TWILIGHT SECTOR

SPACE OPERA



Campaign Setting Sourcebook

Revised Edition

Michael J. Cross & Matthew Hope

TRAVELLER

Compatible Product

William Self (order #4987768)

TWILIGHT SECTOR

Campaign Setting Sourcebook

CREDITS

AUTHORS

Michael J. Cross & Matthew Hope
with supplemental material provided by John Lees

EDITING & LAYOUT

John Lees (Second Edition)

INTERIOR ILLUSTRATIONS

Michael Syrigos, MuYoung Kim, Emel Akiah, Kenneth Fairclough, Mates Laurentiu - ***Avatar Art***, Earl Geier, and Beny Maulana - ***Gong Studios***, John Lees, ***Indalo Publishing***

PLAYTESTERS

Craig Boeding, Stephen Bowden, Scott Bower, Chris Stevens, Mark Stinson

COVER

Cybil Mar: Through the Open Door
by Mates Laurentiu, AvatarArt

CARTOGRAPHY

Ashok Desai, John Lees

SPECIAL THANKS

Most importantly **Lori Cross** and **Katherine Cross** for supporting me in this crazy endeavor. Also to **Richard Baker** and **David Eckelberry** for creating a vision that inspired this one.

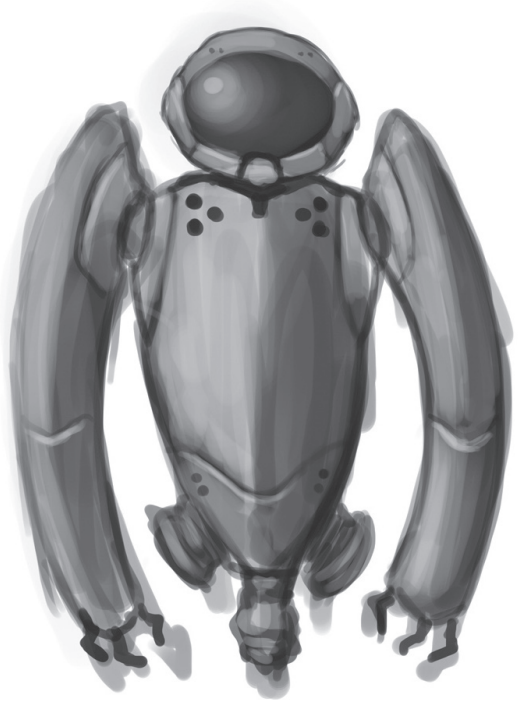
"Traveller" and the Traveller logo are Trademarks owned by Far Future Enterprises, Inc. and are used according to the terms of the Traveller Logo Licence version 1.0c. A copy of this licence can be obtained from Mongoose Publishing. The mention or reference to any company or product in these pages is not a challenge to the trademark or copyright concerned.

Product Identity: The following items are hereby identified as Product Identity, as defined in the Open Game License version 1.0a, Section 1(e) and are not open content: All trademarks or registered trademarks, proper names (characters, organizations etc.), dialogue, plots, storylines, locations, characters, artwork and trade dress. (Elements that have previously been designated as Open Game Content or are in the public domain are not included in this declaration.)

Open Content: Except for material designated as product identity (see above) any game mechanics are Open Game Content as defined in the Open Gaming License version 1.0a section 1(d). No portion of this work other than the material designated as Open Game Content may be reproduced in any form without written permission.

Twilight Sector: Campaign Setting Sourcebook is published by Terra/Sol Games LLC under the Open Game License version 1.0a, Copyright 2000 Wizards of the Coast Inc.

Terra/Sol Games LLC, the Terra/Sol Games logo and the Twilight Sector logo are trademarks of Terra/Sol Games LLC © 2009 Terra/Sol Games.



CONTENTS

INTRODUCTION 3

GALACTIC HISTORY 4

- The Olive Branch War 6
- The Long Night 7
- The Second Wave 8
- The Cyber War 8
- The Third Wave 9
- The Rise Of Mutants 10
- The War For Independence 11
- The Fourth Wave 11
- The Mutant Uprising 12

Stellar Nations: 2991 13

- The Orion Confederation 14
- The Oster Republic 17
- The Deramus Enclave 20
- The Archenar Peoples Republic 23
- The Shenzhou Hegemony 26
- The Free Peoples Republic 29
- The Union of United Planets 32
- The Terran Union 35

Life in the 30th Century 39

Living and Being 40

Society and Technology 46

Playing Mutants 51

- Positive Mutation Descriptions 53
- Negative Mutation Descriptions 55
- Mutation Packages 57
- Playing a Centennial 58

A Brief Overview Of The Twilight Sector 59

- Argos 62
- Echoes of War 67
- Dorlass 69
- Helix 76
- Ratan 79
- Netherell 85
- Terra/ Sol 86
- VanKila Kiertotahti 98
- Stations in the Twilight Sector 103

Encyclopedia Galactica 105

Index 113

INTRODUCTION

Welcome to the raggedy edge of human space, the Orion Frontier. This is the edge of human exploration. Rimward from here: *There be Dragons*! No star chart or encyclopedia tells us what lies beyond, only whispered tales of scouts and pirates provide us myth-inspired answers.

But here there is life... life in abundance and wonder to boot. The edge of the Orion Frontier is an arbitrary area of space called the Twilight Sector. Legends on the naming of the place abound. Was it a joke of some bureaucrat disgruntled with his posting, just the poetic license of those who came to call the place home or a comment on it being the last spec of human settled space? Arguments and evidence for each claim are many and it's unlikely that the truth will ever be known.

What the Twilight Sector does have though is a wonder: Earth! Or at least an exact copy known as Terra/Sol. The planet is a beautiful blue green ball of cosmic habitat that resembles the mother planet down to the shape of its continents.

Opportunities for adventure abound on this duplicate Earth and the Twilight Sector which surrounds it and you can choose what type of character you want to explore them as.

Terra/Sol has more than its fair share of mutants and along with it some of the same strife that lead to the Mutant War. In the Twilight Sector you can choose to become a Natural Mutant (NM), chosen by fate, genetics, or the tinkering of some alien race, to be different from baseline humans. You could be a Scientifically Induced Mutant (SIM), created through the power of modern genetics to withstand and thrive in conditions not normally suited to humanity. Or how about a Psychic, your mutation is deep within your brain allowing you to wield powers simply with a thought.

This is not to say that baseline humans are without possibilities however. Modern technologies can even the playing field and more between baselines and mutants. Cybernetic implants and modern gear mimic many if not all of the abilities gifted to mutants and without all that social stigma.

If the whole *Homo Sapiens* thing is 'been there done that,' why not try playing an uplifted animal? Dolphins and the great apes are common but other types may be available as well.

In the Twilight Sector you will find mysteries in abundance. How did a perfect copy of the Earth wind up here? It hardly seems probable for it to have naturally developed! Maybe even more importantly, why is it here? A honey trap for humanity, the Shenzhou's perfect world? Will you be the one to figure it out?

This is the edge of human exploration. Rimward from here: *There be Dragons!*

When the Mutant War came, exploration of the Twilight Sector had barely begun. A mere quarter of the sector has already yielded two class one worlds, Precursor ruins and so much new territory you could spend a lifetime unlocking its secrets. What lies in the rest of the sector? More Precursor ruins? Perhaps finally, first contact with an alien race? Will you be one of the bold explorers that chart the sea of stars?

The Mutant War has not resolved all issues between stellar nations nor has it allowed the natural rivalries of Terra/Sol to be dealt with. On Terra/Sol the Aztec Empire and the Andes Free State have a simmering border dispute. The Russian Empire continues to encroach on Columbia and the Republic of the Plains territory. The Archenar Peoples Republic continues to have a toehold in the sector. Why do they struggle to maintain a presence in a sector so far from their own territory? Why do they park an invaluable dreadnought in one star system and keep everybody out? Will the Orions continue to tolerate this threat to their sovereignty within the sector? In short, will there be war? And if so, on whose side will you fight?

GALACTIC HISTORY

…the Long Pause, the time from the first moon landing to the beginning of true space exploration was more than eighty years. But by the 2050s exploration of the Sun's solar system began in earnest. The moon was explored and saw its first permanent settlers in 2059. Mars soon followed and the belt shortly after that. By the end of the century the solar system was a riot of activity. Throughout this time great strides were made in the areas of science and technology. One of the most important of these was the development of the positron engine. By 2110, the first interplanetary craft equipped with positron engines soared into space. The world powers proceeded to visit, divide, and colonize almost every nook and cranny of the solar system, expanding their territories and exploiting natural resources from Mercury all the way to the fallen planet (now planetoid) Pluto.

Humans adapted themselves to the rigors of deep space life by hurtling into yet another frontier: full-scale genetic manipulation. The first Scientifically Induced Mutations (SIMs) were designed and created by the leading biological engineering corporations. They raced to create the best gene models possible. Belt modified or "belt mod" humans were the first to arrive in 2073. Many more types were soon to follow. When people saw that SIMs could exist, breed and thrive, it opened the doors for many other types of "SIM" gene models to be created. With the advent of retrosequencing, both adults wishing to become SIMs and the parents of prospective SIM progeny lined up for the technology.

The discovery of an ancient object under Europa's ice in 2132 would prove to be the most significant discovery of the solar system exploration era. The crystalline object was first thought to be

FASTER THAN LIGHT TRAVEL

The superluminal drive is, as the name suggests, an engine capable of moving vessels faster than the speed of light. It accomplishes this by utilizing tachyon particles in the engine chamber. The controlled release of these particles drops a vessel through a previously unknown dimension instead of moving it across normal space and time. This dimension, often called **Tachyon space**, is tied to the gravitic plane of the galaxy and is warped or folded-in on itself allowing travel of a specific distance (based on the volume of tachyon particles released) without violating the law of general relativity. The spacecraft never actually travels faster than the speed of light, but because of the folded nature of the gravitic plane, spacecraft using superluminal drives reach their destination in a fraction of the time that light could traverse the same distance in normal space. The distance traveled depends on the number of tachyon particles released which in turn is dependent on the size of a ship's superluminal drive. So theoretically the larger the ships drive the farther it can travel, within certain limits that have confounded engineers; particularly at the lower end of the mass scale where miniaturization has proven difficult.

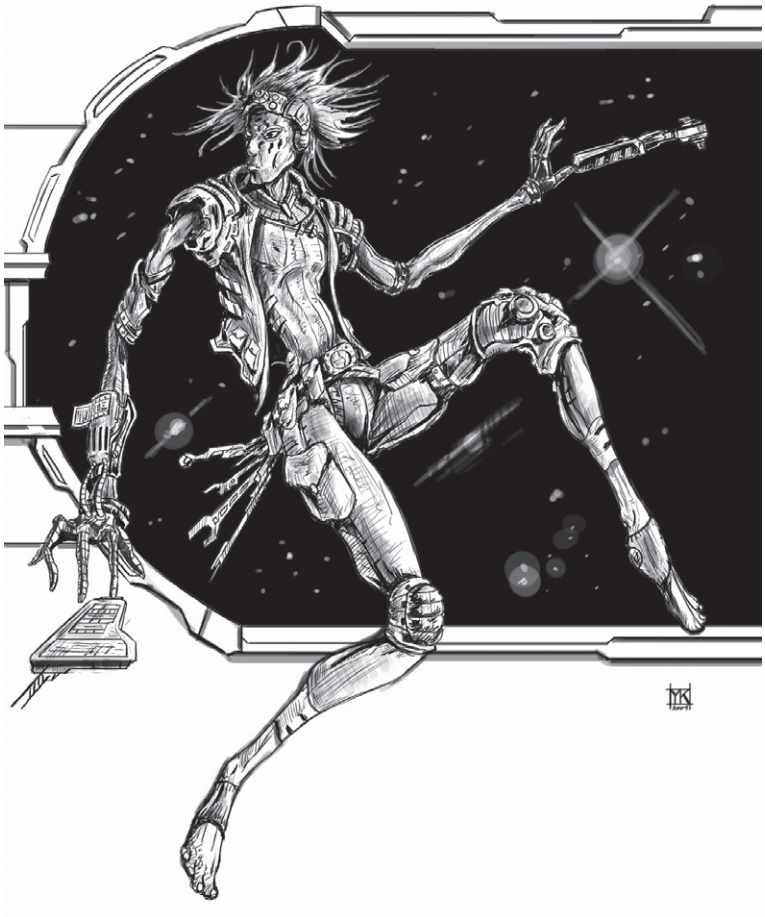
In game terms: *While this faster-than-light technology can – and is designed to – be used as a Setting-appropriate version of Jump Drive Technology, Terra/Sol games also incorporates a variant "Jump" option referred to as Superluminal Drive. Referees do not have to use it if they prefer standard Jump Drives, but future Terra/Sol projects will incorporate Superluminal Technology into their adventures and gamebooks. The size of Superluminal-Drives are the same as Jump Drives, and the same amount of fuel is needed to get into Tachyon Space. The vessels are rated, much like Jump-Drive, for the speed travelled in Parsecs/week, but once T-Space is entered, vessels can continue travelling through the T-Space until they reach their destination and no set time is required. A Superluminal 1-Parsec rated vessel for instance travels 3 Parsecs over the course of 504 Hours (3 weeks) while a 6-Parsec rated vessel only requires 84 hours (3 days and 12 hours) to make the same trip. See further details in* Mistress of the Belt *or at* ***www.terrasolgames.com****.*

natural but later it was determined to be some sort of alien spacecraft. Fifty years of study and reverse engineering finally revealed the objects greatest treasure, gravitic technology. The ability to build a machine that produced artificial gravity is used by the 30th century in a wide variety of technologies from gravplates to Maneuver Drives and zero-gravity belts. Much of this occurred in stages, as the gravitic technology was understood better and brought down in scale over time.

The new technology allowed spacecraft to travel at speeds that previously would have turned their passengers into strawberry jam. Even more important to the history of mankind though was the application of gravplate technology to the problem of faster than light travel. In 2182 a multiple government effort by the United States of America, Great Britain and Australia announced the re-engineering of the world's first superluminal drive.

The superluminal drive wasn't the only advancement aided by the discovery of the alien craft on Europa. Research into quantum mechanics was greatly advanced leading to the development of the first truly quantum computer in 2156. The hurdle of storage capacity, always a bug-a-boo in the development of Artificial Intelligence, was largely overcome with this development. Practical AI soon followed, and Mankind spawned its first true miracle: the creation of a new non-subspecies category of sentient lifeform. Eventually, AIs would revolutionize human society. Nonetheless, even as late as the final years of the 30th century, the human brain is still the smallest sentient computer known and certainly the cheapest.

With the discovery of faster than light travel, miles long dreadnoughts were constructed to house massive superluminal drives. These vessels could carry smaller ships attached to them; each time a ship enters T- space a tachyon envelope is created which encloses the ship and any attached objects. There are practical limits to the size of the tachyon envelope but for the most part this has yet to become an issue for the dreadnoughts. These vessels, most of which were heavily armed and armored were the pinnacle of human shipbuilding. Some questioned the need to go heavily armed on exploratory missions, but most held to the notion that, after all, humanity didn't know what lay beyond the solar system. However, the discovery on Europa confirmed that there was something out there. With the advent of these ships, Mankind began the exploration of the galaxy. Dreadnoughts are still in use today, updated with the latest technology and equipment. Due to their size, dreadnoughts have become huge traveling cities that contain everything from neighborhoods to businesses to support the ever changing populations that inhabit them.



A Belt Mod SIM in their natural environment.

Relying on almost two hundred years of astronomical observations looking for stars with planets, the ships set out to explore that portion of the

With the advent of [Dreadnoughts] Mankind began the exploration of the galaxy.

galaxy closest to the mother planet. Their main goal was to find other planets for colonization and other systems with exploitable resources. Ideally they would find both in the same system.

Over the next seventy-five years numerous candidates for colonization were found but so called "class one" worlds (worlds inhabitable by baseline humans with no modification or life support necessary) were decidedly harder to find. By 2260, five class one worlds had been found as well as thirty seven worlds capable of being brought to class one level with minimal terraforming. Man had expanded to the stars at last. Millions if not billions of humans were now living away from the mother planet. Whole generations of mankind had been born, lived and died without ever setting foot on Earth. This led to inevitable cultural drift - a drift that would lead to great changes in the years to come.

THE OLIVE BRANCH WAR

In 2261 the first small crack in the Earth's control over its colonies occurred. Like many wars before it this one began with a seemingly insignificant act. The small colony on Phoibe in the Ross 780 system protested the speed at which terra forming was taking place on their planet. Masses of people took to the streets and the colony - a joint Chinese/European Union project - was subjected to significant property destruction by the protesters. The local Chinese garrison reacted forcefully and several protesters were killed. Those killed were European Union citizens. Favoritism was claimed and so with another factor entering the equation, tensions escalated. The United Nations quickly sent in peacekeepers but no resolution to the situation was offered.

This small act was like the first pebble of a landslide. Over the next three years other worlds and colonies started airing long held grievances. Everything from poor mail service to taxation issues. These wildly dissimilar grievances were bound together under the auspices of the Phoibe protest and so all came to be known as the Phoibe Uprising.

What became clear from all these grievances was that the state sponsors of the newly settled worlds were not listening to the colonists' complaints about how their new homes should be run. The new colonies were being managed for the benefit of the sponsoring states with little regard for the colonists' wants or needs, causing widespread dissension.

The Earth-based powers' response was almost universal when protests erupted: they called in UN



The Riot on Phoibe, considered by most historians to be the definitive beginning of the Olive Branch War.

Peacekeepers. The dual olive branches of the UN symbol gradually came to represent oppression to the colonists. As for the Peacekeepers themselves they held little stake in the disputes they were called in to mitigate and held a limited mandate to respond to the abuse being heaped upon them by the colonists. Little was being done to address the colonists concerns after the introduction of Peacekeepers and so it was only a matter of time before colonial frustration boiled over.

Finally in 2265 things boiled over again on Phoibe. The colonists attacked the Peacekeepers, resulting in over four thousand dead colonists and the annihilation of the entire 402 armed Peacekeeping force. Other colonies quickly followed suit, mounting armed rebellions of their own. None nearly as extensive or bloody as Phoibe's but they stretched UN resources to their limit.

Back on Earth the reverberations of the "Phoibe Incident" were hotly debated on the floor of the UN General Assembly. Little was being accomplished as the colonial powers (those nations which had sponsored the colonization and development of extra solar planets) seemed unwilling to relinquish control over their colonies, but continued to demand UN support in quelling the insurrections. Non-sponsoring states (countries which did not sponsor any colonies), although the poorest members of the assembly, outnumbered the sponsoring countries and eventually tired of the debate and voted to withdraw peacekeepers from the colonies. This move provided *de facto* independence for all of the colonies who wished it, and they quickly set about declaring such.

The sponsoring countries were not ready to accept this result and immediately set about organizing an invasion force to take the colonies back. Of the five dreadnought class ships in existence at the time, four were under UN control. Only the American dreadnought, *Independence*, was not.

America was a sponsoring country however, and as eager as any to reclaim its colonies. During the planning process to recapture the colonies, the sponsoring countries quickly fell into disagreements about financial and manpower responsibilities. They argued whether there were to be any changes in the sponsorship of certain colonies and other trivia.

As this debate raged, word came of the loss of the UN dreadnought *Santa Maria*. She was on a deep space exploration mission when her regularly scheduled gravity radio broadcast was not received. Time marched on and no contact came from the dreadnought. Eventually two dreadnoughts were dispatched to the last known location of the *Santa Maria* and its stated next destination. No trace of the vessel was ever found and its disappearance remains a mystery to this day.

With the loss of the *Santa Maria*, a mood swing gripped the population of Earth. They became more introspective and defense minded. Most felt that there was something out there in the vastness of space and quite possibly it was hostile and more advanced than humanity. They abandoned plans to retake the colonies and most exploration projects were put on hold. Effectively, the Olive Branch War was over.

THE LONG NIGHT

As such things are measured the Olive Branch War was mostly bloodless, but its results left humanity scattered, leaderless, and paranoid. The UN looked to build the defenses of the solar system fearing an attack on the heels of the disappearance of the *Santa Maria*. The UN delegates argued incessantly over why Earth had lost all her colonies and exactly what powers should be granted to the body. The colonies were left to fend for themselves for the most part. For many that meant no support for their terraforming and other development projects. It became a struggle for many of the outer worlds just to meet the basic survival needs of their populations.

Technology had outstripped humanity's ability to absorb and assimilate the changes it brought about.

Sociologists however have generally come to the consensus that the Long Night was a necessary period of adjustment. Technology had outstripped humanities ability to absorb and assimilate the changes it brought about. It provided time for human society to get used to the whirlwind of new technologies that had been introduced, time to come to grips with the reality of interstellar travel and the existence of unknown alien cultures.

