 DV per hour exposed from overheating, at the gamemaster's discretion. These effects can be nullified by wearing a vacsuit, the application of some sort of cooling system, or returning to a suitably cold environment.

**Bonus:** 10 CP

### Whole Body Apoptosis (Morph Trait)

This morph has been genetically programmed to suffer a sudden and lethal massive cellular failure at some point in the future, usually within a given 10 year period, though it is possible to target a specific date, give or take a few months. This modification is favored by bioconservatives that wish to live healthy and die quickly and "naturally." The cellular failure takes about 10 minutes to complete, giving the character time to stop what they are doing, send any final messages, or commit any other final acts. This trait may only be applied to biomorphs (including pods). Apoptosis may not be initiated voluntarily.

**Bonus:** 0 CP

# New Gear

This gear is commonly used in specific areas of the inner system, as noted. At the gamemaster's discretion, it may be purchased during character creation just like other gear.

## New Bioware

These implants follow all of the standard rules for bioware given in the *Eclipse Phase* core rulebook.

### Hydrostatic Pressure Adaptation (Physical Augmentation)

The morph is capable of operating under extreme pressure conditions. Biomorphs (including pods) with

this mod can withstand up to 500 atmospheres; the synthmorph equivalent can handle up to 2,500 atmospheres. The morph can also acclimate to changing pressures more quickly and is immune to oxygen toxicity, nitrogen narcosis, and the bends. **[Expensive]**

### Radiation Tolerance (Physical Augmentation)

This mod may only be installed in morphs with medichines. The biomorph's DNA is redundantly encoded and vital tissues are actively replaced. Additionally, vital systems are protected with special shielding sleeves and blood filters, and many chemical processes are reinforced against disruption. The morph can survive radiation exposure thirty times as effectively as if unaugmented. **[Expensive]**

### Temperature Tolerance (Cryonic) (Physical Augmentation)

The morph is treated as having the Temperature Tolerance bioware (p. 305, *EP*), but the addition of both an integral nuclear battery and specially bioformed insulation allows this morph to indefinitely tolerate temperatures as low as –200 C without harm as long as the morph is in an atmosphere with a pressure of less than 0.1 atmosphere. In a dense atmosphere, like that of Titan, the morph can endure temperatures as low as –120 C. **[High]**

### Winterist (Physical Augmentation)

The character has the androgynous appearance and non-sexual erogenous zones common to inhabitants of Winter hab (p. 64). The character has a monthly hormonal cycle driving their desire for erogenous contact. The character also produces fertile gametes once a month in accordance with this cycle, but these must be harvested through a medical procedure and placed in a Winterist exowomb in order to be fertilized. This augmentation can be added to any biomorph but may not be taken in combination with the sex switch augmentation or any other augmentation directly linked to the character's sex. Characters with this augmentation are immune to the effects of tailored pheromones. **[Low]**

## New Cyberware

These implants follow all of the standard rules for cybernetic implants given in the *Eclipse Phase* core rulebook.

### Parallel Processor (Mental Augmentation)

A modified derivative of the neo-syngergist hypermesh link, this augmentation allows users to link their minds together together in a manner similar to parallel processing computers, allowing them to borrow processing power from other linked egos to solve intellectual problems. In addition to automatically providing the appropriate teamwork bonus for the problem (to a maximum of +30) without the others needing to take any actions, as long as three or more users are linked together, each user also gains a +5 COG bonus for the duration of the linkage. These bonuses only apply when the users are linked. Users must possess the mental speed augmentation to use this implant. While the implant is active, the character's Trauma Threshold is reduced by 1. To avoid possible personality bleed-over, users are advised to use this augmentation for no more than six hours per day. **[High]**

### Plasma Sail Implant (Physical Augmentation)

This augmentation installs a miniature plasma sail in the morph. This implant includes a potent battery-powered superconducting magnet and a tank holding sufficient compressed hydrogen to allow the plasma sail to operate for three months. This implant allows the user to fly through space with an acceleration of up to 0.01 g, though beyond the orbit of Saturn the solar wind becomes too faint to provide any acceleration. In open space, this sail can achieve a maximum velocity of 80 kilometers per second, but can only be used to accelerate away from the sun (tacking can be used to sail toward the sun, but at a maximum of 10 kps). It can be used to maneuver in any direction, however, as long as the user is within a planet's strong magnetic field. Within 70,000 km of Earth, 3,000,000 km of Jupiter, 1,500,000 km of Saturn, 450,000 km of Uranus, or 500,000 km from Neptune, the plasma sail allows the user to maneuver freely and to land on and take off from any moon with a surface gravity of less than 0.05 g. Using it requires Flight skill. This is a relatively large implant and produces a characteristic humpback shape on almost all morphs. **[Expensive]**

## New Nanoware

These implants follow all of the standard rules for nanoware given in the *Eclipse Phase* core rulebook.

### Long-Term Life Support

The biomorph is adapted for harsh environmental conditions and can survive for long periods of time as a closed system thanks to symbiotic bacteria and nanomachines. This augmentation allows any biomorph or pod to recycle air, food, and water for up to one year. This augmentation's implanted miniature maker allows the morph to process ice and various simple organic chemicals into air, water, and food. The morph need not eat or breathe but must ingest about five kilograms of ice and carbon grit per day. It must also balance out or replenish chemical reserves once a month, either by exchanging with other similarly augmented morphs or applying a Low-cost chemical reserve pack. **[Expensive]**

### Neural Enhancers

This active nanotechnology bonds with the morph's neural structures, creating a series of specialized cognitive subprocessors that enhance the user's intelligence. It provides users with a +5 modifier to COG. However, enhancing intelligence is a difficult process and this enhancement is based on techniques used on existing morphs. It has no effect if used on a

morph that has a COG modifier of +10 or more. This augmentation can be used on biomorphs, pods, and synthmorphs. **[Expensive]**

## New Robotic Enhancements

These alterations follow all of the standard rules for robotic enhancements given in the *Eclipse Phase* core rulebook and are only available to synthmorphs and bots.

All of the bioware, cyberware, and nanoware listed above, with the exception of radiation tolerance, winterist, and long-term life support, are also available as robotic enhancements (and thus may be incorporated into synthmorphs).