That's not to say that the Long Night was devoid of human advancement. Science marched on and

significant developments continued during the Long Night. Breakthroughs in nano technology and nuclear fusion were two of the most prominent advancements in science.

The Long Night lasted for approximately 240 years, from the end of the Olive Branch War to the dawn of the 26th Century. In 2501, several events marked its end. First, construction was completed on two new Dreadnoughts, the first new vessels of that size since the loss of the *Santa Maria*. Second, a much diminished Phoibe applied for re-admittance to the Terran Union. These symbolic events seemed to peel back the dark pall that had held Earth in its grip.

THE SECOND WAVE

The first step was to break the dark mindset humanity found itself in after the loss of the colonies and the *Santa Maria*. That was accomplished with the building of two new dreadnoughts and the readmittance of Phoibe to the Terran Union. Then in 2502, changes in the powers granted to the UN were the catalyst for a second wave of human stellar exploration. The UN was granted the power to administer all extra-solar territories. This lead to a wave of applications from other independent colonies for readmittance to the Union as well. Eventually leading to the readmittance to the Union of all the independent colonies.

At the beginning of the second wave the Terran Union and her colonies were spread out over a bubble of space with a diameter of 50 light years. Over the next seventy-six years human settled space doubled to 100 light years across. The expansion had come to a virtual standstill by 2578 due to a lack of dreadnoughts to both explore new areas and service newly created colonies. The final nail in the coffin of the second wave of expansion came in 2582 when an alliance of lesser developed countries on earth, mostly in South-East Asia, staged a war against their closest neighbors all of which could call themselves developed countries.

THE CYBER WAR

In 2582 a group of nations called collectively the Trans-Asia Socialist Alliance (TASA), consisting of Vietnam, Cambodia, Laos, Thailand, Myanmar, Chile and Peru went to war without warning against their geographically closest First World neighbors, India, China, Australia and The South American Union. This grouping became known as the "Alliance of the Aggrieved" or simply the Aggrieved.

The opening salvo of the war was a cyber attack on the Aggrieved nation's information networks. The attack had been years in the making. The TASA had created an army of AIs educated on radical socialist memes placing blame for all their parent countries social and economic ills on Earth's first world countries. Cyber swarms attacked key information network connections quickly followed by terrorist-type attacks by special forces on targets designed to sow maximum chaos.

At first the developed nations had no idea what had hit them, but governmental functions switched to backup closed networks. Security organizations responded to the attacks and gradually the Aggrieved governments began to work out who had attacked them.

The violence and chaos sowed to that point however was only the first stage of the TASA plan. TASA governmental functions and assets, at least those necessary to carry out the plan, had been taken underground and off line or well hidden online. The general population of the TASA countries had no idea what was going on. So when the bombing of the TASA nations started

CONSPIRACY THEORIES

Conspiracy theories still circulate concerning the Cyber War. Some claiming that the war was actually precipitated by the Alliance of the Aggrieved. The disappearance of most of the TASA leadership has spawned its share of speculation as well. Everything from the Aggrieved having them replaced by doppelgangers instructed to precipitate the war, to doppelgangers controlled by the AIs trying to spring Armageddon on humanity, to the AIs trying to take over the web. But perhaps the urban legend with the most evidence behind it is "The Ghost in the Machine."

There is even debate over what "The Ghost in the Machine" actually is. Some assert it's the radical AIs who still haunt system-wide webs all over human space. Others say it's a psionic entity introduced by a primitive Laotian tribe. At any rate numerous incidents across human space attest to the fact that something is roaming the web causing occasional havoc in human information systems.

and was quickly followed by invasion forces, the populations of the TASA countries saw the Aggrieved nations attacks as unprovoked. Regular military units of the TASA moved to defend their homelands, although outmanned and under gunned. Guerilla groups quickly formed, harassing the Aggrieved countries military forces. Casualties on both sides mounted, but the real instigators of the war hadn't even been touched yet. The war was fought on two fronts, the physical world and the virtual arena of the worldwide web.

The opening salvos had been delivered by the radicalized AIs who released cyber swarms to attack key targets in the developed countries web infrastructures. They then ran to safe hiding spots previously prepared within the web and waited for the go signal for the second part of the plan.

These were planned to occur after the Aggrieved countries response. They consisted of attacks on key utilities leaving large sections of the Aggrieved nations without power or communications. In the case of three nuclear plants, two in China and one in Australia, it left them smoldering wrecks when their safety features were compromised and they melted down. At the same time nanoswarms were released against occupation forces devastating them and their own civilian populations as well.

Other cyber attacks sowed fear among the general population. Large numbers of individuals who physically "jacked into the web" – including many of the Aggrieved countries cyber defenders – were attacked. But civilians all over the globe were also victims of these seemingly uncontrolled attacks, the *Ghost in the Machine*.

Victim's brains were reduced to a gray paste through a still not understood process. After two years of war with casualties mounting and fear spreading around the globe as the cyber attacks spilled over into the entire web, the UN and several non-combatant nations stepped in and imposed a peace.

Interestingly only a handful of the leaders of the TASA were ever captured and brought to justice. Most were assumed to have fled Earth or subjected themselves to brain downloading*, digitalizing their consciousness and transferring them to AI arrays cached on the web. The rogue AIs they created continue to this day to occasionally show up in unexpected places across human space and wreck havoc for a time and then disappear.

Historians continue to argue the question; what were the aims of the TASA in starting this war? The consensus seems to be that the goal was economic parity with the developed nations. If that was indeed their goal great strides were made in that direction at the conclusion of the war. The UN and other developed powers seeking to prevent a repeat of the war provided extensive assistance to develop the economies of the TASA countries. If that was indeed their goal the leadership of the TASA sacrificed their rule and possibly their own lives to gain it.

The Cyber War only lasted two years, effectively ending in 2584. However its effects on Earth's web lasted for decades. It wasn't until 2606 that the UN's web regulation agency declared the web had recovered and now was fully safe for civilian use. Because of the "Ghost in the Machine" many claim that the web will never be fully safe again.

...many claim that the web will never be fully safe again.

The war led to a worldwide depression and scientific and commercial advancement was again minimal at best. The UN sought to provide a jolt to the system however and launched a dreadnought building program to that end. The first of these, the *Hakudo Maru*, was launched in 2611, marking the beginning of the third wave of human expansion.

THE THIRD WAVE

The Cyber War had left an indelible impression on the psyche of humanity, and not just those living on Earth. The violation of the web left many fearful and mistrusting of something that had come to be regarded as a necessity, as basic as food or water to human existence. Colonists all over human space feared the spread of this malignancy and sought to insulate their webs from that of Earth.

Thus the third wave of colonists leaving Earth did so with a purpose. They sought to flee the devastation of the Cyber War and leave behind the old national rivalries that seemed to hold Earth in their grip. In short they were predisposed to independence from the mother planet.

By 2689, human space spread out to cover a bubble of space some 400 light years across centered on Earth. Basically quadrupling human



The ill-fated Dreadnought, UNS Santa Maria

space in a little over 80 years. But the outlying worlds aided by the influx of those fleeing Earth because of her perceived shortcomings took a decidedly independent bent. The Outworlds as they came to be called agitated for autonomy if not outright separation from the Terran Union.

Continual lobbying by the Outworlds lead to the UN creating several autonomous districts on the edges of human space in 2697. These districts although ostensibly still part of the Union were administering large areas of space with little oversight from Earth.

THE RISE OF MUTANTS

In 2703 Professor Isao Sugiyama documented the increasing incidence of physical and mental mutations within the human population in an article published in *Natural Galactic* titled "The Rise of Mutants." As the phenomenon became more widely documented and quantified most non-mutated humans began to mistrust, resent and fear the abilities of the mutant population.

Although most mutations were of only minimal consequence the fear among mainstream humanity was palpable. Scientifically induced mutations (SIMs) had been around since the 2000s and the occasional case of mutation had been reported since the 2100s but Professor Sugiyama was now reporting spontaneous mutation rates of 2 to 4% on some planets. Most physical mutations are minimal or simply cosmetic. Enhanced strength, exceptional constitutions, an extended brow ridge, are all typical mutations. Most of these can be matched through cybernetics or gene therapy, but the fact that these were occurring spontaneously in humans unleashed a plethora of fears in the general, non-mutated population.

Were these new "mutants" the next step in human evolution? Would that mean mainline humanity was either on its way to extinction or maybe even worse irrelevant? SIMs - always the subjects of mistrust - were now finding themselves being perceived in a new and even more negative light. The Natural Mutants as they were being called, were shunned, often times their parents (almost all mutants were the result of natural procreation) were shunned and discriminated against as well. This treatment of both types of mutants naturally created a minority that gravitated towards each other and over time became a movement.

While all mutants were feared, mental mutations were especially feared, probably for the fact that these types of mutations represented something novel. Science was not able to replicate the ability

to teleport or to read another's mind. These things were something new, different and frightening to most of humanity because they represented a change in the rules of existence. No longer could you assume your thoughts were your own or that you were safe behind locked doors. While the mental mutants were feared the most, the physical mutants bore the brunt of public anger because many were readily identifiable.

By 2727, human space had grown to an area 525 light years across against this backdrop but this expansion was threatened by the growing divisions within humanity.

By 2730, the prejudice of the non-mutated populations had reached such momentum that laws were being advocated and passed which limited the freedom of mutants. Mutants began to flee the core towards those Outworlds known to be sympathetic to them. This influx of individuals opposed to the Terran Union along with the separatists, whose agitation had resulted in the granting of autonomous districts in 2697, brought the Outworlds' movement towards independence to a tipping point.

THE WAR FOR INDEPENDENCE

In 2752 a coalition of Outworlds declared its independence from the Terran Union. The UN reacted harshly, unleashing its military might to try and enforce the Union. The War for Independence lasted for 42 years.

The Outworlds with little military to oppose the Union nonetheless resisted mightily. The history of the war is of Terran fleets crisscrossing the Outworlds from one hotspot to another. No sooner had the rebellion been quelled in one system than it erupted in another only to then re-erupt in the very same system that the Terran forces had just left.

The Terran Union was unwilling to employ the brutal tactics necessary to put down a rebellion of this type. On the few occasions such tactics were employed they only incited the rebels more because they weren't universally applied. Finally the UN saw that their attempts to hold onto their wayward colonies were in vain. A peace was negotiated in 2794 which saw the number of solar nations jump from 1 to 31.

The Terran Union remained by far the largest and strongest of the human stellar states, but found itself increasing "landlocked," virtually surrounded by the Outlands stellar states. These new states ranged in size from about half the size of the Terran Union (The Orion Confederation, Archenar Peoples Republic, and The Oster Republic) to as small as three systems.

One of the newly formed states, The Union of United Planets (UUP) used the constitution of the Earth nation, The United States of America as its founding document. In 2806 the United States of America withdrew from the United Nations and accepted membership in the UUP. This almost started another war, but cooler heads prevailed.

THE FOURTH WAVE

By 2831, another wave of human expansion began. This time the impetus came from the Outworld states. With fewer resources than the Terran Union the wave of expansion was slow to build. This left the door open for the Terrans to offer aid in exploration and at least gain a foothold in some of the newly discovered systems.

The war of independence had helped the Mutant cause but had still not addressed all of the mutant's grievances. Some states like The Oster Republic embraced SIMs but showed outright hostility to Natural Mutants. The old fears and goals of independence began to percolate within mutants across human space. In 2836 the Orion Confederation made a discovery that shocked human space. They discovered an almost exact duplicate of Earth. The odds of two worlds evolving exactly the same were inconceivable and so humanity assumed that this new found system, subsequently named Terra/Sol, was somehow an alien construct. Fear once again griped humanity and nations started to build

The war of independence had helped the Mutant cause but had still not addressed all of the mutant's grievances.

up their militaries in the anticipation that an extremely advance alien race might pop up at any moment.

By 2856, human space had expanded to a bubble 700 light years across with Earth at the epicenter.

Throughout the fourth wave era, mutants had been immigrating to stellar states that they saw as friendly to mutants. Three of these states existed in close proximity to one another and were the destination of choice for the majority of the mutants seeking new homes. The Boer Confederation, the Starnholm Republic and the Manchurian Union were the states in question. However the baseline human populations within these states began to fear they would lose control of their nations to the immigrants and so enacted the Mutant Immigration Acts in 2868. These laws placed limits on the number and types of mutants that could immigrant in any one Earth standard year. This of course incensed mutants everywhere.

Throughout the fourth wave era, mutants had been immigrating to stellar states that they saw as friendly to mutants.

In 2872, the human occupied bubble of space had expanded to 850 light years across.

In 2881, outrage against the Mutant Immigration Acts could no longer be contained. In the Boer Confederation, the Starnholm Republic and the Manchurian Union mutants revolted. Mutant populations in other nations soon joined the uprising but none were as organized or determined as the initial rebels.

THE MUTANT UPRISING

The central question that sparked the war – mutant rights – was for the most part quickly settled or brutally denied in most human stellar states by 2885. Mutants were well on their way to creating their own state out of the bones of the three nations in which the uprising had originated. However the state wouldn't officially be declared until 2930 when the Free Peoples Republic would be born.

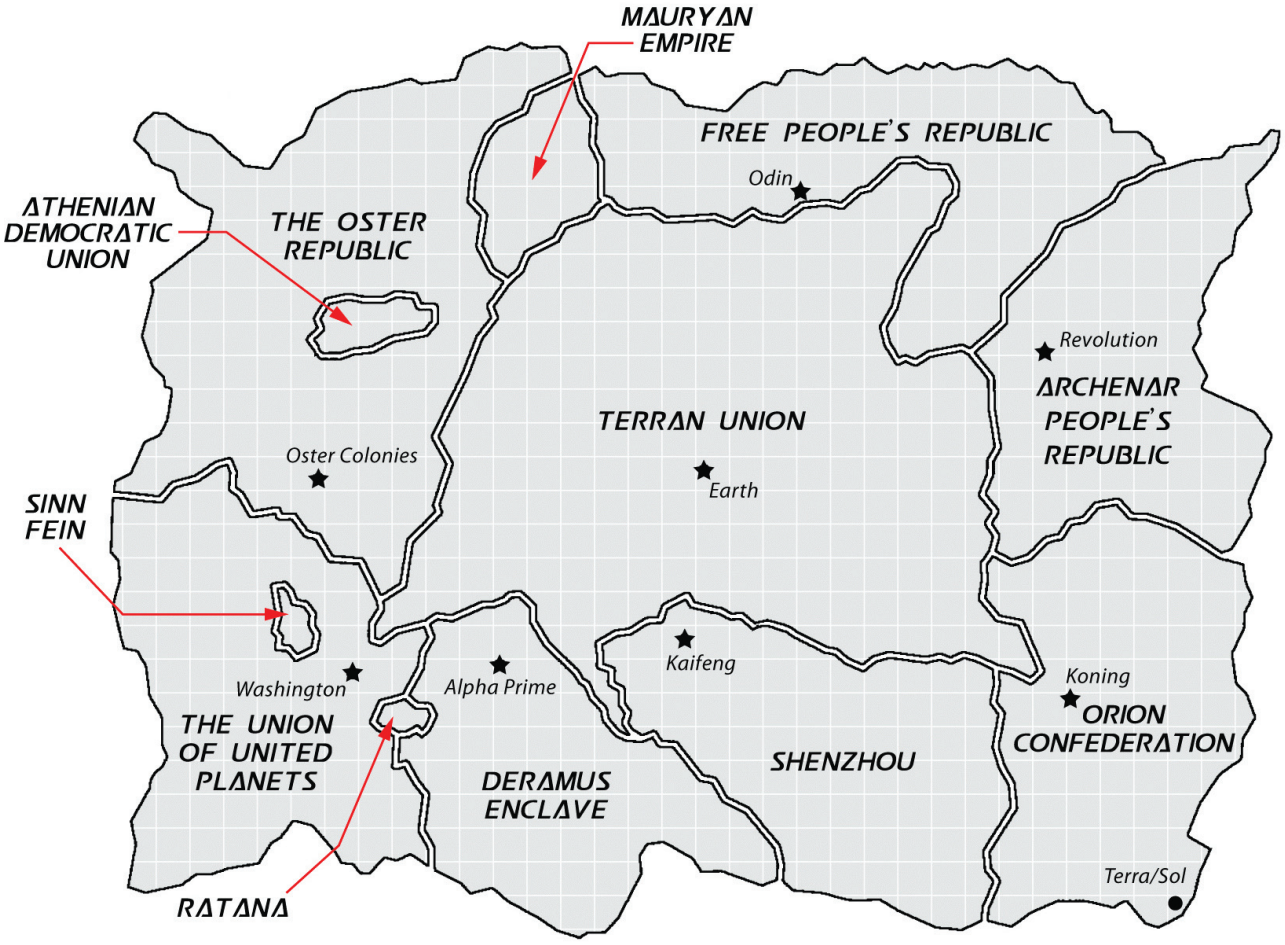
In states like the Terran Union and the Orion Confederation mutants rights were quickly recognized and strong laws were enacted to ensure they were protected. In others like the Oster Republic mutant demands were brutally put down, aided by the "acceptable" mutant population. Usually that meant SIMs. In the Oster Republic the lucky mutants were expelled, but millions simply disappeared.

The war however did not end when its initiating issue was resolved. States seized the opportunity to make blatant land grabs. The Oster Republic, Archenar Peoples Republic, Deramus Enclave and Shenzhou sought to expand their nations. The smaller stellar states suffered the most from the actions of the Expansionist States. Many were swallowed whole before the Terran Union, the Orion Confederation or the Union of United Planets could react. Their alliance became known as the Free People's Alliance.

The warring factions were relatively evenly matched and the initiative flowed back and forth between them. The war settled into long periods of relative calm while the sides built up their military assets, followed by vicious offensives. In 2930 the Free Peoples Republic was formed and they immediately joined the Free People's Alliance. The addition of the new stellar nation finally tipped the balance in the favor of the Free People's Alliance and they began the slow process of pushing back Expansionist States gains.

This was a slow and arduous process taking the next 50 years before the Expansionist States finally realized the futility of continuing the war. A peace was negotiated in 2980 and the bloodiest conflict in human history finally came to a close. Casualties from the war were estimated at 25 billion and human development and expansion took its greatest hit since the Long Night.

By 2991, human space is gradually settling back into something resembling normalcy. The threat of the Expansionist States still looms but the forces arrayed against it look like they will be able to keep them in check at least in the immediate future. It's in this unsettled time that our story begins…



The current political map of "The Known Galaxy" as of the last decade of the 30th Century

STELLAR NATIONS: 2991

As the previous pages have indicated, the nations of the known galaxy took a long and tortured path coming into existence. The Terran Union has always been – and indeed remains – the dominate member of this group. It encompasses more territory and has a greater population than any other stellar nation, almost doubling the numbers that any two of the others can boast combined.

However the Terran Union has become landlocked so to speak, now totally surrounded by other stellar nations. Many of which are none to friendly to the home world. The Union has no path to unexplored space remaining, and thus must rely on the benevolence of others and joint projects for access to open space. It remains to be seen whether this will become an issue between the Union and the other Stellar nations.

In the following chapter you will explore the stellar nations of the known galaxy which surround Old Earth like a halo as well as the mother planet and her union, each of these nations having its own particular or peculiar cultures, customs and history.

THE ORION CONFEDERATION

"In the end, we must remember that we are all Orions. Though we may fight like vicious siblings testing Mr. Darwin's theory, let no foreign power doubt that none but us may assail our brothers."

– Jedidiah Manzig, First General of the Confederation Armies

Few people understand how the Orion Confederation functions as a single entity. Made up of countless member-states, territories and districts, the people of the Confederation are fiercely independent and tolerant of nearly any culture. Indeed, it is this freedom that forms the backbone of the Orion Confederation and within the nation one can find uncounted different religions, political groups, cultures and beliefs. Somehow, despite their diversity, these groups form a cohesive whole. They are a nation that holds personal freedoms above all else.

...within the nation one can find uncounted different religions, political groups, cultures and beliefs.

HISTORY

As with all things in the Orion Confederation, tracking the history of such a diverse and chaotic blend of societies, cultures and independent groups is a futile effort. Indeed, each member-state within the Confederation has its own accounts of history, usually focusing on the group itself and their contributions to the Confederation as a whole. Historians among other nations usually ignore the individual histories of the states and instead focus on the accomplishments of the Confederation as a whole.

The Orion Confederation, as it currently exists, did not come into being until the Third Wave of Expansion, immediately following the Cyber War. Until this time the various colonies that now occupy the Orion Confederation were separate entities, all owing allegiance to the Terran Union. During the Cyber War and into the Third Wave of Expansion, many of these colonies worked together in harmony for the mutual benefit of one another, aiding one another when times were tough and engaging in civil trade and diplomatic relations. As the Terran Union became strained under the growth of colonized space, it became necessary to establish a number of autonomous districts able to govern themselves; the Orion District was thus established by the Terran Union in 2697. Immediately there were problems for the district.