### Cryonic Protection (Physical Modification)

Even synthmorphs can have difficulty with the cryonic temperatures found in the outer system. While almost any synthmorph can operate normally for at least an hour at these temperatures, longer exposure can cause materials to get brittle and joints to lock up, especially in an atmosphere thick enough to conduct heat away from the morph. This augmentation uses the morph's nuclear battery to slightly warm its surface, while also coating the morph with a thin layer of insulation. Cryonic protection allows synthmorphs to operate indefinitely in the coldest temperatures found in the solar system. **[Low]**

### Ego Sharing (Physical Modification)

This enhancement allows more than one ego to access the internal systems and controlling functions of a single synthmorph, bot, or vehicle at one time. Each ego requires its own cyberbrain. Command responsibilities are usually divided into appropriate sectors of control. For example, one ego is responsible for physical movement, another handles data analysis, a third operates weapon controls, and so on. Each ego acts on its own Initiative; the morph may only move on one ego's action and each weapon system and enhancement may only be actively used by one ego per Combat Turn, though other egos may passively access data from enhancements and systems used by others. Morph aptitude modifiers and bonuses from enhancements apply to all egos equally. No Speed-boosting enhancements may be used with this morph. **[Expensive]**

### Smart Wings (Physical Modification)

This augmentation consists of a smart material coating on the morph's arms. With a Quick Action, the synthmorph can extend or retract smart-material wings with a wingspan of 8 meters. In normal atmospheric pressure, the synthmorph can fly at speeds of up to 100 kph as long as the surface gravity is less than 0.15 g. They may also be used for gliding (see *Gliding Membranes*, p. 166, *Sunward*). When retracted, this augmentation is hidden. This mod is very common for synthmorphs on Titan and in various large low gravity habitats throughout the outer system. Large or heavy morphs may not use it. **[Low]**



FENRIR SYNTHMORPH ■ p. 186

## ARMOR MODS

Armor mods are detailed on p. 313, *EP*.

### STASIS MODULE

This modification may be applied to any type of vacsuit or other fully enclosed suit of armor. When activated, it places the wearer in a medical stasis, preserving the body and mind. Characters in stasis cannot act and are considered unconscious. This module may be linked to the user's mesh insert medical sensors, triggered to activate if the wearer's Durability drops below a pre-set threshold. **[Low]**

## EVERYDAY TECHNOLOGY

These devices are commonly used throughout the outer system.

### DUST REPELLENT

This smart material spray prevents electrostatic dust from adhering to surfaces. It is commonly deployed on visors, sensors, windows, joints, moving parts, and other areas that could be covered or jammed up by dust from asteroids, moons, Mars, and so on. One can is enough to cover a single car-sized vehicle or eight human-sized morphs. **[Trivial]**

### FLYING VEST

This garment consists of a thick vest containing a large battery, a miniature electric turbine on the back, and air intakes and exhausts at the shoulders and waist. Thrust from this turbine allows the wearer to fly, but only in low gravity environments in an atmosphere. In a gravity no more than 0.14 g it allows the wearer to fly at speeds of up to 40 kph, and in gravity less than 0.1 g, the wearer can fly at speeds of up to 100 kph. This vest is soft and highly flexible, but is also several centimeters thick and the turbine makes a small but visible hump on the wearer's back. This vest has a mass of 9 kilograms and can operate for 4 hours before it must be recharged. **[Moderate]**

### FRACTAL GLOVES

These gloves are designed to fit over a humanoid wrist and hand to duplicate the effects of the fractal digits robotic enhancement (p. 31, *EP*). The gloves also include micro-cameras that allow wearers to clearly see the objects they are manipulating, duplicating the effects of nanoscopic vision (p. 311, *EP*). **[Moderate]**

### PLASMA SAIL

This backpack and harness operates in the same manner as the plasma sail implant (p. 189). **[Expensive]**

### SMART MANIPULATORS

When not in use, this device resembles a small five-kilogram backpack. It contains a nuclear battery, advanced smart materials, and an AI that allows users to operate this device as easily as their own arms or legs. When activated, the device can create a wide array of tools and manipulators. It can sprout a pair of wings that allow the user to fly at speeds of up to 100 kph in one atmosphere or more of pressure if the gravity is 0.15 g or lower. It can also create gliding membranes that duplicate the augmentation with the same name (p. 166, Sunward). In addition, the device allows the user to create a number of highly flexible limbs equal to their COO/5, which can each reach as far as seven meters. Each of these limbs can be sculpted to end in a hand, grip pad, cyberclaws, knife, shock baton, flex cutter, or any tool that can be created by the wrist-mounted tools augmentation (p. 309, *EP*). Alternatively, each limb can duplicate the abilities of a length of electronic rope (p. 332, *EP*) up to 30 meters long that can end in a grip pad if desired. These items are very popular with users who work in zero gravity or very low gravity environments. **[High]**

## PETS

This is a sampling of animals unique to the outer system. Aquarium pets, marmosets, and squidlings all receive the small target modifier (–10 to hit in combat).

### AQUARIUM PET

Not so much a pet as a prison, aquarium pets are transgenic aquarium animals such as koi, plecos, or axolotls that have been implanted with a ghostrider module. The ghostrider module has no control over the animal's body but is fully wired into its sensorium as if it were living a real-time XP recording. An ego "sleeved" into an aquarium pet experiences being a fish, from the sensation of swimming to autonomic drives such as hunger and urination. Many of these sensations, such as the pleco's rasping at the soft aquarium wood to which it clings with its sucker-like mouth or the koi's constant rifling of filthy bottom gravel with its mouth, are deeply revolting to most transhumans. In addition, the animals used often have good hearing, meaning the sleeved ego can make out conversations outside the tank.

**PETS**

| ANIMAL | COG | COO | INT | REF | SAV | SOM | WIL | INIT | SPD | DUR | WT | DR | LUC | TT | IR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aquarium Pet | 1 | 10 | 5 | 5 | 5 | 5 | 5 | 2 | 1 | 2 | 1 | 3 | 10 | 2 | 20 |
| Poisonous Marmosets | 5 | 20 | 10 | 15 | 5 | 5 | 5 | 5 | 1 | 25 | 5 | 37 | 10 | 2 | 20 |
| Squidling | 5 | 15 | 10 | 20 | 5 | 5 | 5 | 6 | 1 | 5 | 1 | 7 | 10 | 2 | 20 |
| Titanian Caribou | 5 | 10 | 10 | 10 | 5 | 20 | 10 | 4 | 1 | 30 | 6 | 45 | 20 | 4 | 40 |

Aquarium pets are physically helpless, as the ego cannot control the animal. The animal behaves instinctively, avoiding nets with a Fray skill of 40 in water, flopping around helplessly out of it. The ghostrider module imposes no modifiers to the ego's mental stats and is usually connected to a cortical stack, but it has no access to control interfaces.