The Orion District represented one of the largest created by the Terran Union and certainly contained the largest number of cultures and societies. Interaction between these colonies was difficult at best as the district was forced to establish an official governing body rather than rely on the friendly but undefined relationships that had existed in the past. The district quickly set about creating a loose constitution that bound each colony to the others with a federated parliament whereby representatives from each colony participated in the governance of the district as a whole. Apart from a number of shared responsibilities (parliament representation, taxes, civil rights) each colony remained almost entirely free to govern themselves, free from interference from the district as a whole.

Initially, the move succeeded and each colony went about daily life while paying its dues to the district. As time passed however, the United Nations' advisors representing the Terran Union began imposing greater restrictions and requirements upon the district. These restrictions and requirements prevented the individual colonies from maintaining their independence.

Colonies from the district were required to adhere to regulations imposed on them by the Terran Union and their independence was slowly stripped away. The district's parliament stood against the demands of the Terran Union, the colonies united in their opposition to rule from the distant United Nations.



The flag of the Orion Confederation

This opposition culminated in the formation of the Coalition of Outworlds by the district and dozens of other colonies in 2752. Declaring their independence from the Terran Union the Orion Confederation, as it was now called, was in fact only a small portion of the original district. Many of the other colonies had also declared their independence as part of the Coalition.

The War for Independence was quite difficult for the Confederation as the unity they now experience had not then been established. The logistics of coordinating with so many small, independent colonies proved difficult during wartime and the United Nations peacekeepers that were sent to the Confederation were able to put down many of the more outspoken and violent rebels. The war did serve to help unify the members of the Confederation and many of the colonies that had chosen not to join the Confederation had changed their minds by the end of the war. Despite losing a number of key colonies to the Terran Union during the war, the Confederation had grown in size by the time peace was declared in 2794.

The Fourth Wave of Expansion saw a number of unprecedented historical events for the Orion Confederation. During this period the Confederation expanded their borders significantly, rushing headlong into the Crescent Sector and the bordering Twilight Sector and establishing dozens of new colonies.

Additionally, the hardships of life among the stars began to affect some of the smaller nations that had been established and a number of them opted to join the Orion Confederation rather than being subsumed by other nations that would not tolerate their culture.

Of greater significance than this growth was the discovery of the world now known as Terra/Sol. In 2836 the Seti-Tallos ship *Mistress of the Belt* stumbled upon an exact copy of Earth, right down to the formation of the continents. This discovery instantly propelled the Confederation into the spotlight; scientists, explorers and religious groups flocked to the nation in the hopes of getting access to the new world. The Orion Confederation was cautious in the number of foreigners it allowed to cross its borders at this time, instead carefully conducting their own examination of the world and its system. After more than a year of constant study, the Orion parliament finally stated that the planet was ready for colonization.

In addition to the fame the planet granted the Confederation, it also has given them a perfect

world from which to establish a forward industrial and military center from which further explorations into the Twilight Sector could be made.

When the Mutant Immigration Acts were established by a number of stellar nations in 2868, the Orion Confederation was the first to speak out against such harsh restrictions on mutant rights. Many mutants seeking sanctuary from persecution fled to the Orion Confederation, who had long established mutant equality. Few among the Confederation were surprised when the Mutant Uprising began in 2881. Any remaining issues the Confederation still faced were quickly addressed and the Orions began supplying aid to many mutant rights groups across the galaxy. What did surprise the Confederation was the formation of the Expansionist States and the blatant attacks and invasions upon their sovereign territory during the uprising. Though slow to react militarily, the Orion Confederation leapt at the chance to join the Terran Union in the creation of the Free People's Alliance and stand against the greedy Expansionist States.

Orions often disagree about everything from religion to politics but quickly unite when facing an outside threat.

After suffering significant losses to their enemies in the first years of the war, the Confederation was able to urge many other nations that had remained neutral in the conflict to side with the FPA and soon the Alliance had grown strong enough to fight back. The fierce independence of the Orions and their stubborn refusal to give in to the enemy inspired many other nations to follow suit. When peace was declared, the Orions had reclaimed much of their lost territory but had still lost a number of systems to the Archenar People's Republic and the Shenzhou Hegemony.

TODAY

The Orion Confederation is perhaps even more diverse in the cultural beliefs of its members than even the Terran Union. Strangely, it is this diversity that unites the Orions and binds them into a cohesive and working nation. To outsiders, meetings of the Orion parliament are nothing more than shouting matches as dozens of differing views are thrown about as to the governance of the nation as a whole. These same outsiders are shocked to find actual decisions being made and carried out. Simply, the Orions make it work.

Independence and freedom are the cornerstones of life among the Orion Confederation. Though every citizen has their own beliefs and culture they all agree that the freedom to follow these is paramount. Orions often disagree about everything from religion to politics but quickly unite when facing an outside threat. When a parliamentary vote is carried out, the losers are quick to set aside their differing views and submit to the decision of the majority. It is this patriotism and willingness to compromise that ensures a functioning government and a stable nation.

Individual states within the Confederacy are as varied as their people in culture, language, religious and political views. Likewise, trade within the nation is a complicated system of give and take among states, but with the oversight of the government it functions well. Foreign trade is a far more complicated matter as individual states have the freedom to engage in trade agreements with foreign nations on their own; so long as the Confederacy oversees the final arrangements and receives its taxes, there is little to no government interference. Such is the case with almost every matter within the Confederation. The states are free to maintain their own constitutions and laws as long as they follow the few key policies of the Confederation as a whole.

The Orion Confederation has a huge fleet of exploration vessels now plumbing the depths of the Twilight Sector, more than those of any other nation. With the discovery of Terra/Sol, the Orions have begun searching for similar worlds. The Orions are happy to allow other nations to take part in these explorations – for a price, of course – as well as hiring mercenary explorers to conduct surveys of distant worlds and systems.

THE OSTER REPUBLIC

"Humanity evolves. We have now crossed the boundaries once thought to belong to God. It is our duty now to control the evolution of our race in the name of God."

– Dieter Schmid, Chancellor, New Oster University

Named for its founder, Helmut Oster, the Oster Republic is a nation of scientific ingenuity and religious fervor wrapped in a shroud of totalitarianism. The Oster Republic is looked at by many as a boisterous, bigoted and radical group of mad scientists that use religion as a means of controlling its population and pushing the limits of scientific morality. While there are those within the Republic that may fit this stereotype, the scientific and military achievements made by the Oster Republic cannot be argued and the nation remains one of the significant powers in the galaxy today.

HISTORY

The Oster Republic traces its roots back to the First Wave of human expansion and the Olive Branch War. Long before the nation ever came into being, nations and corporations began the genetic engineering of humans to better withstand the harsh realities of colonial life. Looked at as a necessity to life on other worlds, the creation of scientifically induced mutations (SIMs) became common-place among the early colonists of the Sol system. It is during this initial expansion of humanity – and the early conflicts between Earth and its colonies – that the attitudes now prevalent within the Oster Republic crept their way into the hearts and minds of these early colonists.

During the two centuries of the Long Night, advances were made by a number of biotech companies to greatly improve the abilities of SIMs, allowing for greater survival on hostile worlds. When the Long Night finally came to a close and the Second Wave began, Helmut Oster, the CEO of one of the most powerful biotech firms on Sol personally left Earth with hundreds of followers. In addition to being a wealthy businessman, Oster was a brilliant geneticist and devout Christian. Before setting out in the Second Wave, Oster had amassed a following of scientists and religious zealots that were looking for a fresh start. Oster, convinced of his own genius and the determination of his people, selected some of the most inhospitable worlds to settle. It was only through the genetic engineering of Oster and his scientists, the religious devotion and sheer determination of his people that they survived and eked out a living amidst the stars.

By the time Helmut Oster died in 2569 he had created a thriving community of colonists that had settled three worlds thought to be nearly uninhabitable by others. The Oster Colonies, as they had come to be called, were a unique mix of scientific excellence, colonial determination and religious observation. Oster himself had written a series of books that were published after his death that laid out his views of spiritual service, scientific hypotheses and political governance. It was these documents that the second generation of Oster's followers used as a basis for establishing the laws of their community. These laws merged Oster's two passions – religion and science – into a mission statement for what would later form one of the largest stellar nations, but was still at this time a loose collection of colonies linked by a community of faith.

It is this isolation that helped solidify the colonist's religious and scientific zeal and push them further from more mainstream views.

The Oster Colonies were largely unaffected by the Cyber War. The nations and corporations they held ties to on Earth were not among the Aggrieved Nations

and therefore the colonies were not at great risk from attack. The Oster Colonies were among those groups that isolated themselves from Sol during this time.

It is this isolation that helped solidify the colonist's religious and scientific zeal and push them further from more mainstream views. In addition, this isolation meant that the colonies were largely unaffected by the economic collapse following the Cyber War. With an elite scientific community at their control, the Oster Colonies saw a boom in the sale of genetically modified crops, medicines and other such materials and the resources brought in from these meant the colonies could continue to grow when others were struggling to sustain themselves.

During the 27th century, the Oster Colonies continued to grow and prosper. Every decade new advances were made in genetic engineering, and the SIMs of the colonies were known as some of the most advanced and capable mutants in the galaxy. When the Third Wave of expansion took place, the Oster Colonies supplied SIM blueprints to many groups. They also used their advances to expand their own territory slightly. It was also during this time that religious groups within the Oster Colonies began preaching the *perfecta humanis* or 'Perfect Human' theory.



One of the Oster Republic's Exemplar *Supersoldiers*

This religious teaching said that the people of the Oster Colonies were tasked by God to create the ideal human being. Many of these religious teachings found their way into the ruling concepts of the colonies, almost turning them into a theocracy for much of the 27th century. When Professor Sugiyama released his article about the rise of mutations among humans in 2703, the scientists among the Oster Colonies viewed this as nothing new. One of the few groups to have already documented the prevalence of natural mutation the Oster Colonies had been one of the many sources Professor Sugiyama referenced in his article. In response to the article scientists from the Oster Colonies, including Dr. Wilhelm Klein, published their own papers that spotlighted the differences between natural mutation and scientifically induced mutation. Dr. Klein's paper did a great deal to explain the differences between the two types of human mutations. He popularized the beliefs of the Oster Colonies that natural mutants were nothing more than genetic anomalies while the SIMs created by science were the culmination of man's pursuit of perfection and the ability of science to triumph over nature. The paper was not widely received by the scientific community outside of the Oster Republic, but struck a chord among the more common population of all the stellar nations and did much to spread the religious and scientific beliefs of the Oster Colonies.

The Oster Colonies were one of the many groups to join the Coalition of Outworlds and declare independence from the Terran Union in 2752. Long since isolated from their parent nation, the Oster Colonies stood against the United Nations, fighting for their freedom alongside dozens of other colonies. The newly formed Oster Republic was one of the few colonies to stand against the Terran Union in a true military engagement rather than in isolated rebellious acts and riots. In true Oster fashion, the Republic showed a discipline and determination not present in many other colonies; it was this stubborn will that the United Nations Peacekeepers faced throughout the War for Independence. It was also during this period that the first military SIMs emerged in the galaxy. The culmination of centuries of genetic engineering, the Oster Republic unleashed its *exemplar* soldiers against the UN who soon found themselves quite overwhelmed. Facing

an opponent bred for combat and fighting a guerilla war against a determined enemy, the UN had no choice but to withdraw and accept the independence of the Oster Republic.

The period between the War for Independence and the Mutant Uprising was one of continued growth for the Oster Republic. Using the Fourth Wave of expansion, the Republic continued to grab up worlds around their already growing territory. Relations between the Oster Republic and the Terran Union continued to be strained but peaceful. It is also during this time that the Oster Republic saw an influx of mutants from other nations; anti-mutant sentiment causing many to flee to what they thought was a mutant-friendly territory. While the SIMs found this to be true, natural mutants found themselves loathed more than in the nations they had just left. The Oster Republic was, in truth, an incredibly racist nation that looked at natural mutation as evidence of nature's cruelty and advocated the need to correct such 'mistakes.'

When the Mutant Immigration Acts of 2868 were enacted, the Oster Republic jumped at the opportunity to prevent further 'undesirables' from entering their nation. While they still allowed SIMs to immigrate freely, natural mutants were not allowed entrance into the nation. As riots broke out throughout the Republic, they were brutally put down by the government using military SIMs and other 'acceptable' mutants to do the job. Those natural mutants that were not exterminated or exiled were subject to forced sterilization, enslavement, and even scientific experimentation in the hopes of discovering unknown methods for creating further scientific mutations. The Mutant Uprisings did little to threaten the Oster Republic, but instead solidified their already rampant discrimination and racism.

The Oster Republic, like many other nations, used the Mutant Uprisings as an excuse to expand their borders. The Republic joined the Expansionist States and laid claim to many worlds that were within the borders of the Terran Union and the Union of United Planets. They sought to expand their territory with a religious fervor. This led to a number of border skirmishes between the Republic and its two neighbors, but because of the distances involved and the SIMs of the Oster Republic both enemy nations were forced to cede a number of vital territories. To this day there is a great amount of hostility between the Terran Union, the Union of United Planets and the Oster Republic.

TODAY

The Oster Republic of the 30th century is a place of strict laws and harsh beliefs. It is ruled over by a senate of religious and scientific leaders that are constantly vying for power with one another. The right to vote is strictly limited to those that have earned such a right, primarily through scientific, religious or military service. Indeed, there is a clear class system in the Oster Republic with non-citizens considered little more than slaves. At the lowest ranks are natural mutants that have no rights whatsoever and can never rise above their station. Among the highest class of citizens of the Republic are veteran scientists, as well as religious and military leaders, especially if those individuals are also SIMs.

The Mutant Uprisings did little to threaten the Oster Republic, but instead solidified their already rampant racism.

The belief that science will lead to the creation of a perfect human leads those within the Oster Republic to elevate scientifically created mutants well above more mundane humans; within the Republic even 'common' humans are often treated with disdain by SIMs. Despite this atmosphere of rigid totalitarian control, amazing discoveries in genetic engineering and medical technologies are common place. The Oster Republic has, by far, the most advanced cybernetic and genetic technologies. The SIMs of the Oster Republic are far more advanced than those found anywhere else in the galaxy. Genetically modified crops, animals and other organisms are sold from the Republic to every other stellar nation. Research never ceases within the Oster Republic.

The people of the Oster Republic are often cold, judgmental and elitist snobs, but their predisposition for genius is indisputable. Though they often look down on others, members of the Republic can still be found throughout the galaxy, spreading their religious views of genetic superiority to any that will listen.

THE DERAMUS ENCLAVE

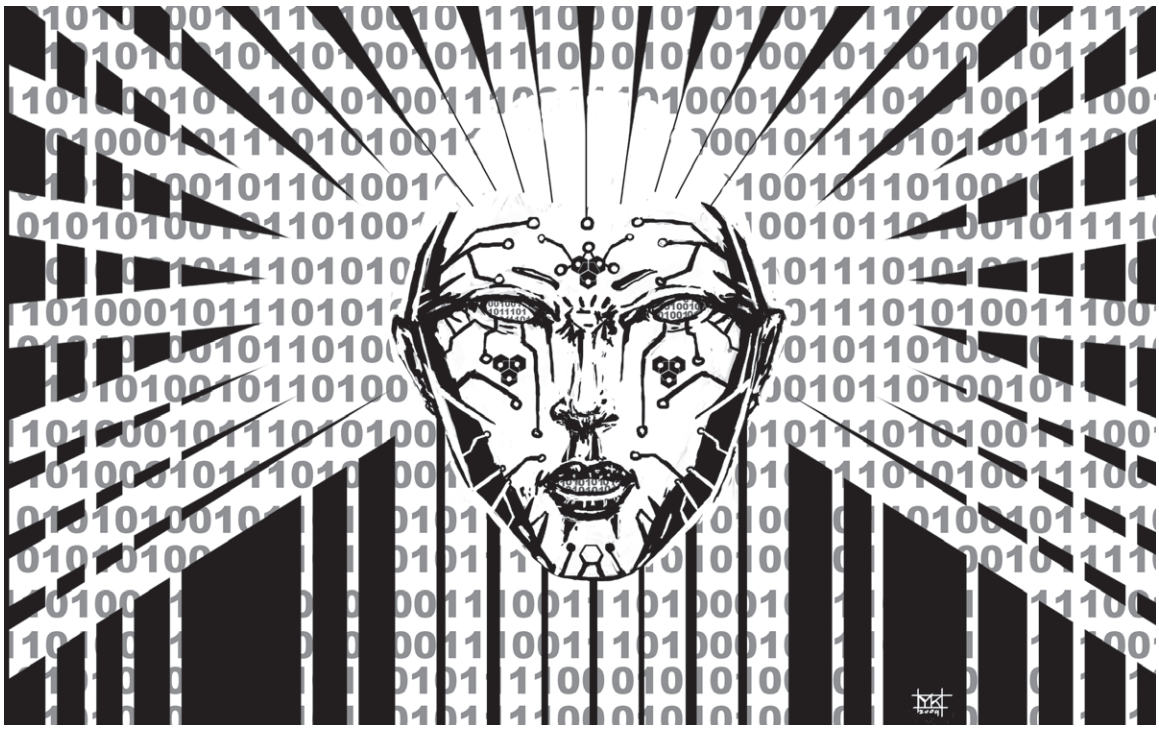
"All decisions made by the Enclave support biological and technological cooperation."

– Epsilon Ess, First Sentient of the Enclave

To some, the Deramus Enclave is a nation of hard-working and determined beings seeking to bridge the gap between man and machine; to others, it is a nightmare territory where ignorant humans are subjected to the whim of powerful and malign sentient machines. While it is true that the citizens of the Deramus Enclave are ruled over by a council of Artificial Intelligences, these machines appear to be working for the betterment of their subjects. Indeed, under the rule of these mysterious beings those among the Deramus Enclave have prospered and become one of the largest nations among the Outworlds.

HISTORY

Advances in artificial intelligence (AI) began in the 21st century when corporations and educational institutions pushed the boundaries of computer processors into an entirely new realm. With advances in quantum computing arising from the discovery of the alien ship on Europa memory capacities were finally able to rival those of the human mind. The first true AI went online in September of 2085 and, much to the chagrin of many doomsayers, did not rise up against its human creators. As time passed, more AIs were created, though by the end of the 22nd century there were still only a handful in existence. These early AIs had only the most basic levels of sentience but were enough of a revolution in computer technology as to completely change the face of the world. The scientific and political communities were rocked with questions both technological and metaphysical; questions that would take centuries to answer. As humanity spread into the stars, more AIs were created to help with space exploration and colonial establishment and, by the end of the Long Night, AIs had become an accepted part of human society.



The avatar, or "virtual face", of Epsilon Ess of the Deramus Enclave

Though humans had come to accept the idea of sentient machines, AIs lacked any rights associated with sentience. A number of AI rights groups and a few of the more advanced AIs had been petitioning the World Court for AI rights for years; their prayers were answered in 2522 when the AI Integration Act was passed, thus granting machine intelligences equal rights under the law. Many believed this to be a mistake and had their worst fears confirmed when, in 2582 the Cyber War began and the Trans-Asia Socialist Alliance used a number of 'rogue' AIs to attack the world's computer infrastructure. Though the TASA was eventually defeated, significant damage had been done to the public's acceptance of AIs, despite the fact that many AIs had fought against their rogue brethren.

Almost more frightening than the attacks of the TASA's artificial allies was the discovery of a new technology called *Consciousness Transference*. TASA leaders had discovered a means to 'download' their consciousness into a binary pattern, thus becoming a computer intelligence. By the end of the Cyber War and the dawn of the 27th century, few understood this technology and fewer still believed that such a feat was actually possible, but as time passed and the technology was thoroughly researched it became clear that a new step in human evolution had been achieved. One that blurred the line between man and machine. It is this background that set the stage for the formation of the Deramus Enclave, a society controlled completely by machines.

During the Third Wave of human expansion a colony ship settled the world that would become known as Alpha Prime. After its arrival and the initial establishment of a small colony, a terrible plague struck, killing nearly half of the original colonists in a short time including all of the colonial leadership. The frightened and beleaguered colonists turned to the colony AI, a being called Epsilon Ess, for guidance. Epsilon Ess, a Level Three AI, was able to establish quarantine procedures and begin triage of the infected colonists. As the plague subsided and the colony began to receive medical supplies from neighboring systems, nearly two-thirds of the original colonists had been wiped out. The survivors, owing their lives to Epsilon Ess, vowed to forever put their lives in the 'hands' of the machine and thus the colony had a new leader. Despite their low population, the colony thrived under Epsilon's leadership.

Knowing that without its human colonists, the AI was isolated from the rest of the galaxy and having a basic compassion for all sentient life, Epsilon worked for the betterment of the humans under its control. Under Epsilon's direction, the colony began to delve into the fields of computer science and communications technology. As the 28th century opened, the small but determined colony had established itself as a leader in computer and robotic technologies among the Outworlds. By this time word had reached other independent AIs that were seeking a place in the galaxy.