Egos unwillingly placed into an aquarium pet must make a WIL x 2 Test when first "sleeved" and every week thereafter. The ego takes 1d10 SV on a failed test. If the aquarium pet dies with the ego in it, the ghostrider module ceases running and may only be re-instanced from the cortical stack (if any). Most aquarium pets have a DUR of 1 or 2. The ghostrider module and stack take up enough space in these creatures that an observer who makes an Academics (Biology) Test or a Perception Test at –20 realizes the animal contains implants, though they won't know what kind of implants. **[Low]**

**Skills:** Fray 40, Swimming 60

**Implants:** Access Jacks, Cortical Stack (optional), Ghost Rider Module

### Poisonous Marmoset Swarm

A Titan Tech prank that got out of hand, these bands of ten-centimeter-tall poisonous primates were thought to have been eradicated, but it's always possible some got away. **[Medium]**

**Skills:** Climbing 80, Fray 60, Infiltration 50, Unarmed Combat 50

**Attacks:** Bite (1d10 ÷ 2) – 1 DV

**Implants:** Poison Gland (BTX), Swarm Composition

### Squidling

Favored by some uplifted octopi as pets (and by others as snacks), squidlings are .25-meter-long squid adapted for air breathing, their natural water jet locomotion replaced by powerful jets of air, much like octomorphs, for micrograv propulsion. Most lack ink sacs, these being a hazard in space habitats. They aren't exactly affectionate, but they instinctively shoal with octomorphs for protection and will eagerly devour any scraps dropped to them. **[Low]**

**Skills:** Fray 60, Free Fall 60, Unarmed Combat 40

**Attacks:** Beak (1d10 ÷ 2) - 1 DV, AP +1

**Implants:** Enhanced Smell, Enhanced Taste

### Titanian Caribou

Companions of the reclusive hulder, Titanian caribou have dark, blubbery skin similar to the hulder themselves. Both males and females have antlers. Their muzzles contain chemical sniffers to detect the carbonaceous compounds upon which they "graze" and fractal fingers for breaking down ice, rock, and carbon grit. **[Medium]**

**Skills:** Freerunning 60, Fray 50, Perception 60, Unarmed Combat 50

**Attacks:** Antler (1d10 - 2) DV

**Implants:** Enhanced Smell, Enhanced Vision, Fractal Digits, Long-Term Life Support, Temperature Tolerance (Cryonic)

## Robots

These shells follow the rules for bots given in the *Eclipse Phase* core rulebook.

### Aerostat

These balloon platforms are used on planets or moons with atmospheres. They rely on buoyant gases for lift, but are propelled with turbofans.

**Research aerostats** are loaded with sensors and scientific analysis equipment, usually to analyze atmospheric conditions. **[High]**

**Enhancements:** Access Jacks, Chem Sniffer, Laser Link, Lidar, Radar, Radiation Sense, Telescope

**Surveillance aerostats** are equipped with sensors and surveillance packages, serving as an eye in the sky. They are also used for exploration and surface terrain mapping. **[High]**

**Enhancements:** Access Jacks, 360-Degree Vision, Enhanced Vision, Image Recognition Software, Laser Link, Radar, T-Ray Emitter

**Mining aerostats** are deployed on the gas giant planets, loaded with equipment to extract specific volatiles from the atmosphere, which are then stored in pressurized tanks. These tanks are either picked up periodically or equipped with a rocket to launch into orbit for collection when full. **[High]**

**Enhancements:** Access Jacks, Chem Sniffer, Gas Collection Gear, Laser Link, Storage Tanks

### Defense Platform

This robotic weapons platform is designed as a defensive system for small habitats, mining claims, brinker colonies, and similar small settlements. They are often placed in orbit around an asteroid or small moon to guard against encroaching intruders. They are also sometimes entrenched in physical perimeter locations. Defense platforms are equipped with two AIs with Beam Weapons 40, Fray 40, Kinetic Weapons 40, Perception 40, and Seeker Weapons 40. The beam weapons are continuously powered by the platform's

**ROBOTS**

| BOT | PASSENGER CAPACITY | HANDLING | MOVEMENT RATE | MAX VELOCITY | ARMOR | DURABILITY | WOUND THRESHOLD | DEATH RATING | MOBILITY SYSTEM |
|---|---|---|---|---|---|---|---|---|---|
| Aerostat | 0–4 | –0 | 4/20 | 100 | — | 20 | 5 | 40 | Microlight |
| Defense Platform | — | –20 | 8/40 | NA | 16/16 | 250 | 50 | 500 | Thrust Vector |

nuclear battery, while the ammo bins hold up to 1,000 rounds of ammo and 50 minimissiles. **[Expensive]**

**Enhancements:** 360-Degree Vision, Access Jacks, Anti-Glare, Chameleon Skin, Cryonic Protection, Ego Sharing, Heavy Combat Armor, Hyperspectral Imager (p. 153, Panopticon), Radar, Radar Absorbent (p. 149, Panopticon), Super-Wide Cameras (p. 153, Panopticon), 6 Weapon Mounts with 2 Exoatmospheric Particle Beam Bolters, 2 Seeker Rifles (HEAP and Plasmaburst), 2 Railgun Machine Guns

## Survival Gear

The following gear may be of use in surviving some of the outer system's more extreme environments.

### Hibernation Pod

In the outer system, distances are long and conditions are harsh. In emergencies, individuals may be isolated for weeks or months. To avoiding running out of life support or suffering the effects of extreme cold and severe boredom, users can rely on this device. Before it is activated, this pod comes in a small pouch containing a miniature nuclear battery, a supply of medical stasis nanobots, life support foam, and an emergency broadcast transmitter. This pouch has a mass of 3 kg and is approximately the size of a thick hardback novel. To active it, users open it, pull the smart material fabric around themselves, and activate the nanobots and the foam. Within 2 minutes, the device becomes a rigid pod 1 meter wide and thick and 2.4 meters long, filled with both the now solid foam and the user. The user can choose to either become unconscious or radically slow down their thoughts. The pod automatically awakens the user within one minute of entering a habitable atmosphere or if they receive a message. This device works on all biomorphs and pods and keeps them safe for up to one decade. Lacking the need for food or air, synthmorphs do not require this device. **[Moderate]**

### Smart Anchors

This harness is worn by a user but operated by a built-in AI. When activated, the harness deploys up to six anchoring cables with a reach of ten meters. These cables are designed to either spike into dirt, rock, or ice or use grip pads to fasten to an appropriate surface, with the intention of keeping them anchored should they accidentally drift off into space or kick off with enough force to reach a terminal velocity. The cables shorten or lengthen as needed to give the wearer slack and the freedom to move around. If the user moves a distance farther than one cable can reach, it will retract that cable and immediately deploy another. The device always keeps at least three cables anchored at a time. **[Low]**

## Robots and Vehicles

These shells follow the rules for bots and vehicles given in the *Eclipse Phase* core rulebook.

### Deep Sea Submarine

This mini-submersible is capable of carrying four passengers and a small amount of cargo all of the way to sea floor on Europa. Moving on propellers powered by a small reactor, it can provide life support for the crew for 1 week. **[Expensive]**

**Enhancements:** Access Jacks, Cryonic Protection, Headlights, Hydrostatic Pressure Adaptation, Maker, Radio, Sonar

### Diving Exoskeleton

This hardsuit-like exoskeleton enables the wearer to swim in the high-pressure depths of subsurface oceans. The legs are equipped with swim fins that and enhances the user's own leg movements. The arms are held into penguin-like swimming fans, but are mechanically powered and mentally controlled, as their flapping motion is not a natural form of swimming for humans. The built-in maker can provide food, water, and atmosphere for the wearer indefinitely. **[Expensive]**

**Enhancements:** Access Jacks, Cryonic Protection, Fixer Nanoswarm, Headlights, Hydrostatic Pressure Adaptation, Maker, Radio, Sonar, Utilitool

## VEHICLES

| VEHICLE | PASSENGER CAPACITY | HANDLING | MOVEMENT RATE | MAX VELOCITY | ARMOR | DURABILITY | WOUND THRESHOLD | DEATH RATING |
|---|---|---|---|---|---|---|---|---|
| Deep Sea Submarine | 4 | –20 | 4/20 | 30 | 30/30 | 250 | 50 | 500 |
| Diving Exoskeleton | 1 | — | 4/20 | 30 | 15/15 | 60 | 12 | 120 |
| Diving Sled | 2 | –20 | 4/16 | 20 | 5 | 40 | 8 | 80 |
| Fast Transport | 120/200 | — | NA | NA | 20 | 750 | 150 | 1,500 |
| Methane Skiff | 6 | –10 | 4/40 | 60 | 5/5 | 125 | 25 | 250 |
| Outsystem Hover | 6 | +10 | 8/32 | 150 | 30/20 | 150 | 30 | 300 |
| Outsystem Skimmer | 8 | +20 | 12/200 | NA | 20 | 320 | 80 | 640 |
| Titanian Cargo Copter | 32 | — | 4/40 | 150 | 20/20 | 250 | 50 | 500 |
| Utility Helicopter | 8 | +10 | 8/40 | 200 | 20/10 | 150 | 30 | 300 |

## DIVING SLED

This deep sea sled can pull along 2 passengers or 1 passenger with cargo. **[Low]**

**Enhancements:** Access Jacks, Cryonic Protection, Headlights, Hydrostatic Pressure Adaptation, Sonar

## FAST TRANSPORT

These are ordinary standard transports (p. 349, *EP*) with smart material hulls that restructure to double the amount of hydrogen carried, allowing the ship to make the journey twice as fast. The downside of reconfiguring a standard transport in this fashion is that it can only carry 120 passengers instead of the normal 200.

## METHANE SKIFF

Essentially sailboats, methane skiffs usually come in a catamaran configuration, with two sleek, flat hulls for stability. Since only hulder morphs can survive prolonged immersion in Titan's methane lakes, stability is key. Hazers and other morph types generally wear vacsuits when sailing methane skiffs. Piloting a methane skiff requires a special skill, Pilot: Sailboat. **[High]**