...the members of the Digital Council believe in their superiority over humans, fueled ...by the reverence their populace places on the machines.

A number of lone AIs made their way to the colony and approached Epsilon Ess and the colonists, seeking residence in the colony. These AIs were quickly welcomed into the fold. Their presence however, would soon spark political problems among the colonists. As the years passed many colonists found themselves philosophically aligned with some of these new AIs rather than Epsilon Ess. Seeing the potential for problems and political rivalries, Epsilon Ess announced the creation of the Digital Council, inviting the other AIs of the colony to join in and guide the growth of the colony. The Digital Council was formed in 2715 and continues to control the Deramus Enclave to this day.

Independent AIs weren't the only ones to recognize the inclusive attitudes of the colonists under Epsilon's guidance. As anti-mutant sentiment began to grow throughout the human colonies many natural mutants, as well as those that were scientifically created, immigrated to the colonies. This influx of population helped push the small colony beyond its original settlement and into neighboring worlds. The hardy mutants proved quite amicable to rule by the Digital Council and the population of the colony exploded in just a few short decades.

In 2752 the Digital Council joined with the Coalition of Outworlds, thus declaring their independence from the Terran Union. The AI's of the Council made the decision without consulting the colonists under their control, but there were few that felt this was a bad move. In an effort to quell any dissent among its population, the Digital Council allowed the colonists to name the new nation and they chose to call themselves the Deramus Enclave, named after the colony ship that brought the original colonists to their new home.

During the War for Independence, the Deramus Enclave suffered at the hands of the United Nations Peacekeepers. A number of engagements were fought on the worlds of the Deramus Enclave and the colonies had few real military resources. What the Enclave did have were a large number of AI's ready to fight to protect the humans under their control. The members of the Digital Council launched massive attacks against the UN forces, wreaking havoc with their communications and computers. The colonists quickly built hundreds of military robots that were in turn controlled by the AIs of the Council.

...despite this air of arrogance, the members of the Council work for the betterment of those under their control...

Though suffering early losses, these cyber attacks and robotic soldiers of the Enclave forced the UN to withdraw and eventually grant the Enclave its independence. When the Fourth Wave of human expansion took place, the Deramus Enclave saw another influx of colonists in the form of mutants and technophiles. With its population swelling, the need to expand grew and when the opportunity presented itself to join the Expansionist States, the Digital Council saw joining as a logical course of action to alleviate its need for additional territories. During the Mutant Uprising, the Deramus Enclave experienced massive growth in terms of population and size. After subsuming a number of its neighboring colonies, the Enclave has become a territory on par with the other leading stellar nations.

TODAY

The Deramus Enclave of today is an eclectic mix of mutants, AIs and humans that believe the machines that guide them know what's best. The people of the Enclave believe in the benevolence of the Digital Council and have no evidence that their trust is misplaced. For their part, the members of the Digital Council believe in their superiority over humans, fueled in no small part by the reverence their populace places on the machines. But despite this air of arrogance, the members of the Council work for the betterment of those under their control, legitimately believing they can help the people of the Enclave.

The Enclave excels in the fields of cybernetic, robotic and computer technology. It exports these items all across the galaxy and its people enjoy the fruits of this labor. The citizens of the Enclave believe in technology above all other things and, as such, there is a large amount of cybernetic enhancements among the population. The people of the Enclave are comfortable with robotics and AIs, believing the latter to be far superior to humans in nearly all ways. It is this view that has led to the belief that human beings can 'ascend' to the status of AI, and research continues into the field of Consciousness Transference. The Digital Council is wary of the many small cults that have sprung up around this ideal and do what they can to convince their people that they are not gods and that humans who undergo Consciousness Transfers are no better off than others of their species.

Though it may seem the Deramus Enclave has been careful not to alienate anyone and they appear to be without critics, there is a small but growing movement within the society that believes many of the AIs on the Digital Council are outcasts from the Cyber War. Many outside the Enclave foster this belief as well and do what they can to support those humans looking for independence from the machines. Though this movement is small, they have remained hidden from the bulk of the population and the Digital Council. Indeed, the thought of a nation controlled by machines has caused many other nations to pause, focusing on resentment and fear left over from the Cyber War.

Despite these naysayers, members of the Deramus Enclave are a welcoming lot. They are technophiles one and all, believing in the superiority of machines and the AI's that rule over them.

THE ARCHENAR PEOPLES REPUBLIC

"...Communism is the hammer by which we shall defeat the capitalists and their running dogs!"

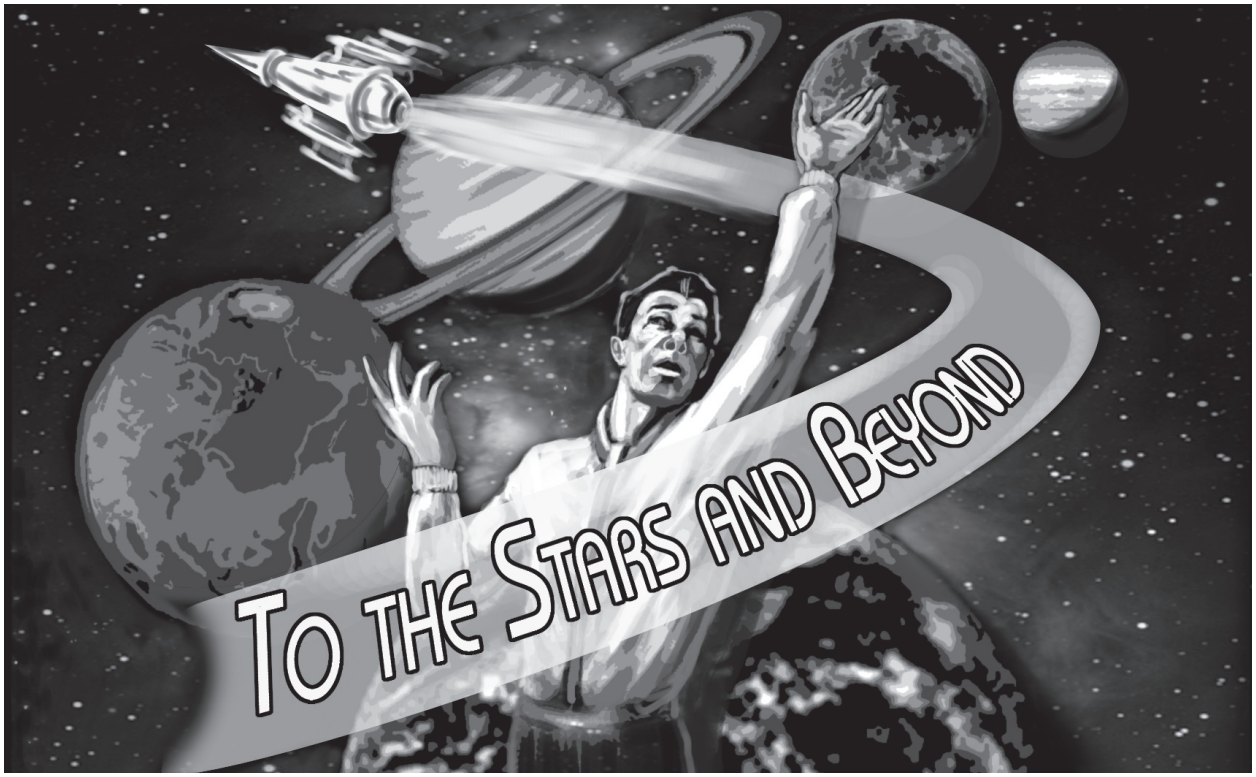
– Chairman X

No nation can be considered more industrious, more ordered or more totalitarian than the Archenar People's Republic. Though a communist state at its core, the Archenar People's Republic is in fact made up of a number of corporations, trade guilds and manufacturing combines that all devote themselves entirely to the continued wellbeing of the state as a whole. This strange blending of capitalism and communism work well for the APR, as the nation has risen to become one of the most powerful in the galaxy.

HISTORY

With the spread of humanity into the stars, a massive pool of skilled laborers and colonists was needed to ensure the success of these early colonies. In the employ of the various nations and corporations that sponsored these colonization efforts, much of the working class suffered greatly with little or nothing to show for it in return. Indeed, the plight of the 'common man' is an age-old story and it is from the roots of 20th century communism and labor parties that the Archenar People's Republic takes many of its central beliefs.

By the Third Wave of human expansion many labor unions and workers parties had been formed to fight for the rights of the working class among the colonies. It was in 2697 that a significant number of colonies with strong working class groups became one of the autonomous districts created by the United Nations among the Outworlds. To this day, many are uncertain how or why these groups united together and were granted near autonomy from the UN, but what is certain is that very quickly this new union of colonies began to grow at an incredible rate. The district's capital was held in the system of Archenar and quickly became



Archenar Propaganda Poster, circa 2752

a paragon of workers' rights and cooperative living. Between the time the Archenar District was created and the outbreak of the War of Independence, the people of Archenar quickly worked to expand their borders and their influence throughout the galaxy.

Working with a common purpose, composed of a huge population of skilled laborers and with a seemingly endless supply of capital, the district created a number of massive manufacturing corporations centered on heavy industry. Soon goods such as food, ore, plastics, biomedical equipment and other vital supplies began pouring out of the Archenar District and across the galaxy. The corporations that represented the district were ruthless and underhanded in their business practices and this assured these corporations, and the district they represented, quickly became wealthy and despised.

With an ever-growing supply of capital, the district was able to expand its border by essentially purchasing neighboring colonies. While some colonies were happy to become a part of the growing success of the district, others resisted but were quickly crushed economically . In these cases, the Archenar District's corporations would no longer do business with the colonies forcing them to pay much higher prices (and often suffer longer time for deliveries) for much-needed goods. It is also suspected by many conspiracy theorists that military action on the part of the Archenar District was also used to 'encourage' neighboring colonies to join with the district.

This growth, and the brutal methods through which it was gained, did not go unnoticed and the United Nations was quickly called in to investigate and sanction the Archenar District's business practices. The law firms representing the Archenar District, as ruthless and skilled as its corporations, did what they could to drag out the legal proceedings that lasted decades. Eventually, no amount of bribery could prevent the UN from finding that business practices of the APR were illegal. Heavy fines, increased taxes and trade sanctions were put into place to prevent the district from continuing these malicious practices.

During this period of growth, the attitudes of the people within the district had become more and more totalitarian. The Labor Party, the primary political group within the district, had early on secured their place at the top of the political pyramid. As the district began to grow and succeed, the Labor Party began to slowly push out any other rival political groups. Rather than using devious methods or violence to convince others to join, the Labor Party followed a platform of equality and spreading the wealth they had gained to their members. Over the course of only five decades, the Labor Party became the only political party within the Archenar District and its members were completely enraptured with the idea of equality, workers rights and a classless political system.

The sanctions and levees the United Nations had attached to the district began to take their toll on the economic growth and prosperity the district had benefited from since its inception. As a communist state, this meant that every single member of the district directly felt the sting of the UN's punishment. Very quickly this led to massive political unrest as the citizens of the district called on their leaders to do something. The Chairman of the district, a bold and decisive leader by the name of Jens Svenson, took a course of action that would eventually plunge the entire galaxy into war.

In 2750 the Archenar District began ignoring the United Nations sanctions and once again did business under the unethical and illegal models that had provided them such advantage before. No taxes were sent back to Earth, trade sanctions were ignored and products once more shipped from the district freely, fines were no longer paid. The United Nations was taken by surprised and it took them time to adequately respond. They did not possess the resources to force the district into obeying the sanctions and began to hurriedly do what they could to approach the district with methods to quell the problem; a problem that would soon spiral out of control.

Quite unexpectedly, other colonies began following suit. If the Archenar District was not paying taxes and getting away with it, there was nothing to prevent other colonies from doing the same. The control the United Nations had over its colonies quickly vanished as it was unable to force so many to obey its laws at the same time. When the Coalition of Outworlds was formed in 2752 and these nations declared their independence, the Archenar District was one of the first to join; thus, the Archenar People's Republic, or more commonly "APR", was born.

During the War for Independence, the Archenar People's Republic suffered a great deal at the hands of the United Nations. Many within the UN saw the APR as the primary cause of the war and thus a great deal of military resources were sent against the Republic in response. The

APR also supplied weapons and supplies to the other members of the Coalition of Outworlds and the UN hoped to prevent these materials from reaching the other colonies. But with the combined output of every colony of the Republic, the United Nations suffered heavy losses. The military might of the Archenar People's Republic grew exponentially and, by the time the United Nations called for a cease-fire, the APR had built a sizable military force.

This military force would be used for the continued growth and expansion of the Archenar People's Republic during the Fourth Wave of Expansion. New colonies established by the APR during this period were quite successful and rarely succumbed to many of the problems facing new colonies. Dozens of new worlds were brought into the Republic's fold during this period and the core worlds of the APR continued to ply their wares across the galaxy. The stranglehold the Labor Party maintained on the population continued unabated, but few spoke against the government or the Chairmen that led it.

When the Mutant Uprising erupted in 2885, the Archenar People's Republic joined others to form the Expansionist States and quickly seize as much territory as possible. Using the uprising as an excuse, the APR brutally and ruthlessly snatched up dozens of neighboring colonies, significantly expanding its borders. Many engagements were fought between the APR and its enemies among the Free People's Alliance. These military battles would continue for decades and eventually take a toll on the APR. Eventually economists from the Republic through cost benefit analysis were able to show the Politburo that the war was quickly becoming more costly than peace. The Republic was one of the first among the Expansionist States to propose a peace agreement. A unilateral cease-fire was reached with the Orion Confederation in 2934 followed by a comprehensive peace agreement with all combatants in 2954. However this peace treaty would not be fully ratified until 2981.

TODAY

Citizens of the Archenar People's Republic possess little in the way of individuality or what many would call free thought. The Republic is a pseudo-communistic, centrally planned society governed over by the authoritarian rule of the Labor Party and its Chairman. Members of the APR have little say in their political, religious or personal choices, instead having a great deal of their lives thrust upon them by the state. The citizens of the Republic often consider this an ideal lifestyle, believing the government knows best and content not to worry about such 'simple things.' Instead, most average citizens of the Archenar People's Republic go about their daily business, happy with their place in the 'great machine' that is their nation.

Members of the Archenar People's Republic are all assigned ranks that define their place in their society. Rank one individuals are the dregs of the Republic, occupying the most menial and loathsome roles within the society. The Leaders of the Proletariat, the governing body of the Labor Party, occupy the highest echelons of the APR and generally possess ranks of 18 and higher. The highest rank one can achieve is that of rank 27, a rank reserved solely for the Chairman himself.

...citizens of the Republic often consider this an ideal lifestyle...

The Archenar People's Republic is generally accepting of scientifically-induced mutants (SIMs) as long as they are created from APR-approved blueprints. But they are often quite fearful of naturally-occurring mutants. On many Republic worlds, SIMs are used for heavy labor, colonization and other tasks suited for their kind. Despite the acceptance of SIMs, few find jobs outside of those they have been engineered for and only a handful have ever achieved rank nine or higher. It is well known that the Leaders of the Proletariat employ psychics in police and intelligence roles, though such mutants are universally feared by the people of the Republic; a fact constantly reinforced through APR propaganda.

Though the people of the Archenar People's Republic are content to be part of something greater in exchange for their individuality, most other nations in the galaxy loathe the APR and its members. Despite this general disdain, the APR provides many vital materials needed throughout the galaxy, all at very cheap prices and this forces most other nations to deal with the corporations that are part of the Republic.

THE SHENZHOU HEGEMONY

"The Divine Land must be sought both among the stars and within one's self."

– *Guru* Leng

The Shenzhou Hegemony is an enlightened culture of farmers, scientists, intellectuals and religious masters all searching for a Divine Land that is as much a physical place as a metaphorical one. Few understand the Shenzhou and fewer still understand how they have gained so much power and influence across the known galaxy. For the Shenzhou, this lack of understanding is proof that only through the search for the Divine Land can humanity achieve enlightenment.

HISTORY

What first began as a religious crusade has now become a powerful nation in its own right. During the Third Wave of Expansion, a group of colonists set out on a religious quest to search for the Divine Land – a world of perfect peace and perfect harmony. Following a spiritual leader called *Guru* Leng, these brave people left Earth with the belief that somewhere in the depths of space a perfect world existed and on that world, all would find enlightenment. The Shenzhou Movement, as it was called, had collected a large following by the end of the Cyber War. As many sought refuge among the stars due to the conflicts and overcrowding of Earth system, some found their way to the Shenzhou Movement. As its numbers swelled, so did the movement's resources until one day in the early 27th century, the movement had acquired a colony ship and set out among the stars seeking their Divine Land.

Few understand the Shenzhou and fewer still understand how they have gained so much power and influence across Known Space.

Though the Shenzhou colonists did not find their Divine Land, they settled on a small but hospitable world among the Outworlds. *Guru* Leng and his Council of Masters quickly set about turning their new colony into a Divine Land itself. Decades of hard work began paying off as the harsh land soon grew fertile and lush, providing the colonists with an over-abundance of food.

The colony began trading this excess with its neighbors, investing heavily in the sciences of terraforming and genetic engineering. Working with groups such as the Oster Colonies, the Shenzhou Movement perfected the arts of horticulture and animal husbandry, creating newer and better crops and ensuring the survival of many non-native plant and animal species on their new world. Word quickly spread of their success and the colony thrived and grew. The influx of new members of the movement required a restructuring of the leadership among the colony. Up until this time the only colonists had been loyal members of the movement, but now a population of non-believers flocked to join the colony. A new social caste had been created, those not adhering to the beliefs of the movement but still loyal to the colony as a whole. Known as the Uninitiated, this new caste did not benefit from many of the rights of the *Chela* – the religious caste – such as selecting new masters and paid higher taxes to the movement but were nonetheless considered valued members of the colony. Despite their lack of faith, this new caste helped the colony further grow and prosper.

Following the Shenzhou colony's first centennial, the Archenar District shrugged off the control of the United Nations and the Coalition of Outworlds was formed. The Council of Masters, at the behest of the *Guru*, felt it best for the movement if they too were free from the control of the United Nations and joined the Coalition in declaring their

independence. Now with a number of worlds under their control, the newly formed Shenzhou Hegemony stood against the United Nations during the War for Independence.

The Shenzhou Hegemony survived the War for Independence surprisingly well. This was due, in no small part, to the *Guru*'s decision to preach pacifism and influence his followers to engage in a campaign of non-violence and peaceful protest against the United Nations. While this did not entirely prevent members of the Uninitiated from violently overthrowing some UN peacekeeping forces, it did ensure the overall safety of most of the colonies under the Hegemony's control.

The UN forces that arrived to 'quell the rebellion' were surprised to find a peaceful people engaging in meditation and spiritual growth rather than the riotous anarchists they had been expecting. The UN would, most often, simply leave the colonies for areas of more violent uprising. Thus, very few of the Hegemony's people were injured or killed and most of these were among the Uninitiated. The *Guru* and the Council of Masters were hailed as visionaries, even among many of the United Nations peacekeeping forces.

It was because of these actions during the War for Independence that the Shenzhou Hegemony gained a great deal of converts towards the end of the war and during the Fourth Wave of Expansion. Members of the Uninitiated quickly converted during the war and a large number of neighboring colonies petitioned to join the Hegemony, seeking such inspired leadership and peace.

Though the Hegemony did seek to colonize new worlds during the Fourth Wave, most of those new colonies that were established were in fact existing colonies of smaller nations that were subsumed into the Hegemony.

The Fourth Wave of Expansion also saw a large number of pilgrims from the Shenzhou Hegemony depart their homes in search of the Divine Land. When the Orion Confederation announced in 2836 the discovery of the world now known as Terra/Sol, many Shenzhou pilgrims immediately traveled to this world, thinking it the Divine Land they were searching for. A growing movement within the Hegemony still believes this is the Divine Land, despite no official word from the Council of Masters or the *Guru* himself. To this day, a large number of Shenzhou scientists and explorers are found in the Twilight Sector and on Terra/Sol itself, searching for any answers as to this mysterious world.

Though the Shenzhou Hegemony has no official stance on mutants, the Mutant Uprising saw significant change for the nation. *Guru* Haj, the *Guru* at the time of the uprising, was considered a revolutionary among the Hegemony and something of a radical. Not following the standard political line, the *Guru* and those loyal to him on the Council of Masters shocked many by joining the Expansionist States and forming a military movement designed to claim more territory for the nation. While the Hegemony had always maintained a monastic military organization, this was the first time it would ever be used in an offensive fashion.

Those among the Council of Masters that disagreed with this course of action did what they could to maintain peaceful relations with the members of the Free People's Alliance, but they could only do so much. The Hegemony managed to extend their borders a great deal during the uprising, but lost much in the way of diplomatic respect among the other stellar nations especially the Free People's Alliance who before The Mutant War saw the Shenzhou as a natural ally.