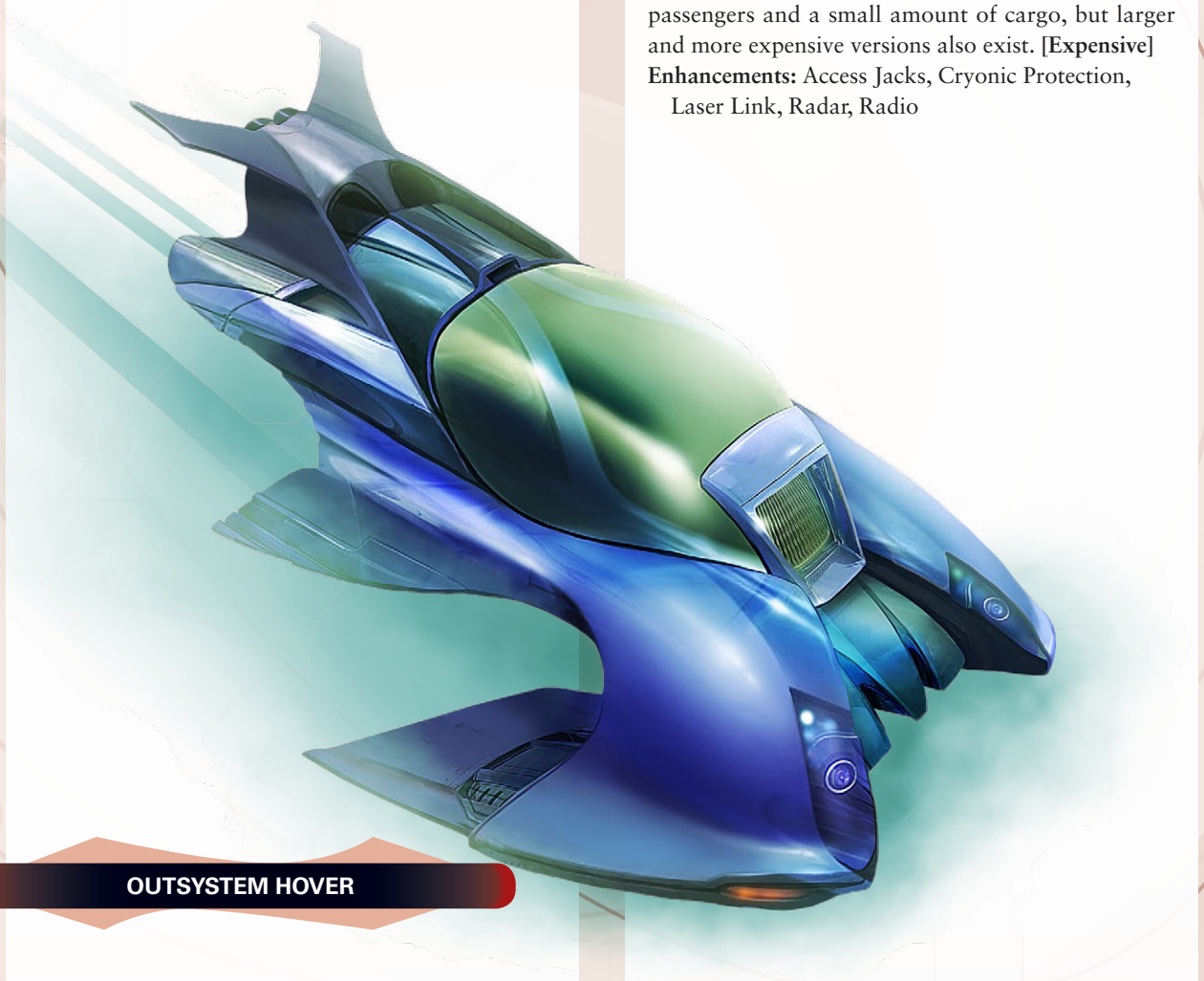
**Enhancements:** Access Jacks, Cryonic Protection, Radio

## OUTSYSTEM HOVER

Most vehicles designed for use on airless worlds have limited ranges because they are rockets that must carry along all of their fuel. However, with the exception of Io, all of the large and medium-sized outer system moons have large amounts of ice and other frozen volatiles on their surface. This vehicle employs a small reactor to convert both stored water and any local frozen volatiles into hot gases that it uses to propel itself. Using steam from its water tank to become airborne, the vehicle's underside contains powerful heating elements that flash frozen volatiles on the ground beneath it into warm gas that the vehicle then uses to move itself along.

Because it is surrounded by a cloud of roiling gas, this vehicle uses radar and t-ray sensors for navigation. Except for brief periods where it relies on stored reaction mass and can reach an altitude of up to 30 meters, it flies at a maximum altitude of 3 meters above the ground, and it has a top speed of up to 150 kph over any terrain. On any moon with either a thick atmosphere or where the surface is mostly ice or other frozen volatiles like frozen carbon dioxide or nitrogen, it can fly indefinitely. These vehicles are pressurized and contain life support that functions as long as the vehicle is resupplied with ice or other oxygen-containing substances at least once a month. The most common version of this vehicle holds six passengers and a small amount of cargo, but larger and more expensive versions also exist. **[Expensive]**

**Enhancements:** Access Jacks, Cryonic Protection, Laser Link, Radar, Radio



OUTSYSTEM HOVER

### Outsystem Skimmer

Powered by a small fusion reactor, this vehicle contains as a miniature plasma rocket that's designed to produce up to 0.25 g thrust by lowering efficiency and increasing reaction mass use. Skimmers can use either hydrogen, methane, or water as reaction mass, allowing them to swiftly and easily refuel on almost any moon. They are also quite small, being lentil-shaped disks eight meters in diameter and five meters thick. Skimmers can carry up to eight passengers and twelve tons of cargo. They can typically make a journey of up to one million kilometers in 10 hours, with fuel left to take off or land from any moon, asteroid, or other small body in the solar system. These vehicles are popular with couriers, smugglers, traders, and other residents of the outer system. Their life support functions for 30 days before it requires additional input, but they are rarely used for one-way journeys longer than five million kilometers, which take two full days. **[Expensive, min 60,000]**

**Enhancements:** Access Jacks, Cryonic Protection, Laser Link, Radar, Radio

### Titanian Cargo Copter

This massive dual-rotor helicopter takes advantage of Titan's thick atmosphere and low gravity. It is unable to fly anywhere else in the solar system, including Earth and Venus. It can carry 15 tons of cargo or 30 personnel. **[Expensive, Minimum 40,000+]**

**Enhancements:** Access Jacks, Cryonic Protection, Laser Link, Radar, Radio

### Utility Helicopter

This is a standard helicopter design from Earth, deployed on Titan. It is commonly used for cargo and personnel transport, medevac, ground/air assault, and command/control. **[Expensive]**

**Enhancements:** Access Jacks, Cryonic Protection, Laser Link, Radar, Radio

## Other Secrets and Notes

The following ideas expand on some of the material introduced in earlier parts of this book. As always, gamemasters should feel free to alter or even ignore this material as best fits their campaign settings—especially if they know their players have read this section of the book.

### Asteroid Family Neighborhoods

Given that the asteroids within a family tend to cluster together in their orbits, making it easier to travel between habitats in the grouping, each tends to develop cultural characteristics similar to other regional "neighborhoods" in space. A few of the more noteworthy families and their dominant cultures are noted below.

The **Flora** family orbits in the inner portion of the Main Belt, nearest to Mars. Though one of the early families to be exploited due to being one of the closest clusters to Earth, it has largely been bypassed in recent years for better prospects. To date, no large habitats have been developed in this silicate-rich section of the Belt. Most stations number only a handful of egos, and an unusually high number of wanted criminals have been known to seek shelter in the abandoned mining stations and decrepit outposts of this area.

Both the **Gefion** and **Nysian** families (home to Ceres and Extropia, respectively) are Extropian strongholds and a focal point of the anarcho-capitalist free market.

The cluster with the honor of having the highest rate of piracy falls to the **Griqua** family in the outer Belt region. A statistically high number of automated ships have been raided and even hijacked when passing by or through these asteroids, strongly suggesting the presence of several pirate bases here.

While not a true family in that they do not originate from the same body, the **Hildas** follow a unique orbital path that takes them in succession near the Jovian Trojans, Jovian Greeks, and an aphelion point opposite to Jupiter. The Hildas are a favorite for autonomists of various stripes, particularly anarchists.

The **Hungaria** family is just inside the innermost edge of the Belt, the closest dense cluster to Mars. Known for its high inclination, this grouping is popular among those that like to keep to themselves. Numerous brinkers, cults, secretive hypercorp labs, and opulent private residences can be found here.

The outer-orbit **Tirela** family has a reputation for being the "Bermuda Triangle" of the asteroid belt. There have been an unusually high number of both ship and individual disappearances here, including at least one small cluster habitat (they may simply have been towed elsewhere). In one of the more notable incidents, the small Zuniga torus was found entirely deserted, its residents missing without any sign of having left.

### Running the Jovians

There are many ways to handle the Jovian Republic in a campaign. As superficially presented, the Jovians are portrayed as bad guys, both for their throwback attitudes towards transhumanity, their militaristic ways, and their fascistic government. It is certainly easy to play this up by highlighting their expansionism and belligerence towards other polities, their slingshot taxation and invasive naval patrols, or the way they repress their own populations and commit civil rights violations. This villainous empire niche is often important for certain scenarios—nobody minds shooting space Nazis, right?

On the other hand, you can also present them in a more nuanced fashion. At its core, the Jovian mission is about saving humanity from extinction—an agenda with which even Firewall can agree. Given

the availability of super-empowering technology in *Eclipse Phase*, and how close transhumanity has already come to being wiped out, their fundamental concerns are widely shared. However, whereas other factions view technology as a tool that can also save transhumanity and even look optimistically toward the future, the Jovians take a more extreme approach to the matter. In their ideology, security is more important than personal liberties and technological progress is a potential danger that must be restricted, no matter that doing so costs human lives. The methods they choose to pursue their mission are designed to provide them with the utmost control over humanity's precarious situation, yet it also opens the door to potential abuses of power. By presenting the positive and sympathetic elements of the Jovian cause alongside the negative and terrifying, the Jovians become a more complete and multi-faceted entity.

These dual characteristics can be highlighted in your campaigns. The Jovians can be brought in as allies to Firewall in many missions, given their joint desire to deter x-risks, but tensions may arise over specific tactics and end goals. Or they may start off as enemies, only to come to terms with the characters in order to stave off a mutual threat; though by working with the Jovians, the characters risk legitimizing their other actions. Alternatively, a campaign can be run inside the Republic, dealing with the tensions and conflicts inside Jovian society. The bioconservatives themselves are not united, split between the pragmatism of the Junta's mostly atheist leadership and the reactionary doctrines of the religious masses. The technology-banning CBEAT also competes against the Republic's own corporations and medical workers, both stymied by lack of progress. Poor Jovians must face lives in septic habitats, with limited rights, and without the luxuries shared by most other societies, all in the name of security from threats they may never see.

## Jovian Military Conflict

The ongoing escalation of tensions between the Republic and the city-states of Callisto, particularly Hyoden and Gerðr is ripe for plot material. This could be a campaign based on political maneuvering, spycraft, and behind-the-scenes sabotage, as the rival factions seek to undermine each other and gain advantage. The Republic is eager to derail Hyoden's stability and cultural diversity and could seek to subvert its leadership and create scandals to drive people away. Likewise, the people of Hyoden are eager to weed out Jovian infiltrators and gain new allies. The Jovians are also eager to know if the reports about Gerðr's Planning Council seeking to go independent are true—something that even many native residents are unsure about.

Either of these campaigns could easily transform into a military operation, as the Republic acts upon its expansionist plans and seeks to solidify its control over these unruly city-states. Either habitat would likely have a difficult time competing with the Junta's military might, but they could certainly make the engagement costly for the Jovians, and possibly force the situation to devolve into a protracted campaign where Jovian occupying forces must fight against insurgents using asymmetric warfare tactics.

## Jovian Trojans Distances

The Trojan L4 and L5 points are 5.2 AU from Jupiter. On average, that's a farcasting time lag of 43 minutes. This places the Trojan points about 9 AU from each other, for an farcasting time of 75 minutes. The Trojans are spread out, however, each occupying 26 degrees of Jupiter's orbit, roughly 2.5 AU in length, so these times can vary by around 10 minutes.

Travel by ship between the Trojan Points and Jupiter by standard transport is 56 days, give or take a week. Travel between the L4 and L5 points takes 90 days, give or take a week.

## Immigrating to Bright

In rule terms, individuals must have a current COG score of 30 to be eligible for citizenship on Bright (p. 71) or even to stay there for more than two standard days. All visitors are tested upon arrival, but the test only requires a brief brain scan lasting several minutes. Individuals displaying scores of 40 or higher will usually be offered various incentives like priority access to goods and facilities to make Bright their home for at least a few months.

## Politics and the Trade in Deuterium and Helium

Helium-3 fusion became popular several decades before the Fall, because it was the only type of fusion that did not release free neutrons and thus required far less nuclear shielding that would eventually become radioactive. However, four years ago, researchers on Titan developed a method of creating fusion reactions that insured that 95% of deuterium-deuterium fusion reactions were the variety that released no free neutrons. As a result, almost all modern fusion reactors built in the last few years use deuterium-deuterium based fusion. These reactors can be easily refueled from any source of hydrogen, such as gas giant atmospheres or the abundant ice found on almost every outer system moon. However, a number of older fusion reactors, especially those built before and during the Fall, are still powered by helium-3. As a result, gas mining for helium-3 is common around all of the gas giant worlds, especially Saturn, where the combination of relatively low gravity and abundant helium make it an ideal choice. Gas miners from Saturn also send cargo shipments of helium-3 to older settlements

and facilities in the Main Belt. Ongoing tensions between the Planetary Consortium and the Titan Commonwealth prevent Saturn-derived helium-3 from being used on Mars.