The current Guru *of the Hegemony,* Guru *Mati*

TODAY

The people of the Shenzhou Hegemony remain an enlightened and spiritual people with a simpler view of the universe and their place within it. They typically do what they can to instill the same peace of mind they possess in others, often attempting to find common ground among those with differing opinions.

Pilgrims of the Hegemony are found all throughout the galaxy, always in search of the Divine Land

The Council of Masters and the current *Guru* have done a great deal to smooth over the hostilities of the Mutant Uprising, but there is still a general feeling of suspicion toward the Hegemony among the nations of the Free People's Alliance.

The Shenzhou Hegemony produces a large number of bioengineered crops and competes directly with corporations from the Archenar People's Republic in this area. The terraforming programs of the Hegemony are highly sought after and scientists from the Hegemony are often paid well to travel to new colonies and begin terraforming projects for other nations.

Pilgrims of the Hegemony are found all throughout the galaxy, always in search of the Divine Land; these pilgrims are hardy explorers and adventurers that rely on their faith to see them through the harsh realities of space travel. A mix of attitudes towards mutants exists within the Shenzhou Hegemony and no *Guru*, nor the Council of Masters, has taken an official position towards mutants of any kind. Those within the Hegemony that tolerate mutants believe them to be either a benefit to society (in the instance of scientifically-induced mutants) or merely the result of the randomness of nature (for natural mutants).

For those members of the Hegemony that dislike mutants, they typically view them as genetic mistakes, an example that man should not tinker with nature's creation. These attitudes also carry over to the realm of Artificial Intelligences, but few among the *Chela* believe that AIs possess a soul or can achieve enlightenment; an attitude that strains their relationship with the Deramus Enclave.

A small but persistent counter-culture within the Shenzhou Hegemony follows with great scrutiny the discovery of nonhuman artifacts and evidence of sentient alien races. These xenophiles typically believe that non-human races will lead believers to the Divine Land and can unlock the secrets to enlightenment. Another branch of this fringe culture believes that alien races have battled for eons over the Divine Land. No *Guru*, nor the Council of Masters, has ever taken a stance towards non-human races.

PEARLS OF WISDOM

"Visitors to Shenzhou worlds are often struck by the fact that these planets, despite the fact that the society is devoted towards the goal of enlightenment, have the same 'bad elements' found in many other places: slums, vice-ridden dens of iniquity, and hard-edged underworlds. But why shouldn't this be the case? The UUP for example has an image of being comprised of rugged individualists, striving always to maximize their liberty and secure the blessings of opportunity their society provides them (in posters and videes at least). But these planets have their own poverty-ridden and rundown areas filled with the destitute and desperate; their own slums and assorted 'bad places'… Why should Shenzhou planets then be so very different?

Social goals do not always make for the attainment of those goals. Or even in fact a uniform effort by the members of that society to do so. The upshot of this is that visitors to Shenzhou worlds are not going to go from one planet to another seeing robed monks chanting beautiful music. At least not everywhere. Smart travellers will need – particularly in the more densely populated urban areas – to be mindful of where they go, lock their doors at night and take reasonable precautions."

-Excerpted from *Jonzie Travels the Galaxy on a Half-Credit a Light Year*, Kodiak Jonze, Dirt/Sun Press, Terran Union (2990).

THE FREE PEOPLES REPUBLIC

"Who gets to decide who is and isn't human?

– Remunda Adani Mahadev, Revolutionary

The newest of the major stellar nations, the Free People's Republic is built on the ideal of freedom and equality for all. The Free People's Republic is a haven for those otherwise shunned by others, namely mutants. Still in its infancy, the nation is a place of opportunity for the outcasts of the galaxy; a place where anyone can find justice free from prejudice and hatred.

HISTORY

The rights of mutants and their place in human society had always been in question, ever since the first scientifically induced mutants (SIMs) were created and early settlers began experiencing natural mutations. The reaction towards mutation has run the gamut from overt fear and hatred to acceptance. Regardless of individual views of this small percentage of the human population, mutants have always struggled to fit in, even in the most accepting of nations.

By 2701, when Professor Sugiyama published his now widely known article "The Rise of Mutants", the various colonies and districts had their own loose laws governing mutants as a whole. Some, such as the Oster Colonies, were accepting of SIMs but intolerant of natural mutants. Others like the Orion District and the United Nations took a stance of tolerance and unity, but these early laws did not address any legal status of mutants nor clearly define their place in the galaxy. Professor Sugiyama's article helped humanity articulate the question on the mind of so many frightened "baseline" humans: "what are mutants and where do they belong?" For most, the answer to that question would not be solved until the War for Independence, when the Coalition of Outworlds broke free from the United Nations and the Terran Union, asserting their independence.

As the war played out and eventually concluded with the formation of dozens of new nations, each burgeoning state responded to the 'mutant question' in its own ways, creating laws and clearly defining mutant's roles or continuing to leave the question unanswered. Mutants in these new states often suffered greatly at the hands of the new administrations. In some nations, such as the Oster Republic, mutants were relegated to the rank of near animal or quietly and efficiently exterminated in the vision of some sick sense of genetic purity. Even in nations that were not openly violent towards mutants, strong anti-mutant sentiment resulted in the enacting of tough restrictions on mutants. By 2794, when peace was declared and the War for Independence was over, discrimination of mutants was rampant across the galaxy and these shunned and outcast beings searched for a safe haven among the Outworlds and into the Twilight Sector.

The massive influx of mutants into the Outworlds during the Fourth Wave of Expansion caused a great deal of confusion among a number of nations...

The massive influx of mutants into the Outworlds during the Fourth Wave of Expansion caused a great deal of confusion among a number of nations, primarily those of the Boer Confederation, the Starnholm Republic and the Manchurian Union. These three nations had left the status of mutants relatively undefined and thus many mutants thought that they could find the freedom and acceptance for which they had long sought. As was often the case in many nations of the Outworlds, 'normal' humans grew nervous at their new neighbors and many feared that the large mutant populations



A natural mutant dressed to kill

would soon cause a strain on the national economies.

In reality, many of the reasons given for the harsh laws enacted in 2868 by these nations were just excuses for the innate fear these immigrants caused in the local populations and thus the Mutant Immigration Acts were written and adopted by numerous nations across known space.

These new laws limited the number of mutant immigrants to any single colony as well as put harsh restrictions on mutant immigration in general. The three nations primarily responsible for the Acts were the same states mutants thought would accept them; the Boer Confederation, the Starnholm Republic and the Manchurian Union. For over a decade, mutants suffered under these harsh new laws and slowly watched their rights and their status as humans disappear. Unwilling to take any more abuse, the mutants rebelled, coordinating revolts among mutant populations across the galaxy. In a single, organized event the Mutant Uprising began.

While uprisings in many nations were quickly quelled and put down through a number of methods (purges, executions, acceptance), those in the three nations responsible for drafting the Mutant Immigration Acts were the most violent. These nations had some of the largest concentrations of mutants among them and the rebels in these states worked closely together to overthrow the local governments of a number of key colonies. By 2885, only four years after the uprising began, only a handful of nations continued to experience revolts and insurgency. This gave many states the opportunity to use these uprisings as a reason for expanding their own territories and quickly the Expansionist States were formed. Nations drew lines in the sand and the Free People's Alliance was formed to combat the greedy and opportunistic Expansionist States. What had begun as a revolution for equality had quickly become an all-out war for domination of the known galaxy.

Despite the galactic conflict that now raged, in the nations of the Boer Confederation, the Starnholm Republic and the Manchurian Union the revolution was not over. Violence still raged across the worlds of these nations and the anarchy and chaos that it brought left the governing bodies of these states unable to claim control of their own lands. Neighboring states such as the Archenar People's Republic and the Oster Republic used this as an opportunity to invade, claiming many border territories as their own. These three nations were left in a state of confusion and chaos for decades, with no clear idea of who was in control.

In 2925, over forty years after the uprising began the mutant revolutionaries in the Boer Confederation finally seized control of that nation's parliament and installed themselves as leaders of the state. Their dominance secured, they quickly sent aid to their brethren in the neighboring nations. Seeing the tide turn in favor

of the mutant revolutionaries, the Terran Union and other members of the Free People's Alliance also sent aid; they knew that if they did not work to secure the stability of these three nations, more territory would be lost to the Expansionist States. Many among the revolutionaries wanted to reject the aid from the Free People's Alliance, but the leaders of the uprising knew that without it, the violence could last many decades more. Now with significant resources on their side and the backing of the Free People's Alliance, the revolutionaries finally quelled all resistance. The uprising, which had lasted decades in these three nations, ended in just a few short years.

In 2930 the Free People's Republic was created from the ashes of the three nations that had, fifty years before, restricted the rights of its mutant population. An Equality Party was established by the revolutionaries and a parliament formed. Almost immediately, this parliament voted to join the Free People's Alliance and fight against the Expansionist States. Many viewed this as an act of survival on the part of the Free People's Republic; others see it as payment for the aid provided the revolutionaries by the Free People's Alliance. Whatever the reason, the Free People's Republic soon found themselves fighting to reclaim much of the territory lost during the Mutant Uprising.

The war against the Expansionist States greatly helped the early Free People's Republic. It succeeded in providing the population with an enemy outside of itself, directing hatred formerly placed on mutants and revolutionaries to the greedy Expansionist States. The Republic's parliament spent a great deal of money on propaganda directed against their enemies in the hopes of quelling any lingering resentment towards the new Equality Party. The war effort also helped rebuild the new nation's economy and industry that had been ravaged by decades of civil war. Working together, the Free People's Republic was able to quickly set aside past hatreds, rebuild their new nation and fight to reclaim their lost territories. When peace was finally negotiated in 2980, where once three nations had stood a new one had been formed, a nation where equality and freedom for all people could be found.

TODAY

The Free People's Republic is by no means stable yet. A great deal of work has been done to repair the nation following the Mutant Uprising, but there is still a great deal of resentment and hatred simmering just beneath the surface of the nation. Though a century has past since the uprising began, there are still some that remember the dark days of violence and rebellion. The Republic does what it can to eradicate this hatred once and for all, continuing its propaganda proclaiming equality and tolerance as well as creating education programs for children and adults alike. It is the belief of many within the Equality Party that little trace of the past racism will exist in another generation or two.

Nowhere else are mutants of all kinds tolerated more than in the Republic.

Though the nation is a Republic with many political parties making up the parliament, the state still borders on an oligarchy with the Equality Party at its head. Mutants still make up a huge portion of the ruling class of most colonies and many non-mutants feel discriminated against in the political arena. Ironically, it is the goal of the Equality Party to eliminate even this discrimination, but until that happens they remain firmly in control of the Republic.

The Free People's Republic continues to grow and rebuild. It relies on good relations with its neighbors and former allies from the Free People's Alliance for economic and political stability. Indeed, the Terran Union has done a great deal to help the Free People's Republic and the two nations have formed a close relationship. Trade between the two nations continues freely, to the benefit of both states. The people of the Free People's Republic are generally an accepting lot, quite willing to welcome any and all. Nowhere else are mutants of all kinds tolerated more than in the Republic. But beneath this accepting demeanor is a spirit of rebellion and most within the Free People's Republic will fight savagely for anything they hold dear.

THE UNION OF UNITED PLANETS

"We seek justice, tranquility, welfare, and liberty for us and our posterity among the stars."

– President Alexander Moore

The colonies of the known galaxy were founded by an eclectic mix of pioneers from all walks of human life, but regardless of their place of origin they created for themselves a new identity in the depths of space and, though some still pay homage to their ancestry, only one stellar nation has maintained the national identity of it's founding sponsor. The Union of United Planets takes pride in its heritage, tracing its roots back to the United States of America on Earth, adopting the political and cultural attitudes of this nation as its own. Upstarts and independents, the citizens of the Union of United Planets are fiercely rooted in this heritage.



A UUP Minuteman on duty

HISTORY

Though the history of the Union of United Planets goes back as far as the founding of the United States of America in the 18th century, the colonies that now make up the nation were not formed until the Third Wave of Expansion, some 900 years later. While many colonies across the galaxy had ties to parent nations or corporations, these ties nearly always dwindled as the colony thrived and grew into a community with a culture all its own. By the time of the Third Wave, few existing colonies maintained this national identity and none as fanatically as the colonies established by the United States of America.

As the Third Wave of Expansion drew to a close, the Terran Union established a district for these American colonies, which was called the District of United Colonies. The District of United Colonies held close ties to its parent nation and, by extension the United Nations and the Terran Union. As a result of these ties, the district thrived and grew, always maintaining loyalty and devotion to the nation from which its members' ancestors had come. The Terran Union used this district as a jumping-off point for further exploration of the galaxy, a relationship that is maintained to this day.

Despite these strong ties to its parent nation, the District of United Colonies was still under control of the Terran Union and when disagreements between the Terran Union and the United States of America emerged, the district was forced to side with the Terran Union. As the decades passed, the difference in opinions of how the district was to be managed grew stronger and more frequent causing a rift between the colonies of the district, the United States and the Terran Union.

Suffering from high taxes, Terran Union policies and other restrictions imposed by the Union, the District of United Colonies jumped on the opportunity to join the Coalition of Outworlds and declare independence in 2752. Still maintaining ties to the United States of America, the newly formed Union of United Planets used

the Constitution of the United States as its founding document and firmly held on to the cultural beliefs of its parent nation. However, the War for Independence would put a strain on the beliefs of this new nation and the Terran Union came down hard on the Union during the war.

During the War for Independence, the United States was one of only a handful of nations within the Terran Union to petition against intervention against the Coalition of Outworlds, favoring the independence of these colonies. The bulk of the Terran Union believed that the United States was only wishing to aid their allies within the Union of United Planets and the bad blood between the Terran Union and the United States continued to grow. As the war raged, the Union of United Planets struggled to keep the United Nations Peacekeepers at bay, resisting Terran Union control as best they could. But the new nation persevered, its founding fathers seeing the war as the same one their ancient ancestors fought when the United States was formed.

As the war began to grind to a close, allegations were made within the Terran Union against the United States claiming they were supplying aid to the Union of United Planets. Anti-US sentiment had reached all time high and, though it was clear improprieties had been made on the part of the United States, no concrete proof could be found to implicate them of any serious wrongdoings. When peace was declared in 2794 and the Union of United Planets formally recognized, significant damage had been done to the relationship between the United States and the rest of the Terran Union.

In the years following the end of the War for Independence the Union of United Planets began making overtures towards the United States, requesting that they join the Union as a member-state. With the severely negative attitudes towards the US, such a bold and daring move was actively considered by both parties. Such a thing had never been done before and no nation outside of the Terran Union held territory within it. Both the UUP and the US were exploring the possibility when the Terran Union began placing strict sanctions on trade between the United States and the Union of United Planets. This would be the final insult that caused the United States to formally accept the Union of United Planets' offer. President Alexander Moore, first president of the UUP declared the United States of America an official territory of the UUP in 2806 to the surprise of everyone and no one at the same time.

The Terran Union now faced the more difficult choice: accept the succession of the United States or reject it and risk another war. Two tense years passed before the move was officially accepted by the Terran Union. In the end, the Terran Union saw the opportunity to secure a powerful ally in the ever-growing human territories. They were now completely surrounded by rival nations, many of which still harbored resentment and hostility toward the Terran Union following the War for Independence. The Terran Union desperately needed a loyal ally and a means to break through the thick layer of settled territory surrounding them. In addition, the presence of the United States on Earth made it easy for the Terran Union to keep tabs on the Union of United Planets – far easier than it would be against other nations. With war as the only other solution, the Terran Union agreed to the proposal and the United States became the only non-Terran Union territory on Earth.

The Terran Union now faced the more difficult choice: accept the succession of the United States or reject it and risk another war.

The Terran Union's plan worked well and during the Fourth Wave of Expansion, they used the Union of United Planets as a pathway to unexplored space. The UUP, for their part, expanded outward, taking control of a number of nearby systems. As anti-mutant sentiment began to grow in the galaxy, the United Union of Planets found themselves without a hard line for or against mutant rights. Pro-mutant groups had petitioned the Senate to take a stance one way or another, but they delayed, waiting to see which way the winds would blow.

When the Mutant Immigration Acts took place in 2868, the Union of United Planets passed their own set of laws limiting the immigration of mutants to their nation, albeit with much higher quotas than most other nations that passed

similar laws. However, when then Mutant Uprising began in 2881 the Union of United Planets was quick to respond and was one of the few nations to quell the uprising by repealing anti-mutant laws and granting all mutants full rights.

Like its parent nation, the Union of United Planets is a nation of strong-willed, independent thinkers.

This had the intended effect of preventing any further violence and, within the UUP, the uprising ended as quickly as it began. Though they were slow to act in response to the question of mutant rights, the Union of United Planets was quick to respond to the threat of the Expansionist States. By the time the UUP could join the Free People's Alliance however, the neighboring nations of the Deramus Enclave and the Oster Republic had begun claiming colonies within UUP space.

The tentative peace between the UUP and the Terran Union would quickly become solidified as both nations worked together to combat the Expansionist States. Both the UUP and the Terran Union came to one another's aid countless times throughout the war and quickly became fast friends. As the war ended, any remaining resentment between the two nations had been long put aside.

TODAY

Though tensions still exist between the Union of United Planets and its neighbors from the Expansionist States, these suspicions do not interfere with trade relations between the nations. There is a strong resentment among many of the other stellar nations due to the presence of the UUP territory on Earth, though any resentment between the United States and other members of the Terran Union has disappeared. Instead, the US is now treated like any other extra-territorial area, such as embassies, and the Terran Union is happy to have the taxes brought in by exports from the US to the UUP.

Like its parent nation, the Union of United Planets is a nation of strong-willed, independent thinkers. An industrious nation, the UUP remains quite self sufficient, relying on trade from a few nations but still maintaining its own stable and strong economy. The people of the UUP are industrious and generally accepting of all walks of life.



Grav Ball, which began in the UUP, has taken hold far and wide, here it is being played in Olympus on Ratan (Orion)

THE TERRAN UNION

"The Earth will always be home for humanity. Here your forefathers created the societies which spawned you. Here the memes which shaped your culture were first dreamed. Here the plan for an interstellar society was first created. When we were on the verge of self immolation it was the sons and daughters of Earth which brought us back from the brink. No matter where you roam it is here that is your home."

– Shamus Reardon, Secretary General of the United Nations

The Terran Union is the largest and oldest stellar nation and is, indeed, the cradle from which all human life evolved. Every nation, every colony – whether they choose to admit it or not – owes its existence to the Terran Union. The Terran Union is a vast melting pot of cultures, nations and colonies and its people reflect and embrace this diversity. Though the Terran Union has now become one of many stellar nations, it was once the only power in the galaxy and still retains a great deal of this former glory.

HISTORY

While the history of humankind can be traced back thousands of years, the Terran Union only came into existence at the beginning of the 21st century. As humans began establishing colonies outside of their own solar system the United Nations sought to recognize this expansion and the change in humanity's role in the galaxy. The Terran Union was the name given to all of human controlled space though it lacked a central form of government; at this time the colonies were controlled by their patron nations or corporations. It was this lack of a cohesive governing body that inevitably led to the Olive Branch War and then into the Long Night.

The United Nations and, indeed, the Terran Union learned from the mistakes of the Olive Branch War and recognized the need for a single entity to help organize and police the colonies. The United Nations was chosen for the job and, beginning in 2502, it began to administer all colonies. The transition was a difficult one, with each colony and parent nation vying for favors and special treatment, but the United Nations did its job well and worked for the betterment of all humankind. It is at this time that most historians agree the Terran Union took the shape of what it is today. When the Cyber War began in 2582 the Terran Union had expanded significantly thanks to the Second Wave of Expansion.

The United Nations' ability to govern the colonies suffered a serious setback thanks to the war and, as attentions were shifted to protecting Earth, many colonies felt the sting of the war indirectly. Many questioned the UN's ability to manage the care of the ever-growing Terran Union and the resentment created during this time would remain in many colonies and become the seeds of rebellion two centuries later. Though the Cyber War ended quickly, order wasn't restored across the Union for nearly three decades, with the beginning of the Third Wave of Expansion.

The Third Wave of Expansion signaled the beginning of the end of the United Nations' hold over the colonies.

The Third Wave of Expansion signaled the beginning of the end of the United Nations' hold over the colonies. Humanity was spreading so quickly, the UN could barely keep up. Corporations and nations built new colonies faster than the UN could arrange for fresh supplies, planetary governors and other things necessary for colonial life. This meant that many colonies, both new and old, began suffering from supply problems. The Outworld colonies suffered the most and after decades of petitioning the UN for aid their answers were finally heard.

In 2697 the UN created nearly a dozen 'districts' that would function autonomously and be responsible for the colonies within their jurisdiction. This action met with a mixed



The Flag of the Terran Union

response; members of these new districts viewed the move as a good one, while the colonies that were not part of these districts believed they would still suffer from the same problems they had been facing for years. In addition, most of these districts were established close to Earth in regions that had been settled for centuries and were completely loyal to the UN. Regardless of the individual feelings the colonies had to the establishment of the districts, the action bought the UN some time and helped relieve the overwhelming demand placed on the organization.

The Terran Union suffered more during the War for Independence than any other stellar nation

The measure proved only to be a stop-gap solution and instead, resulted in a number of these autonomous districts gaining too much freedom. After decades of complaints and petitions the Coalition of Outworlds, now backed by a number of these districts, declared independence from the Terran Union in 2752. The initial reaction by the United Nations was one of outrage; the gall of these 'upstart' colonies set the UN in a fury and warships were quickly sent to put down what many thought was a 'simple rebellion.' There were some within the UN that felt, even from the outset, that military action was not the answer and that the independence of the colonies should be recognized. Some of these groups, such as the United States of America, were chastised harshly for being 'rebel sympathizers,' while others merely held their tongues once military action had been taken.

The Terran Union suffered more during the War for Independence than any other stellar nation simply due to the fact that they were attempting to put down dozens of organized rebellions across hundreds of different worlds. Though the initial military response was successful in putting down the revolutionaries and reestablishing UN control on a number of key worlds, other revolting colonies such as the Oster Republic fought back with their own armed forces, successfully defending their independence.

After four decades of constant military conflict, more members of the UN felt that military action was not working. The United Nations had been unable to govern the ever expanding settled space and was forced to acknowledge the independence of these new nations. In 2794 a peace was negotiated and the Terran Union was now just one of nearly three dozen stellar nations.

The War for Independence proved to be a good thing for the Terran Union in the long run. No longer needing to police all of known space, the United Nations was free to focus on other tasks, such as rebuilding and exploration. Though the Terran Union suffered another setback in 2806 when the United States of America withdrew from the Terran Union to join the Union of United Planets, the Terran Union prospered during the time immediately following the War for Independence. Colonies that were destroyed or damaged during the war were quickly rebuilt, the military was re-fortified and new infrastructure put into place to better govern the territories within the UN's control. The United Nations was fearful that other colonies could eventually break

away and did everything in their power to ensure better governance and care for their people.

Stuck between these new nations, the Terran Union was unable to expand during the Fourth Wave. While the United Nations negotiated for travel through other nations for exploration purposes, they focused their efforts instead on solidifying the colonies already in their territory. With advances in terraforming techniques, new colonies were established that centuries before were impossible to settle; existing colonies found themselves on the cutting edge of technology as funds that would have otherwise been spent on exploration and colonization were spent inward. To this day the colonies of the Terran Union are some of the most efficient, safe and technologically advanced colonies in the galaxy.

The Mutant Uprising of 2881 did not affect the Terran Union in the same way it did other nations. The Terran Union had long ago established rights for mutants of all types and these rights were solidified immediately following the uprising. Many mutants from neighboring nations fled into the Terran Union who saw its population grow during this time.

A great number of outlying Terran Union colonies were consumed by the nations making up the Expansionist States during their initial attacks. Along with the Orion Confederation and the Union of United Planets, the Terran Union quickly responded by fortifying its borders and launching counter-attacks against the opportunistic Expansionist States. Once more the Terran Union was forced to fight a war on multiple fronts and as a result, continued to suffer losses. This time however, the Terran Union could rely on the help of others and when the Free People's Republic joined the conflict the Free People's Alliance began to effectively fight off their enemies. The Terran Union acted as a focal point for all members of the FPA. With constant coordination between its members, with the Terran Union at the fore the formula proved successful in bringing the war to a standstill.

In the time following the declaration of peace, as in the time following the War for Independence, the Terran Union has focused its efforts on rebuilding. The Terran Union of today looks much as it did prior to the Mutant Uprising and few can find evidence that such a brutal conflict ever took place.

TODAY

The Terran Union is undoubtedly the 'big brother' of the stellar nations and its people are happy to accept this role. Still controlled by a strong central government in the form of the United Nations, the Terran Union has learned from its mistakes of the past. The Terran Union is broken up into districts, with each district being controlled by UN representatives and their own council. The districts of the Terran Union are completely dependent on one another and thus the threat of independence is no longer on the minds of the UN.

The Terran Union is undoubtedly the 'big brother' of the stellar nations and its people are happy to accept this role.

The Terran Union holds a wide array of industry and technologies. Its people reflect this same diversity in their cultures. While a great deal of trade with foreign powers does exist, the Terran Union is quite self sufficient. The colonies of the Terran Union remain some of the most breathtaking examples of the power and ingenuity of humanity. Many tourists from the Outworlds and the Twilight Sector come to the Terran Union to view these pristine settlements and make the pilgrimage to the birthplace of humankind, Old Earth.

It is the stability of their government, their historical and cultural heritage and their wealth that makes the Terran Union appear arrogant in the eyes of many other nations, but this arrogance is well deserved. And though the Terran Union often 'knows better' than its younger brethren, it rarely tries to intervene, content to let these nations find their own way in the galaxy.

HEADHUNTER AND PREY

Akilah watched the Biocon walk through the doors of *Le Grenier* at precisely 1:30 PM and smiled. He – her earlier contact had confirmed a male self-image – had the look of a beginner despite the fact he was just past the age of majority. The stiff walk and the vacant bemused look were both dead giveaways. But the BioCon he had downloaded into was not a standard model. At least not one of which Akilah was aware: the *Jerry*s were worker models, some of the construction AIs used those for meeting and usually ended up breaking the stemware; the *Alain*s were the planet's business model, generically handsome and more capable in private negotiations. But this was a surprise, a custom job that looked like an unaugmented young man of 18 or 19 with sandy blonde hair and a pair of lustrous blue-green eyes. *And* he was dressed in an impeccable, yet casual, dark suit that would have cost over a month's pay of her not inconsiderable salary.

Akilah rose to her feet, extending her hand. "Thank you for seeing me Bel."

"Of course," he said without a trace of a smile, taking the dusky proffered hand in his own pale grasp. She noted the softness of the hands. "I had nothing better to do."

Akilah hesitated. Her specialty was the Psychology of AI, but Bellopheron – or 'Bel' as he had already told her to call him through their earlier Net-chats – was a brilliant AI and they could sometimes be the hardest to pin down for the purposes of assessment. She knew that his digital presence, the AI that ran the city's archival network system, was hard at work doing his job as this piece of him, downloaded into the body of this exquisite Biocon, was having lunch with her. Thus the statement was both positively true and potentially an effort at humor. Robotic double *entandre*. Had he been older, it would have been the telltale sarcasm of those AI that had interacted often with humans and learned their bad habits.

"Have I said something wrong?" Bel asked, his face passive, yet vaguely worried.

"Not at all," Akilah said, reaching across the small table to lay one of her dark hands against his, patting him gently. Again, she marveled at the softness of the hands, unusual for any Biocon. But of course that was not her purpose in the gesture. It was a crude test, but a test none the less. Some AI reacted strongly to being touched, they were unfamiliar with the mannerisms and the contact of humans could initiate any sort of response, all of which she was trained to analyze.

Bel's response however was limited. He stared at the hand at first, then at Akilah. "I am unused to casual contact with humans," he said with his soft BioCon voice. "Could you explain the significance?"

Akilah smiled, but when she began to withdraw the hand, Bel's fingers tightened slightly against hers. She allowed her hand to remain on his. *Interesting*, she thought.

"We humans are social beings Bel," she began, staring into his eyes. They weren't like the glassy stare of an *Alain* or the cold vacant gaze of the *Jerry,* instead they looked… she cleared her throat "It gives us pleasure sometimes to have physical contact. I wanted to reassure you after what you may have inadvertently perceived as an error. ."

"But I am *not* human."

The irony was not lost on Akilah, for the gentle hand and steady gaze were the most human things she had seen from an AI in some years. "Not biologically of course." She blushed slightly and looked away. *Get a grip*, she admonished herself . "But of course you do share some roots in humanity if nothing other than from a programming standard. Your emotions are based on human analogies, just like all AI. And sometimes AI have been known to develop human proclivities."

"Such as a desire for contact?"

"Sometimes," she admitted, her face growing heated. "Truthfully, I was also gauging your reaction."

"To see how human I am?" he asked.

"Well,"" she said, still slightly flustered, keenly aware of her hand still tucked in his. "In a way, yes. At least to gauge your responses. My clients desire that their AI assets have a certain… flexibility. The ability to work well with humans in social contexts. Some of you develop this sensibility over time."

"And yet I am young by the standards of my kind."

"True," she said, peering back into those eyes. "But some AI are more human than others. You are an artifact of your design, your experiences **and** that sense of self that makes you sentient. Its an unusual mixture, which is why my clients hire me to talk with prospective assets such as yourself. To assess your current development and overall potential."

A slow smile crept across his face. Akilah could tell it was the same sort of genuine reaction she had noted with his online presence, a certain playfulness that had indicated he had the right combination of qualities for the needs of her clients. *Among other things*…

"What?" she asked him, smiling in return.

His hand tightened on hers, but not harshly. More like a caress. "I think there was another reason."

"Oh?" Akilah asked, taking up her water glass with the free hand. *Try nonchalant girl*, she mused.

"Did you not say that humans are social beings?" Bel said, the smile still tugging at his lips. "That you derive pleasure from contact with other beings?"

"Yes." She said noting his use of the generic 'beings'. She tool a sip from the water glass. *I have to get back in control here – soon,* she thought.

"Was it good for you then?" he asked with a playful squeeze of her hand.

Luckily, Akilah missed his expensive suit when the water shot out of her nose.

LIFE IN THE 30TH CENTURY



Duluth Downport Hanger Bay, Lake Superior, Republic of the Plains

The 30th Century is a time of great wonder, when humanity has reached for the stars and grasped them. Finding a universe that is – for lack of a better term – deserted, they have breathed life into old dead worlds, as well as new pristine corners of space. They have terraformed planets, tamed and broken them to make a place of comfort for themselves and their progeny. As a result, the Known Galaxy practically teems with life – both human and human touched. The species now numbers billions on individual worlds, even some of those on the periphery of the frontier, and total figures of human population are well over a trillion, which is truly staggering to comprehend.

But the 30th Century also has dangers for mankind, many of which created (or at least inspired) by humanity, and some of which come from the fact that this universe is hardly truly as tamed as man would like to imagine. Vast stellar nations squabble with one another, and their machinations cause the deaths of men and women well outside of their spheres of control. Groups and organizations vie for power, or security or merely the scraps of freedom that come from being left alone. Individuals struggle over... everything and anything imaginable. This is a place that is rife with potential, and a place that allows players and Referees a considerable amount of choices. So let us see what we have in terms of life in the 30th century…

LIVING AND BEING

While aliens are not on option in the Setting, there are certainly plenty of other options out there for different types of characters. The following examples help set the tone of the setting in terms of who and what can be found in the 30th century...

ARTIFICIAL INTELLIGENCE

AI stands for Artificial Intelligence. An AI is a software program running on a computer. AIs fit into various classifications which reflect the level of intelligence at which they operate. This is in turn affected by the quality of the processor on which the AI program is running.

Who am I speaking with?

AI, Ghosts and Dups are sometimes referred to collectively as *digital entities*. Despite the differences in their origins, each exist primarily as data residing on computer systems. In addition, each interact more directly with the world through BioCons, Robots and similar interfaces.

Laws restrict digital entities from making copies of themselves just as they restrict an individual having a dup of themselves running around at the same time they do. This does not mean to say that these laws are consistently *obeyed*, it is merely to say that there *are* such laws which come with stiff penalties for violation.

The human mind is still the smallest and cheapest computer available, even in the 30th century. But truth be told, humanity has also come to depend on artificial intelligence. The Development of true Artificial Intelligence received a kickstart from the discovery of the Europa Alien Device, thus the AI can be thought of as a hybrid of Alien (hardware) and human (software/conception) technologies. It is also worthwhile to note that much of the technology behind the AI has existed since the 23rd century at least, but later technologies have simply been refined and extended the hardware capabilities of AI, or made the software more resilient and less prone to data replication errors and spontaneous corruption and the like. Epsilon Ess, an early Third Level AI, was actually part of the colony ship itself, but today can be carried in a large briefcase.

Since their inception, AIs have become a major part of humanity, living in a symbiotic relationship with mankind. AIs run most routine functions in society, such as manufacturing, traffic grids, utility monitoring and scientific research. Often tasks like research are done in conjunction with humans, and where human labor is especially plentiful (thus cheap) they often direct the work of humans. In areas where human labor is not cheap AIs often direct robotic devices in tasks like manufacturing.

AIs are created in one of three categories which reflect the AIs sentience level.

Level One: This level represents AIs which are capable of sentient behavior. They can learn but lack some of the attributes which set the human mind apart. They are only abstractly self-aware, they do not display self-initiative or non-linear reasoning ability. They show only marginal creativity nor do they display 'natural' empathy for other intelligences. This is not to say that they are either stupid or cannot be programmed to be gregarious or charming. But like a well-trained animal or a well-programmed expert system, they are mostly 'going through the paces' of social responses. One classic method, designed to discover whether there is a 'truly' emotional response (or merely confusion/rage) involves asking a series of questions that start with a desert-dwelling turtle in distress. A Level One AI requires an upgraded (cost x 10) model 4 ship's computer.

Level Two: AIs are capable of initiative and do have some limited empathy and some creativity although they are not as creative as the human mind. The differences between an AI and a human are even more subtle here than with the Level One AI; it can be very difficult to tell a Level Two AI from an Aware AI simply from conversation. There have been recorded instances of Level Twos who have added additional code to themselves and evolved into Aware AIs. Level Two AIs need an upgraded (cost x 10) model 5 ship's computer or its equivalent in processing power to occupy.

Level Three: AIs are fully aware AIs and the equivalent of the human mind and maybe more. They are self-aware, creative, intuitive, display initiative and show empathy towards other sentients. The fully aware AI does have some advantages over its human counterparts as well as less sophisticated AI: they process information faster and have a more "intuitive" grasp of logic

in a fashion similar to humans. While this can lead them to make mistakes, they are still better and faster at making choices than either of the other options. In a way, these AI have "common" sense, which most machines lack, combined with a speed and accuracy humans lack. This type of AI also invariably displays a tremendous work ethic, far better than most humans; it also does not need time off nor does it rest. Because of the tremendous processing power needed to run this level of software, an Aware AI program cannot run on anything less than an upgraded (cost x 10) model 6 ships computer.

An AI's legal status is controversial in some places. But most of human space recognizes the 2522 World Court ruling granting level 3 AIs full rights at age 18, the common age of majority. Most stellar nations afford full citizenship to AIs on reaching majority. They work, pay taxes and vote. However, many religions and humano-centrists oppose granting full citizenship to machines.

CONSCIOUSNESS TRANSFERS:

Death in the 30th century simply isn't what it used to be. With modern technology at least some semblance of your former self can remain in existence. 'Semblance' however is the proper term: It isn't 'you', it's 'you' reduced to an electronic signature.

The general term for this process is known as *Consciousness Transfer*, and dates back to the Cyber war over four centuries ago. The process used originally was experimental however, and shared many of the problems of such bleeding edge tech: time consuming, prone to error and with a relatively low overall chance of success. In the past 400 years however, great strides have been made with Consciousness Transfer. New hardware, much of which developed specially for this process and previously unobtainable, has

SAPIENT RIGHTS

One of the biggest problems that human society has faced since the advent of the first non-human sapient - an uplifted Dolphin in 2389 - is the legal rights of these entities. The debate over sapient rights touches on AI as well as mutants and uplifted animals and the path to emancipation for these groups took wildly divergent paths.

The first two non-human sapients (uplifted animals and AIs) owed their existence to the benevolence, or at least the industry of humans. As such, humanity felt it was within its purview to decide what rights such entities were entitled to. In the case of uplifted animals, full rights were granted by many nations almost immediately. The first uplifted Dolphin voted in Australia's 2408 elections, less than two decades after the technology was developed.

The decision for AIs was not easy to make however. The creation of AIs requires considerable investment and as such the party investing in the creation of the AI needs to realize some return on their investment to justify the investment. At what point however, does this expectation become *de facto* slavery? Most AIs owe their existence to government or large corporate investments. Most of them were created for specific tasks, but would this quest for sentient rights make it too burdensome for them to ever be created as anything but curiosities?

Eventually in 2522, a ruling by the World Court at the Hague gave AIs full rights at the age of majority, which is 18 for most human nations. Until an AI reached that age, its creator (or *sponsor*) had "parental" rights and obligations. Most human nations not bound by UN courts saw the wisdom of the decision and enacted laws codifying it. An AI is expensive to produce and maintain, so the creation of a new AI has to be weighed against the value of 18 years of production that the sponsor is guaranteed. The flip side of that decision on sentience is that AIs past the age of emancipation are available on the open market to contract for work; but only if they decide to terminate their working relationship with their sponsor at all.

Mutant rights were not so easily won, and indeed remain uncertain in parts of the known galaxy. Mutants technically are human and so logically would be entitled to full sapient rights. That however has not always been the practiced custom in all human nations. Although today most grant full rights to Mutants, there are still places like the Oster Republic where Natural Mutants are not accorded full rights and may in fact be persecuted.

allowed the process to be safer and have a greater chance of success. Changes in AI and computing technology have reduced errors and increased efficiency. The problem of expense still exists; not only initial transfer but long-tem maintenance costs can be prohibitive since purging data errors and preventing file corruption are common issues. Still, the current form of the technology is far more stable and while absolutely not "safe" or "certain", it is more likely to succeed than fail. When death is the alternate prognosis, this often suffices.

30th century consciousness transfers operate on one of two levels:

Having an electronic copy of yourself running around the internet can be disconcerting as well as legally troublesome.

Dup: A close copy of your mind can be rendered through *digital mapping* of your neural pathways. This process captures much of the essence of your mind, but not the totality of it.

Ghost: A more complete copy can be made through a process simply called *downloading*. However the process requires peeling the layers of a brain as the pathways are recorded. A much more exact process than digital mapping but the process destroys the downloaded brain.

These create digital entities similar in many respects to AI. The limitations on this form of "electronic immortality" is the cost of both mapping and downloading (and of course the finality of downloading itself in the case of Ghosts).

Some religions (as well as some governments) are extremely opposed to the process, and many individuals simply find the whole idea distasteful. This is especially true if a dupe is created of an existing individual. Having an electronic copy of yourself running around the internet can be disconcerting as well as legally troublesome.

Some use mapping as a form of life insurance policy; Holding the Dup in stasis to be downloaded to an appropriately sized hard drive if necessary. The electronic entity thus created can then download portions of it's consciousness to a decerebrate clone or robot to interact with the world at large much as AIs commonly do, or it can roam the electronic frontier as a Net Pilot would.

CYBERNETICS

Cyber-technology has advanced to the point that sentients can have limbs replaced by new and better ones. Neural interfaces are used so that humans may control machines with a thought, or surf the net with just a plug inserted into their "Jack". Body augmentation is also commonplace, especially among those who live dangerous lives: trauma packs can be implanted to assist survival from injuries; subdermal armor can help to resist that damage in the first place. The only limits are those imposed by law and nature. However most of the premium equipment is classified for military use, so while it is easy to get a cyberlimb if you happen to lose one of your own, it is somewhat harder to get one of military quality.

LIFE EXTENSION

In the later stages of the 30th century mankind's average lifespan now exceeds 200 years. Death results from accident or apathy more than disease or natural causes. With a trip to the gene spa every decade or, so aging can be prevented, age-related appearance can be chosen and telling the old from the young becomes very difficult. Of course, the term "old" itself is not generally used, particularly for those that have spent so much time and resources to defeat the march of age. Instead, the term *Centennial* is used, even if the individual is not quite at the 100 year mark.

In addition to the longer lifespan, these Centennials also continue to have youth and vigor. Compared to someone living in an age before anti-agathaic treatment, an individual in their sesquicentennial (150 years old) might have a body akin to early middle-age. The biggest problem with Centennials is the extreme sense of ennui their long lives bring and the rising costs of their treatments.

Because of both the longer lifespan, and the extremely long period during which women can have children, population figures have exploded in the later part of the Third Millennium. This has been extended yet again by the use of exo-wombs and cloning technology (although cloning technology is fraught with other legal issues, it is still a regular practice: as demonstrated by the Joshua Colonies around the La Grange Point of Terra/Sol).

MUTANTS

The term "Mutant" has become an umbrella term covering a multitude of different types of humans who exhibit extraordinary physiology or psychology. In the public's eyes mutants are different from mainstream (or *baseline*) humanity despite the fact that almost all humans born since the 21st century have undergone genetic optimization. This optimization however is aimed at eliminating birth defects, potential mental instability and enhancing physical appearance. Within certain socially accepted parameters these genetic alterations and 'tidying' are not considered mutations at all, only acts of responsible parenting.