## Iapetus

The outer hundred kilometers of Iapetus are now completely abandoned, but intelligence still lurks within this moon. Deep in the warrens that wind through the many layers of computronium and other inexplicable TITAN-created technologies, a small remnant of the previous population remains. While this world once harbored more than 200,000, today it is home to slightly less than a 1,000 strange and unusual beings. Some of these survivors are exsurgent worker drones—former transhumans twisted into alien monsters—that did not self-destruct or die off when this moon's guiding intelligence vanished. The vast majority of Iapetus's population was transformed into tissue cultures grown to feed the drones, but only after their minds were uploaded by the vast intelligence that once dwelled here. A few of these uploaded individuals were downloaded into bizarre synthmorph bodies that served as mobile semi-independent extensions of the TITAN's vast mind.

Most of the biological creatures here survive by eating from the tissue culture vats and makers that they have managed to maintain, and a few raiders subsist via cannibalism. These exsurgents come in a wide variety of forms, including a small number of whippers and wrappers (p. 370, *EP*) and a large number of the "fractal trolls" described in *Into the White* (p. 4), but most have never been seen before; a few are unique. Most have been adapted to survive in the vacuum and cold of Iapetus's tunnels. The remainder are the strange synthmorphs, many of them similar to arachnoids or flexbots, inhabited by egos that were forcibly uploaded by the TITANS.

All of these survivors have experienced at least some memory loss. Most only retain fragmentary memories of their life before the Fall. Some of the synthmorph minds consist of jumbles of memories and personality traits from several uploaded minds that have become connected together into a single new, if often fairly damaged mind. Most of these new minds have no idea that they are not the remnants of single individuals. While they all know that they have lost much of their memory, few worry about the fact that the sequence of their memories makes no sense because these memories come from several different people.

Some of the survivors are dangerously insane and attempt to attack anyone who approaches them. They remember at least some of their existence under the control of the TITANs and are utterly terrified of all outsiders, assuming that anyone from outside Iapetus must be another agent of the TITANs come to destroy or enslave them. As a result, the inhabitants of Iapetus either flee from outsiders or attempt to kill or capture them. Those who kill outsiders often attempt to make use of their gear and to eat the remains of biomorphs. Others coerce and torture their victims into revealing the TITANs' plans or seek to convince captives that they are now free and can hide from the TITANs in the depths of Iapetus. Almost none will even consider the idea that any outsiders are actually free-willing transhumans who survived the Fall.

### Portraits

The current inhabitants of Iapetus are the creators of the mysterious portrait sculptures and paintings

## OPTIONAL RULE: ULTIMATE REP

As an ultimate achieves greater self-actualization and naturally spends more time working and living with fellow adherents, their standing within the movement becomes much more important than other reputation networks. Although an ultimate still maintains a presence on other social networks, their philosophy devalues those interactions and exchanges. To reflect this, ultimate characters may make use of the special Networking: Ultimates skill and U-rep, a special Ultimates-only faction reputation score. U-rep favors can be used to call in expertise on almost any skill, for military gear, resleeving, and morph services, or for travel to and from stations with a significant ultimate population.

The ultimate ideology views the use of rep and favors differently than other networks. Calling in assistance must be carefully considered. Each individual is expected to succeed of their own abilities. While the use of favors is an accepted and common part of that pursuit, such favors are expected to be used for execution of tasks outside the character's own competency. Favors in areas that the requester is known to have skill in may take a penalty on the Networking: Ultimates Test at the gamemaster's discretion. Further, as the ultimates are a distinct minority outside of their bases on Aspis and Xiphos, it may be difficult to call in favors on the fly, as individuals with the needed skills may need to egocast into a location before they would be of any use. Forethought and planning for the future are, as ever, hallmarks of the movement. ■

that explorers have recently found. Many of these beings long for contact with the pre-Fall world, before the horrific transformation of their minds and bodies. These artistic pieces can be considered an attempt to make their shattered memories more concrete, perhaps even an attempt to share them with their fellows by creating images of themselves and people they knew well. These images are made of local materials, since the inhabitants have no means to make the tools or materials needed to create more standard forms of art.

### RESCUE

If someone could remove one of these morphs from Iapetus, the occupant could eventually be resleeved in a normal morph, but the lack of a cortical stack and the exotic nature of the modifications the TITANs made to these victims' minds and bodies applies a –20 modifier to all attempts to upload, resleeve, and fork. These subjects also suffer from the Edited Memories, Mental Disorder, and Neural Damage traits (pp. 149–150, *EP*). Almost half of the inhabitants of Iapetus are effectively new, partial egos that would require extensive work to make stable and sane, but the remainder are people from before the Fall who may have amnesia and neurological damage, but who can eventually become much of who they once were.

### FRACTAL TROLL

These pale and hideously deformed former humans are two meters tall, though they stand with a hunched gorilla-like posture, with elongated forearms and massive clawed wrists. They have two extra sets of smaller arms, one pair jutting out from the back shoulders and the other extruding directly from the chest. These smaller pairs of hands are equipped with fractal digits. Though capable of surviving in vacuum, many of them are still equipped as their human forms were when they were transformed.

| COG | COO | INT | REF | SAV | SOM | WIL | MOX |
|---|---|---|---|---|---|---|---|
| 20 | 20 | 40 | 30 | 10 | 40 | 15 | — |

| INIT | SPD | LUC | TT | IR | DUR | WT | DR |
|---|---|---|---|---|---|---|---|
| 14 | 2 | — | — | — | 55 | 11 | 83 |

Skills: Fray 55, Free Fall 40, Freerunning 50, Infiltration 30, Perception 60, Unarmed Combat 70

**Implants:** Access Jacks, Basic Mesh Inserts, Claws, Direction Sense, Enhanced Smell, Enhanced Vision, Fractal Digits, Muscle Augmentation, Nanoscopic Vision, Oxygen Reserve, Prehensile Feet, Puppet Sock, Temperature Tolerance (Cryonic), Toxin Filters, Vacuum Sealing

**Attacks:** Claws (1d10 + 7) DV, AP –1; Fractal Gouge (1d10 + 4), AP –8

**Notes:** Armor 8/8, Edited Memories, Mental Disorder, and Neural Damage traits

### MEATHAB

MeatHab is an ego that has sleeved into a habitat (p. 172, *Panopticon*). The original ego is still present but prefers to keep a low-key approach towards most of the inhabitants. At his core, MeatHab is someone looking for peace through a strange but gentle accommodation of the flesh. However, MeatHab is something of a prankster, apt to playfully mess with those who try to communicate with him. He is definitely amused by the many attempts to interpret what he's done.