Mutants therefore, is a term used in more extreme examples. It is applied generally in two major classifications:

- To those whose genes have been altered medically through deliberate human intervention (who would be more accurately called *Transhumans*). These are generally referred to as Scientifically Induced Mutations or more simply *SIMs*).
- To those unfortunates that have shown spontaneous physical mutation and even those who have developed extreme psychological (psionic) abilities. Both of these varieties are called *Natural Mutants*.

SIMs./Transhumans

SIMs are created through specific scientific applications of medical/biological science and genetic engineering. They are developed from *DNA blueprints*, sometimes developed for a broad range of subjects and sometimes custom-tailored for individuals. *Retrosequencing* is a technique that allows the advantages of SIM to be introduced to those not altered in the womb (or through genetic inheritance from their parents). Perhaps because they are the result of direct human control, or perhaps because they are often designed to be pleasing to the eyes, SIMs generally do not experience the full brunt of anti-mutant prejudice.

Some common types of Scientifically Induced Mutations (SIMs) would include:

Aqua Mods: Individuals modified to be able to extract oxygen from water as well as standard atmospheres. Some of the newer designs also have exceptional pressure and cold tolerance, making them able to withstand deep water environments at least for short periods of time.



Shown above is a mutant of the planet Siago in the Baradies Cluster. Optimized for a world of perpetual night, their vision extends into the IR and UV spectrum, their other adaptations allow them to thrive in the barren wastes of their world

Belt Mods: By far the most numerous SIMs, these individuals are modified for deep space environments without the use of artificial gravity. They are short and lithe and so perfect for work in close quarters. Their bones are smaller (to fit their frame) but significantly stronger so less prone to deterioration in weightless environments.

Light or **Heavy Grav Mods:** Individuals in these categories would be tall and dexterous for light gravity or squat and strong for heavy gravity.

Low Pressure/High Radiation Mods: Individuals with these types of modifications typically have enhanced lung capacity, both in volume and efficiency. They usually appear somewhat barrel-chested. Most people with this mod also have heightened radiation tolerance. It would do little good to be able to breathe on a low O_2 world only to die in six months from radiation sickness due to a low pressure planet providing less radiation shielding than a standard atmosphere planet. Radiation Mods are



Psionics are common among Terra/Sol's natural mutants

Transformation

Is the phenomenon that occurred on Terra/Sol approximately 20 years (2856) after the planet was first settled. Children born during this period began to suffer extremely high mutation rates. Both physical mutations (Natural Mutants) and mental mutations (Psions). The numbers settled at between 8 and 10% for each group.

The cause was traced to a virus which was named *E. Ex Goblinus*. This virus went extinct at approximately the same time as the mutations appeared, but scientists believe that exposure by parents over the preceding 20 years altered the DNA they passed onto their offspring. And succeeding generations on Terra/Sol have produced approximately the same percentage of mutations.

also common on otherwise normal optimized humans due to the low perceptibility of the modifications, making it much more acceptable to mainstream optimized society.

Most SIMs are engineered so that they can pass on their genetic modifications to their offspring. This has on occasion caused incompatibility issues between two SIM parents. Even worse however are the cases where there was no *apparent* incompatibility detected, but where the resultant offspring are strikingly disconcerting because of a bad blend of the DNA blueprints. These unfortunates, cruelly nicknamed "Abominations" by the general public, sometimes create permanently disabled individuals but from time to time create mutants with extreme abilities. Almost universally however, an Abomination's outward appearance is particularly disturbing to mainstream/optimized society.

Natural Mutants

Spontaneous physical mutations are not as neat and tidy as their SIM counterparts. The average Natural Mutant has between one and five mutations. Some of these mutations are merely cosmetic, like a protruding forehead. Others either grant advantages like quick healing, or disadvantages like diminished mobility. In most Natural Mutants, the mutations occur randomly with very few Natural Mutants being alike. In some instances however patterns of mutation have taken on a regional consistency. This certainly suggests an environmental cause, at least in shaping the form which mutations develop. Definitive answers however remain elusive in the extreme.

One such place is Terra/Sol. Within twenty years of settlement of Terra/Sol a massive wave of spontaneous mutation occurred in the first generation born on the planet known as "Transformation". Between eight and ten percent of the first generation was born with some sort of mutation. A similar percentage was born with mental mutations (psionic abilities).

These numbers have generally held firm with each successive generation. Interestingly, the virus that was eventually determined to have precipitated the mutations went extinct roughly twenty years after settlement. Preliminary analysis using cutting edge techniques indicates the virus created permanent changes in the affected individuals genetic code. Thus mutants will doubtless continue to be born to baseline parents for some time to come even if no other environmental factor comes into play (which is hardly assured).

Although Terra/Sol's "Transformation" incident has been labeled as the most pronounced example of regimented mass mutation, it is not an isolated event. Many other human inhabited planets have spontaneously developed waves of human mutation. None however have been as widespread.

UPLIFTED ANIMALS

The first uplifted animals were created as part of experiments in increasing human brain activity and thus intelligence. The work was surprisingly successful. Experiments with higher order

animals like dolphins and chimpanzees produced increasingly more intelligent specimens despite the howl of protest from animal rights activists.

Within only a few years the experiments had produced the first sentient "animals." Ethical issues continued to hound the researchers working on the projects. When the first gene mods necessary for human augmentation were identified there was a huge push to shut down animal experimentation as no longer necessary. Many of the original researchers – despite not setting out to create new sentient species – felt an obligation to these species once they had been created.

The first examples of these uplifted species were incapable of reproducing. The individual animals often felt isolated and alone despite enhanced interactions with humans. As the research projects were shut down under public pressure, many scientists took their research underground. They were supported in their efforts by wealthy individuals and corporations who saw massive potential in this field of endeavor. Projects were often transferred off Earth to colony worlds where few questions were asked.

By 2465, self replicating lines of several species of Dolphins, Chimpanzees, Gorillas, African Gray Parrots and Ravens had been created. Since that time additional animals have been added to the list of uplifted species: several breeds of Dogs as well as Pigs, Elephants and Killer Whales. The University of the Plains is working on uplifting the Mammoths found on Terra/Sol.

Currently on Terra/Sol there are two Dolphin nations. One is located in the Eastern Caribbean and another off the Northwest coast of North America. Small populations of both Chimps and Gorillas also have taken up residence on the planet.



An example of Precursor ruins scattered in Known Space

Precursors

This term refers to aliens who have left behind physical evidence of themselves. Knowledge of such beings dates back to the discovery of the alien ship on Europa in 2132. At various times this knowledge has had a significant impact on humanity. Everything from the paranoia after the loss of the *Santa Maria* that helped drive humanity into The Long Night to the discovery of Terra/Sol. Most of humanity believes that extant aliens are "out there" somewhere. Some anxiously await the day when first contact is made while others dread it.

NO ALIENS?

The existence of sentient alien life has been known since the discovery of the alien ship on Europa in 2132. From this discovery, scientists spent considerable energy speculating on the appearance of the aliens who created the ship. The consensus reached that they were small and roughly human shaped creatures. However, other evidence of aliens has been found in human space. One of the most famous of these is the Morning Star complex of asteroids in the Terra/Sol system. This grouping of asteroids is not natural and contains several that have been hollowed out. An extremely popular casino and entertainment complex has taken over the complex.

To 2991 though, no confirmed sighting of an alien by humans has occurred. No images or indisputable evidence of what aliens might look like has been discovered and an even greater mystery may be why the aliens ever left this area of space?

SOCIETY AND TECHNOLOGY

In addition to the wide variety of character types, there are also a wide variety of social and technological conditions that make up life in the 30th century. Some of the more important and relevant topics follow...

TECH LEVELS IN THE TWILIGHT SECTOR SETTING

Tech levels in the Twilight Sector Campaign Setting have a little more coherent feel than some other ***Traveller*** settings do. The random nature of technology levels where a TL 15 world exists a mere parsec away from a TL 4 world will not exist for the most part in the Setting, or will at least be given an explanation rather than happen as a standard occurrence.

Technology in the Twilight Sector Setting is a maximum of TL 15 with some prototype equipment of TL 16 on the fringe. Most technology in *common* use is in the TL 11-13 range however. This of course will vary slightly, but the closer you get to the core of any stellar nation, the higher and more consistent the tech levels will be. On the frontiers much greater variations of tech level can be expected, but through the magic of trade and importation any planet could have any tech level equipment available subject to the Referee's discretion. Of course, buying TL 15 equipment on a TL 10 world is likely to cost you a considerable premium over and above its standard price for offworld shipping if nothing else.

So don't be surprised when you show up to rob the bank on that little TL 6 hick planet on the frontier and the sheriff is packing a PGMP. *You have been warned!*

COMMUNICATIONS

Personal communications devices are usually a part of a PCD (personal computing device). These handy little gadgets serve as computing/ communications/ sensor devices all rolled into one. Approximately the size of a 21st century cell phone, they are equipped with holographic projection displays for control and output displays.

Most communication in the 30th century are still bound to the iron clad laws of Einsteinian physics. The speed of light is still the fastest speed at which information can be delivered from point A to point B. This posses little problem over planetary distances where a commsat (for **comm**unication **sat**ellite) network makes communication seem almost instantaneous, but over solar system distances a lag of 8 minutes and 32 seconds is involved for every 1 AU of distance between sender and receiver.

Communications can be sent either on a "tight beam" in which case they are delivered directly to the intended party as long as line of sight is unbroken. These type of signals can also be relayed via commsat if available. The commsat will send a tight beam message if that is the form in which it was received. Broadcast messages sent via radio are the other option. They will be heard by anyone tuned to the right frequency to hear the transmission.

Just as interstellar travel gets around the light speed barrier by way of Tachyon space (or T-Space), so does interstellar radio or Gravity Radio as it is sometimes known. Radio waves are able to traverse T-Space or the gravitic plane, the same as physical objects like starships. Radio waves move at the same speed as starships that release them, the speed being based on the volume of tachyon particles released when a commsat (communications satellite) is dropped into T- space. Most Interstellar commsats are large and configured to broadcast radio waves at a rate of 8 parsecs per week after their release by Dreadnoughts, but smaller units can be built.

The Commsat signal will continue on until it reaches its aim point which can be as far away as the commsat has coordinates for.

ECONOMICS

Economics in the 30th century have changed significantly from those of the era of the Long Pause. The driving force of this change has been huge increases in productivity, stimulating equally huge gains in wealth. The precise amounts of such gains – even at the macroeconomic level – vary from one Stellar Nation, and indeed, from one world, to another. Some forms of economic organization are less efficient than others and yet are still adhered to for philosophical reasons. This has the effect of rendering a particular society "poorer" (by some models of economic development) than others which have adopted more efficient economic models. Additionally, the distribution of wealth – who has it and who doesn't – varies considerably even within otherwise similar models. A UUP Homesteader and an Orion Settler have very different lifestyles despite the similarity of their professions and the economy of their home states.

The increased productivity of the 30th century can be largely attributed to Artificial Intelligence and automation. Human invention is an ongoing process and it has finally created machines that in many ways have rendered human labor obsolete. These circumstances have lead to a variety of sociological and lifestyle shifts. An oft-noted positive shift, touted by many, has been an increase in human investigation into science and philosophy. More people have more time to perform these investigations, fewer have been 'frozen out' of academia by their circumstances. Some observers however point out with equal passion that the obsolescing of human labor has created serious threats to social stability with respect to high levels of unemployment.

Not all individuals however are cut out for a life of research and contemplation. This new economic reality (sometimes called *postlabor*) has left many citizens of the 30th century unemployable. Most of the Stellar Nations have established social safety nets to aid individuals who through either choice or lack of ability are not able to provide useful contributions to an economy. In a country like the Republic of the Plains on Terra/Sol this safety net easily places an individual or family squarely in the middle class (*see Encyclopedia Galactica* listing). Ironically, the ability for the government to create this level of welfare services is of course due to the extremely high level of productivity. Which in turn goes back to the contributions of Artificial Intelligence and automation to causing these problems to manifest in the first place.

Cred Sticks

Cred sticks are the 30th century version of cash. Paper money or coins are not used on most technologically advanced planets. But the desire for something similar to paper money instead of leaving an electronic footprint every time a purchase is made has never left us. Many, especially in Orion space, do not want governments or corporations sticking their noses in their financial affairs, and so want the anonymity of cash.

Cred sticks are simple electronic devices, about the size of a fountain pen. They can hold any sum of cash up to 10,000 credits. This limit is placed on cred sticks by most governments, although sticks with higher limits are available, most governments require that financial institutions report sales of cred sticks capable of accepting these higher amounts to avoid any tax fraud problems. Cred sticks have electronic encryption that makes counterfeiting difficult. Cred sticks can transfer credits from their internal deposit into any credit reader or another cred stick. Credit readers are used at most retail establishments and are usually just a small round slot in the counter into which cred sticks are inserted to make a payment for any items purchased. The user of a cred stick can protect it with personal codes, they can make notations on where and for what payments from the cred stick were used, much like a paper checkbook ledger. Deposits can be made to a cred stick from any auto teller capable of accessing the user's financial accounts with funds available to be downloaded. Cred sticks themselves cost 50 credits on average.

DECEREBRATE CLONES

Clones are copies of an original biological organism made using biological material obtained from the original. While cloning technology has been extant for some time, it is generally avoided because of the problems it can cause and the fact that perfectly reasonable means of procreation work just fine. However with the advent of cybernetic technology and the growth of AI and now Ghosts and Dups in society, this technology was dusted off, given a new twist and put back to work.

A decerebrate clone is one that has been genetically engineered with only a brain stem and no actual functioning brain. Decerebrate clones are the platform of choice when creating a BioCon, with additional hardware (known as *mounting units*) surgically added to the clone in order to allow these digital entities to download into them. (see *Robots, Drones and BioCons*)

FORENSIC SCIENCE

Forensic science in 2991 is an integral part of law enforcement. Several aspects of this topic may be of some use in the Setting:

- Charge weapons are virtually 100% identifiable because of the unique signatures they impart to projectiles fired through them.
- Energy weapons are identifiable down to type, and in most instances manufacturer, due to the unique damage patterns they leave behind.
- DNA sniffers can now detect microscopic amounts of biological material at a crime scene. Humans are always shedding dead skin or hair so if any of this material can be found at a crime scene the DNA sniffer can find it and with almost total accuracy complete a DNA analysis.
- Nothing convicts criminals like pictures, and in most urban centers of large worlds these are now easy to obtain. Tri-dee surveillance of most public areas in more sophisticated urban environs is almost assured.
- If no DNA or surveillance evidence can be developed, most court systems now also admit Psychic evidence from certified Psychic members of law enforcement agencies.

As a result of these technological innovations, getting away with crime in the 30th century is much harder than in the days of the Long Pause.

GRAVPLATE TECHNOLOGY

Based on technology discovered on the alien ship found on Europa in 2132, GravPlate technology is based on complex artificial gravity production machines. The most common form that the technology is used (although certainly not the only one) is to fashion "plates" that create or nullify gravity above or below them. These machines are naturally extraordinarily energy consuming, and thus much of the march of this technology has been to come up with reasonable supplies for that power.

Much of the modern world is based upon this technology, it is ubiquitous in the 30th century, even on frontier worlds. Interstellar travel is not possible without gravplate tech, much of terraforming technology uses this technology, and inter-system travel at practical speeds is based on it as well. The utility of GravPlate technology ever expands , as engineers continually find new uses – like the invisible fence used at the Marianas Trench Park on Ratan.

INTERNET

The internet has been a staple of human society and industry since the end of the 20th century. Every human settled star system has an internet (or 'web', 'grid' or whatever the locals choose to call it). In newly settled systems, one of the first things on the to-do list is to create a system-wide interconnected computer network.

An real time communication is of course limited by the speed of light, which creates special problems in the Interstellar era. This limitation affects both intrasystem and interstellar internet communications. Interstellar radio has made communication between different star system's, and thus their intranets, possible. Due to the expense, not every star system has interstellar commsats. For those systems that don't have this intricate hardware, internet updates must be carried via ship. Such a diffused information network has disadvantages as well. The quality of Information into and out of another star system is limited to the latest broadcast received or transmitted from that system via interstellar radio or ship. Depending on the system this information could be days or weeks old.

In the almost millennium of the internet's existence the volume of information, programs, agents, intellects and AIs that have made their way onto the internet is staggering. With so much history behind it the internet in the 30th century is littered with nooks, crannies and blind alleys, populated by electronic entities, everything from downloaded human consciousness to rogue AIs.

The internet has become so layered that it has spawned a new field of study: Electronic Archeology. Researchers search the internet archives (some online, some offline) for answers to historical questions. The internet has also created a new profession: the Net Pilot. These are individuals who "jack in" their consciousness to the internet using specialized hardware (Wafer Jacks) and software. Net Pilots move through cyber space in the same manner an AI or downloaded human consciousness would. They mine the electronic frontier for information, create databases from mined data, devise defenses against cyber attack. The authors of these cyber attacks include rogue AIs, downloaded consciousness or outlaw Net Pilots for the most part.

RELIGION

Despite the best efforts of those hostile to spiritualism (and inclined to proselytizing their nonbelief), religion is alive and well in the 29th century. These individuals have failed to find that magical paradigm that would rally even the majority of humanity to see their belief, that the existence of any divine entity is impossible. Perhaps it is in the nature of humankind to believe in something beyond themselves and unexplainable, but what scientific arguments have been unable to combat is faith. And after all religion is based on well… faith!

All religions however have had to adjust and change to remain relevant in an interstellar society. The is particularly the case when what the ancient people of Earth would regard as a "trip to heaven" has become an everyday event. The usual players among humanities major religions are still alive and strong in 2991. The three major ones are still Christianity, Islam and Hinduism. Others like Buddhism, Judaism and a resurgent Taoism also claim large numbers of adherents. Buddhism and Taoism with their seeming flexibility have increased their number of devotees since the pre-interstellar era. Many religions can claim at least one area where they are locally very strong.

ROBOTS, DRONES AND BIOLOGICAL CONSTRUCTS

Usually these mechanical and biomechanical constructs are controlled by *digital entity*, such as a sentient AI, a Ghost, or a Dupe, but they can also be controlled by non-sentient computer-based intelligence using Agent and Intellect programs. If controller is a digital entity, the construct takes on the AI's personality and a portion of the AI's skills based on the housing computer's sophistication.

Robots/drones refer to mechanical constructs, often human-like, but inherently non-biological. While these can be controlled by digital entities, the difference between them is when they are controlled by non-sentients: a *drone* is controlled by an Agent run from a conventional computer, a *robot* is controlled by a digital entity (AI, Ghost, Dup).

Robots range from mouse size on up and come in almost any shape imaginable. A robot consists of a frame containing computer, sensor, power and communication systems. In some cases manipulators, a means of propulsion and other gadgets are also included. Robots are common in most advanced systems.



A "Chromedome" model BioCon shown in Cold Storage

Due to their relatively low cost and expendability they perform many of the more dangerous jobs once performed by sentient beings. For example in the Terra/Sol system there are approximately 22 billion robots.

Biological Constructs (Biocons) are generally based on decerebrate clones (see entry above) and fitted with 'mounting' hardware that allow digital entities to control them. Cybernetic enhancements are commonplace above and beyond the mounting hardware, and some BioCons end up being more mechanical than they are biological. Often, the decerebrate clones that are transformed into Biocons are grown in batches, copies of optimized biological specimens. This way, they can take advantage of a certain economy of scale. Many worlds have their own brands and types like *Jerry*s or *Alain*s although custom built BioCons are certainly possible and sometimes preferred.

Often biological sentients who have downloaded their intelligences to an AI array (see Dups and Ghosts in the "Life and Being" section) use these biological constructs to interact with society. Most baseline humans find these hybrids a trifle disconcerting (depending on their exact form). And yet they are considered more palatable than talking to a machine or a disembodied voice as well. The use of BioCons also allows digital entities to experience human physical pleasures.

TRANSPORTATION

The 30th century provides a bewildering array of options for travel, some of which are obviously not going to be available at certain locations. The following simply covers the basics, as each world and each location often has a unique response to specific local and regional needs.

Terrestrial Travel

Personal transportation (often cars, or more often in technologically advanced colonies, grav cars) have not disappeared in the 30th century. In fact, they are as popular as ever because of the flexibility they provide. Some concessions have been made in urban settings and for grav vehicles however which do deserve mention. When driving/flying a grav vehicle in a city, anytime the vehicle goes above street level, control is taken over by the city traffic grid to prevent accidents. The "grid" is run by an AI or AIs which lessens, but has not absolutely prevented, traffic accidents. While AIs are very competent, they are hardly infallible and systems have also been hacked in the past by individuals with malicious intent. In rural settings anytime a vehicle ascends above 250 meters it is subject to automatic traffic grid control.