While MeatHab itself is not a bad guy, there are all sorts of things that can go wrong for him. Corps want a piece. Artists want him to somehow be part of what they're doing. Exhumans wrongly interpret him as being in their camp, when in reality MeatHab is a very humane soul who happens to enjoy having his insides full of a lot of other transhumans. Perhaps the most serious threat to MeatHab are the exsurgents who see the massive living habitat as a vessel waiting to be filled with their twisted desires.

## PROMETHEUS'S SECRETS

Titan's antimatter factory on this small moon is almost an open secret, but it also remains one of the highest security installations in the outer system. Part of the reason for this security is that the antimatter is only one of Titan's secret projects occurring on Prometheus. Marseilles is also the Commonwealth's primary high-energy research facility. It is home to several small and largely speculative projects including attempts to duplicate the Factors' reactionless drive and create weapons that cause small amounts of matter to spontaneously convert to antimatter at significant ranges. Neither project has made much progress, but because they are both theoretically possible, research continues.

The two largest and most well-funded research projects occurring on Prometheus both involve attempts to create high-power reaction drives. One project is an attempt to create quantum black holes to be used for reaction drives and power generation, and the other is an attempt to transform matter into energy by inducing proton decay, which would enable reaction drives to significantly exceed the velocities and efficiencies of current antimatter drives without the necessity of manufacturing or transporting antimatter. Both projects are far from complete, but researchers have made significant progress and are hopeful that they will succeed within a few years.

The antimatter factory and the research area are each located in large caverns that have been transformed into beehive installations. Both are approximately 30 kilometers from the inhabited portion of this moon and 20 kilometers from one another. The hope is that if there is a serious industrial accident in either cavern, the other cavern and the inhabited

areas of this moon will survive intact. All of these technologies being researched have serious potential as weapons of mass destruction, which is one of the many reasons that the Titanians keep them secure—and why outside groups like Firewall, the Jovians, and Project Ozma might be interested.

## Titanian Voting and Reputation

How someone votes in the Plurality doesn't generally affect reputation, but whether they vote does. Titanians traveling abroad, serving with the military or security forces, in dead storage, or in poor health are excused from participation, but everyone else is expected to vote and weigh in occasionally on forums. A character from the Titanian faction who doesn't spend at least one hour each week following Plurality business and voting on measures may be subject to @-rep penalties at the gamemaster's discretion.

A good rule of thumb is that a character who drops out of political life without informing associates that they will be away (or being recognized as missing by the authorities) loses @-rep at a rate of 1 every two weeks. Unfortunately, being away on a secret Firewall mission isn't a good excuse for not voting (though being able to claim convincingly that one was doing work for the Commonwealth is).

Given the complexities of bookkeeping and the many situational modifiers to such rep loss, gamemasters are encouraged to be even handed. The idea is not to penalize characters for going on missions but to simulate the fact that the Commonwealth doesn't tolerate political apathy from citizens.

## Titanian Muses

Due to the need to keep their owners apprised of goings on in the Plurality, Titanian muses commonly have the following skills: Academics: History 60, Academics: Political Science 60, Interest: Parliamentary Procedure 60, and Profession: Law 60. A common muse upgrade, the Plurality package, contains all of these skills and may be acquired from several Titanian microcorps at a cost of [Moderate].

## Ultimate Ranks

In character terms, these are the basic requirements for each level of ultimate rank (see Standing Among Giants p. 121):

**Aspirants:** At least two skills at 50+. Networking: Ultimates skill becomes available at this rank.

**Initiates:** At least three skills at 60+. U-rep 1–20.

**Exemplars:** At least three skills at 70+ and four other skills at 50+. U-rep 21–60.

**Ducti:** One skill at 80+, ten or more at 60+. U-rep 61–80.

**Autarchs:** One skill at 90+, twelve or more at 70+. U-rep 81+

## Neptunian Trojans Distances

The Neptunian Trojan points are on average 30.1 AU from Neptune, for a farcasting time lag of 4 hours, 10 minutes. This places the Trojan points about 52.1 AU from each other, for an farcasting time of 7 hours, 13 minutes. Like the Jovian Trojans, these are spread out across 30 degrees of Neptune's orbit, so these times can vary by up to 2 hours.

Travel by ship between the Trojan Points and Neptune 271 days, give or take a few months. Travel between the L4 and L5 points takes 400 days, give or take a few months.

## Ilmarinen Morphs

All morphs available on Ilmarinen (p. 132) have either Low Pressure Tolerance or Vacuum Sealing enhancements, plus either Temperature Tolerance (Improved Cold or Cryonic) for biomorphs or Cryonic Protection for synthmorphs. Enhanced Respiration and Oxygen Reserve are also common.

## Trans-Neptunian Distances

Given the vast distances involved, locations in the Kuiper Belt and Oort Cloud present a challenge for use as a campaign setting. Specific habitats and locales may be used, but their isolation means that any attempts to communicate or travel elsewhere is going to mean a serious time lag at best, a gap in the time frame of months or years at worst. This means that characters will not be able to easily send off forks or egocast elsewhere to gather information or aid, at least in a hurry. Likewise, if they are in need of physical support, their allies are likely going to be many hours away at best, and may not arrive by ship until many months after the situation is resolved. Keep in mind that a request for aid must first travel the distance to the requestee, then the response will take an equal time coming back, not to mention any time getting ready. This can, of course, also work in the player characters' favor if they are dealing with someone who happens to have powerful allies; no one likes to be caught alone in the far reaches of the system.

There is always the possibility of playing a campaign that intentionally spans the lengths of years (or even decades!) as the characters physically travel around the extreme outer rim, either as explorers/investigators, comet herders, or cargo farhaulers. Hibernoids and synthmorphs are favorable for such long-term travels. The characters would need to deal with the fact that their rivals and enemies might move faster than them in some cases, perhaps egocasting ahead (or traveling via a faster antimatter powered ship). The campaign would also need to account for the fact that the rest of the universe would continue along at its usual speed—and given the pace of technological advancement with transhumanity, this might mean that some things are unrecognizable by the time they return from a journey taking years.

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