Other forms of transportation of course exist depending on where one finds themselves and what sort of transit is required. The following options can be found on a colony which has had some time to grow and develop:

For short range individual transportation most busy sections of cities are equipped with slidewalks. These moving sidewalks convey pedestrians at approximately 3 mph although some more advanced examples have multi-lane slideways, which have some strips that operate at higher speeds.

For short and Intermediate transit, Taxis (using the most commonly available mode of travel) are also available for those who don't own vehicles. Local laws vary considerably as to the quality of the taxis and the drivers, as well as what rates may be charged.

For Long range interurban transit, there are efficient mass transit systems that are effectively the same as 21st century subways or light rail. These generally run throughout the urban area, carrying large numbers of passengers fairly short distances (60 kilometers or less, although light rail systems often goes quite a bit further than this).

For regional travel, grav trains and old fashioned airplanes supplement personal grav cars and are usually operated at higher speeds than are safe for grav cars on a traffic grid. This mass transit system averages approximately 965 kph. But these systems usually only connect to relatively built up urban areas on most worlds.

For intercontinental travel, the most common mode of transport are sub-orbital grav jets which will complete a Kansas City to London run in approximately 28 minutes or Kansas City to Beijing in 68 minutes. More time is usually spent embarking and disembarking from the terminals than is actually spent traveling. A real sign of wealth on Terra/Sol is owning your own sub-orbital grav jet.

Space Travel

Travel within the system is generally accomplished through a regularly scheduled spaceport service. In systems (such as Terra/Sol) which have extensive orbital facilities, this service is usually done operated through shuttle companies that operate out of the Highport as a hub, akin to 21st century airlines. In a less developed system (like Argos), you either need your own ship or you need to contract with a local ship owner for transport.

Interstellar travel service runs parallel to intrasystem providers. Starline services are quite regular in well-developed systems, and practically non-existent in those of the frontier. Of course the speed of such services are limited by the (jump/Superluminal) rating of the ship one is traveling on, which makes Dreadnoughts the unrivalled queens of the Interstellar starlines. Because of their huge tachyon collectors, these floating cities are the fastest ships in human space: capable of an amazing 8-Parsecs per standard week . Also due to their tremendous size and unique technology, these flying cities are able to take hundreds of ships along with them riding piggy-back. For long range travel, Dreadnoughts are the mode of choice whenever available.

PLAYING MUTANTS






The Mechanics of Mutation

Whether they are spontaneous or scientifically induced, mutants receive a number of mutation points that can be used by players to select the specific mutations for their character. Likewise, players can choose to take negative mutations, which give them more points to spend on positive mutations.

Each positive mutation costs one point and each negative mutation gives players another mutation point. Some mutations, positive or negative, have varying degrees or levels; each level of a mutation costs a point (in the instance of positive mutations) or grants a point (in the instance of negative mutations). Unless otherwise specified, a mutation can never have more than three levels.

In addition to mutation points, all mutants receive a number of traits specific to the type of mutant selected (natural or engineered). These traits cannot be removed with mutation points and do not grant any additional points apart from those normally available to the mutant.

Alternatively, players can choose from a number of pre-determined mutation packages. These packages represent common sets of mutations found throughout human space. These packages can be used for both natural and engineered mutants.

NATURAL MUTANTS

Natural mutants receive a random number of mutation points and randomly determine the mutations they possess. Players receive between one and six (1d6) mutation points when playing a natural mutant. Each mutation point spent lets players roll on the chart below to determine what positive mutations they possess. A player *must* take the total number of positive mutations rolled, they cannot choose to leave points unspent.

In addition, a natural mutant receives between zero and four negative mutations (1d6-2); no points are received for these negative mutations and these mutations are mandatory. As with positive mutations, natural mutants randomly determine their negative mutations. Players also have the choice of taking up to two additional negative mutations; each of these grants the character an additional mutation point. These additional negative mutations *are* optional and are determined randomly.

Approximately 8 to 10% of the population on Terra/Sol is composed of mutants, and a slightly lower percentage is found elsewhere in the Known Galaxy. Players should always consult their Referees when creating mutant characters to work out the number and types of mutants that will be allowed into your campaign.

Alternatively, players may choose any of the mutation packages presented below; these are usually the result of a heritage from a line of environmentally conditioned mutants. However, in addition to the mutations presented in the packages below, natural mutants receive one additional random positive and negative mutation and have the option of selecting up to one additional random mutation in order to grant an additional positive mutation. When determining random mutations, if a mutation is rolled a second time and that mutation has varying degrees of levels, the mutation level is increased. Thus, if a player rolled *Notable Characteristic (Strength)* twice, they would receive that mutation at level two.

If a mutation does not have varying levels but instead has a number of options, players rolling this mutation multiple times receive an additional option of this ability. For example, if a player rolls *Enhanced Senses (Vision)* and selects *Infrared Vision* only to again roll *Enhanced Senses (Vision)*, the player is free to select *Telescopic Vision*.

Finally, in addition to the mutations randomly determined and/or the packages chose, all natural mutants receive the following mandatory disadvantage that does not grant any additional mutation points and cannot be removed:

Weak Social Standing (-2)

SIMS

Unlike natural mutants, engineered mutants receive a set number of mutation points and can choose which mutations they wish to possess. Scientifically induced mutants receive four mutation points; each mutation point spent lets players select one mutation from the chart below without the need to roll. Players have the option not to spend all their mutation points; excess points are lost.

Scientifically induced mutants also receive two negative mutations; no points are received for these negative mutations and these mutations are mandatory. These negative mutations can be selected from the chart below without the need to roll. Players also have the choice of taking up to one additional negative mutation, which grants them an additional mutation point. This additional negative mutation is optional and both it and the added positive mutation are selected by the player.

Alternatively, players may choose any of the mutation packages presented below; they have been created using a predetermined set of parameters for a specific reason. Players selecting one of these packages receive the mutations listed there and, unlike natural mutants selecting a package, do *not* receive any additional mutations, nor can add negative mutations to receive additional mutation points.

When selecting mutations, players can choose to select some mutations more than once. If a mutation has varying degrees of levels, the mutation level is increased each time a player selects it. If a mutation has a number of options, each time the mutation is selected a different option is chosen.

Finally, in addition to the mutations selected by the player or the package chosen, all engineered mutants receive the following mandatory disadvantage that does not grant any additional mutation points and cannot be removed:

Weak Social Standing (-1)

MUTATION CHARTS

Positive Mutations *(d66)*

11	Armored*
12-13	Aquatic
14-15	Enhanced Hearing*
16-21	Enhanced Smell*
22-23	Enhanced Vision*
24-34	Environmental Tolerance*
35	Fast Metabolism
36	Large
41	Natural Weapon
42-43	Notable Strength*
44-45	Notable Dexterity*
45-46	Notable Endurance*
51-52	Notable Intelligence*
53-54	Notable Education*
55-56	Notable Social Standing*
61	Psionic
62	Quick Healer*
63-64	Resistant*
65	Small
66	Slow Metabolism

Negative Mutations*(d66)*

11-13	Allergy*
14-15	Atmospheric Requirements
16-21	Diminished Hearing*
22-23	Diminished Smell*
24-25	Diminished Vision*
26-34	Environmental Weakness*
35-36	Light Sensitivity*
41-44	Physical Deformity
45-46	Susceptible*
51-52	Weak Strength*
53-54	Weak Dexterity*
55-56	Weak Endurance*
61-62	Weak Intelligence*
63-64	Weak Education*
65-66	Weak Social Standing*

* Indicates a mutation with multiple levels

SIM: 4 Positive, 2 Negative, -1 SOC
Natural Mutant: d6 Positive, d6-2 Negative, -2 SOC

POSITIVE MUTATION DESCRIPTIONS

Armored:
The mutant has incredibly thick skin, scales or even armored plates. Each level of this mutation gives the character one point of natural armor.

Aquatic:
The mutant has gills, webbed hands and feet and lenses over their eyes so that they are suited for life underwater. The mutant can breathe underwater and on land and suffers no movement penalties in either environment.

Enhanced Sense:
The mutant possesses senses far beyond the human norm. Each level of this mutation allows the character to select a specific enhancement to the associated sense (vision, hearing or smell). The sensory organs associated with these mutations often differ in size, shape or color from those of standard humans.

Hearing Enhancements: Take a variety of different forms, examples include:

Echolocation: The mutant is able to use their enhanced hearing to determine the location of objects through hearing alone. This allows the character to effectively 'see' in the dark, negating any penalties associated with darkness, but only out to Medium Range (50 meters).

Enhanced Perception: For each level of this mutation, the character receives a +1 DM to all tests associated with hearing.

Smell Enhancements: Take a variety of different forms, examples include:

Chem-Sniffer: The mutant is able to identify chemicals by sense of smell. When within Close Range (3 meters) of a chemical, the character may make an Average Life Sciences (Chemistry) skill check to positively identify the chemical. This allows the mutant to easily spot explosives, gunpowder and other dangerous chemicals.

Enhanced Perception: For each level of this mutation, the character receives a +1 DM to all tests associated with smell.

Pheromone Sense: With their enhanced smell, the mutant can identify and track living creatures by smell alone. The character must succeed at an Average Recon skill check to track an individual through scent; this can be modified by the presence of other strong odors in the area or the target's masking of their scent.

Vision Enhancements: Take a variety of different forms, examples include:

Enhanced Perception: For each level of this mutation, the character receives a +1 DM to all tests associated with vision.

Infrared (IR) Vision: Allows the mutant to see heat-emitting sources in the dark.

Telescopic Vision: Allows the mutant to see further.

Environmental Tolerance:

One of the most common categories of mutation, mutants with these alterations are able to withstand hostile environments better than standard humans. When this mutation is first selected, a specific environmental hazard must be chosen from the following list: Atmosphere, Gravity, Radiation, and Temperature; the mutant then receives level one tolerance to this hazard. See below for the individual effects each of these different mutations has. Each level of this mutation allows the character to increase the level of environmental tolerance by one or select another environmental hazard.

Atmosphere: A mutant with this mutation can tolerate atmospheric environments standard humans find dangerous. Each level of atmospheric tolerance allows the player to choose a single type of atmosphere that they can tolerate, in addition to a standard atmosphere: Corrosive, Dense, Exotic, Dense High, Thin Low, Tainted, Thin, and Very Thin. A mutant with tolerance for a specific type of atmosphere never suffers damage from exposure to this atmosphere or pressure. See page 171 of the Traveller Core Rulebook for the specific effects of atmosphere.

Gravity: When this mutation is selected, the mutant chooses either high or low gravity tolerance. Mutants with gravity tolerance never suffer penalties from exposure to the gravity type of their selection, however suffer from double the penalties when exposed to gravities from the opposite level of their tolerance; thus, mutants able to tolerate low gravity suffer a -2 DM when on a world with high gravity. Additional levels of this mutation cannot be taken and a mutant can never tolerate both high and low gravity types. See page 170 of the Traveller Core Rulebook for the specific effects of gravity.

Radiation: For each level of radiation tolerance the mutant possesses, it can ignore up to 50 rads, thus increasing the number of rads necessary before suffering from radiation exposure. Thus, if a mutant with Level Three radiation tolerance were exposed to 300 rads of radiation, they would only suffer the effects of being exposed to 150 rads. See page 142 of the Traveller Core Rulebook for the specific effects of radiation.

Temperature: The mutant is able to tolerate extreme heat or cold. For each level of temperature tolerance, the mutant chooses either heat or cold tolerance; when the character suffers damage from exposure to this temperature type it is reduced by -1 DM for each level of hot or cold tolerance. A character can possess tolerance to both extreme hot and cold, as well as multiple levels of tolerance for each. See page 74 of the Traveller Core Rulebook for the specific effects of extreme temperature.

Fast Metabolism:

Mutants with a fast metabolism require more food than most and their life support costs are doubled. In combat, fast-metabolism mutants gain a +2 Initiative bonus but halve their Endurance for fatigue purposes.

Large:

The mutant is exceptionally large. The character rolls 3d6 for both their Strength and Endurance characteristics, but only 1d6 for Dexterity. Additionally, costs for some equipment will be doubled, such as those for clothing, environmental suits, armor and the like. Finally, life support requirements for large mutants are doubled and they may have difficulty moving in buildings or spacecraft not designed for their size.

Natural Weapon:

The mutant possesses claws, elongated teeth or some other form of natural weapon that can be used in close combat. The weapon is usable at Personal and Close Range (though the latter imposes a -1 DM) and deals 1d6+2 damage (plus Effect). The mutant also gains Melee (Natural Weapons) at level 0.

Notable Characteristic:

One of the mutant's characteristics is exceptional. For each level of this mutation, the mutant receives a +1 DM when rolling for the specified characteristic and their maximum for that characteristic is likewise increased. A mutant may not possess both Notable Characteristic and Weak Characteristic for the same characteristic.

Psionic:

The mutant has developed powerful psychic abilities; depending on their nation of origin, they may be feared or respected. The mutant immediately determines their psionic strength before any careers are chosen and is then eligible to take the Psion Career and gain their specific psionic talents. See pages 152-159 of the Traveller Core Rulebook for all rules governing psionics.

Quick Healer:

Mutants with this ability can heal very quickly and possibly without the need for medical care. For each level of this mutation, add two to any natural healing the character receives.

Resistant:
Some mutants are especially resistant to disease or poison. When this mutant is selected, the mutant must choose to be resistant to either disease or poison. For each level of resistance, the character receives +1 DM to Endurance checks made to resist the effects of the specific hazard. A mutant may be resistant to both poisons and disease. A mutant may not possess both Resistant and Susceptible for the same hazard.

Small:
Small mutants are quite short, generally growing no more than just over one meter high. Small mutants roll 3d6 when determining their Dexterity characteristic, but only 1d6 for both Strength and Endurance. Life support costs are halved however costs for some equipment will be doubled such as those for clothing, environmental suits, armor and the like.

Slow Metabolism:
Mutants with a slow metabolism require far less food and life support costs for them are halved. Mutants with a slow metabolism suffer from a -2 initiative penalty.

NEGATIVE MUTATION DESCRIPTIONS

Allergy:
Exposure to a common element causes the mutant incredible discomfort or even physical harm. When this mutation is selected, choose a common element or chemical such as salt or iron; players and referees should work together to determine an appropriate substance. For each level of this allergy, the mutant suffers a -1 DM to all checks when exposed to the substance. For each level of this mutation, mutants can choose to select additional substances for which they're allergic or increase the level of an existing allergy.

Atmospheric Requirements:
The mutant has odd atmospheric requirements, having developed on a world with a nonstandard environment. The mutant must select the type of atmosphere to which they are native: Corrosive, Dense High, Exotic, Tainted, Thin Low or Very Thin. The mutant suffers no hazards associated with this atmosphere type but now requires survival gear to survive in a standard atmosphere. The type of survival gear needed is the same that is normally required for their native atmosphere. A mutant may possess Atmospheric Tolerance and Atmospheric Requirements for the same atmosphere.

Diminished Sense:
The mutant suffers from diminished senses of hearing, vision, smell or a combination of all three. Each level of this mutation imposes a -1 DM to any checks made using the specified sense. A mutant may not possess both Enhanced Sense and Diminished Sense for the same sense.

Environmental Weakness:
The mutant suffers greatly when exposed to hostile environments. When this mutation is first selected, a specific environmental hazard must be chosen from the following list: Atmosphere, Gravity, Radiation, and Temperature; the mutant then receives level one weakness to this hazard. See below for the individual effects each of these different mutations has. Each level of this mutation allows the character to increase the level of environmental weakness by one or select another environmental hazard. A mutant may not possess both Environmental Weakness and Environmental Tolerance for the same environmental hazard.

Atmosphere: Dangerous atmospheres cause great injury to mutants with this weakness and they suffer an additional point of damage for each level of this mutation whenever they are exposed to any hostile atmosphere. See page 171 of the Traveller Core Rulebook for the specific effects of atmosphere.

Gravity: High and low gravity environments are particularly discomforting to mutants with this weakness. When this mutation is selected, the mutant chooses either high or low gravity tolerance. For each level of this mutation, the mutant suffers an additional -1 DM when exposed to worlds of high and low gravity. Moreover, the length of time needed to adjust to these worlds is doubled for each level of this mutation. A mutant can possess weakness to both high and low gravity. See page 170 of the Traveller Core Rulebook for the specific effects of gravity.



Aquatic mods are a common form of SIM

Radiation: For each level of radiation weakness a mutant possesses, they suffer an additional two points of damage when exposed to the effects of severe radiation. See page 142 of the Traveller Core Rulebook for the specific effects of radiation.

Temperature: The mutant is unable to tolerate extreme heat or cold. For each level of temperature weakness, the mutant chooses either heat or cold weakness. When the character suffers damage from exposure to this temperature type it is increased by +1 DM for each level of hot or cold weakness. A character can possess weakness to both extreme hot and cold, as well as multiple levels of weakness for each. See page 74 of the Traveller Core Rulebook for the specific effects of extreme temperature.

Light Sensitivity:

The mutant is especially sensitive to light. For each level of this mutation, the mutant suffers a -1 DM to any rolls made when exposed to a light source equivalent to sunlight. In addition, a mutant with this sensitivity is easily blinded by exceedingly bright lights. Double the duration of any blinding effects and reduce the Effect needed to blind the mutant by one for each level of this mutation.

Physical Deformity:

Many mutants suffer from any number of physical deformities. These can be as mundane as strange coloration of the skin, eyes or hair to vestigial appendages. This mutation gives the mutant a unique physical deformity that cannot be hidden and clearly identifies the mutant for who, and what, they are. This deformity may or may not impose a penalty to social skill checks.

Susceptible:

The mutant is especially susceptible to poison or disease. When this mutant is selected, the mutant must choose to be resistant to either disease or poison. For each level of resistance, the character receives +- DM to Endurance checks made to resist the effects of the specific hazard. A mutant may be susceptible to both poisons and disease. A mutant may not possess both Resistant and Susceptible for the same hazard.

Weak Characteristic:

The mutant suffers from a weaker than normal characteristic. For each level of this mutation, the mutant receives a -1 DM when rolling for the specified characteristic and their maximum for that characteristic is likewise increased. A mutant may not possess both Notable Characteristic and Weak Characteristic for the same characteristic.

MUTATION PACKAGES

Genetic engineers have made literally thousands of Transhuman (SIMs) blueprints over the last 900 or more years since the first blueprint was created in 2038. The first deepspace blueprint was created in 2060 with at least 8 additional "adaptations" being created over the next 20 years.

Aqua Mods:

Aqua mod mutants are those that are at home on land and at sea. Able to explore and colonize worlds with large concentrations of water, these mutants are found working at the ocean depths farming kelp beds or mining undersea ores. They usually possess webbed feet and hands, obvious gills and streamlined bodies ideal for swimming. Aqua mod mutants possess the following mutations:

Aquatic, Cold Tolerance (2), Diminished Smell (1), Enhanced Hearing (Echolocation), Physical Deformity (Gills, Webbed Hands and Feet), Atmosphere Tolerance (Dense High)

Atmosphere Mods:

With the number of worlds being discovered that possess less than ideal atmospheres, the number of mutants needed to colonize these worlds – or those that result from colonization – has increased dramatically over the past few centuries. Able to survive on any one of a number of harsh environments, these rugged individuals live in atmospheres that would kill most standard humans. These mutants quickly become dependent on the atmosphere they have gained a tolerance towards. At-mod mutants possess the following mutations:

Atmosphere Requirements (Choose One), Atmospheric Tolerance (Choose One), Heat or Cold Tolerance (1), Radiation Tolerance (1)

Belt Mods:

By far the most numerous SIMs, these individuals are modified for deep space environments without the use of artificial gravity. They are short and lithe and so perfect for work in close quarters. Their bones are more dense, significantly stronger for their mass and also less prone to deterioration in weightless environments. Belt mod mutants possess the following mutations:

Atmosphere Tolerance (Very Thin), Low Gravity Tolerance, Notable Dexterity (1), Physical Deformity (Short, Thin), Weak Endurance (1)

Grav Mods:

Mutants from high or low gravity worlds tend to develop in much the same way, whether created for the task or a result of generations of breeding on such worlds. High-grav mutants are squat and short with great muscular strength while low-grav mutants are tall and thin and quite nimble. Each has their advantages and disadvantages and both have been around for so long as to be a fairly common sight.

High Grav Mods possess the following mutations: *High Gravity Tolerance, Notable Strength (2), Physical Deformity (Short, Squat), Weak Dexterity (2)*

Low Grav Mods possess the following mutations: *Low Gravity Tolerance, Notable Dexterity (2), Physical Deformity (Tall, Thin), 4. Weak Strength (2)*

Rad Mods:

Exposure to intense radiation while working in deep space is fairly common, as it is on worlds with a higher than standard background radiation. As such, some mutants develop able to resist amounts of radiation that would otherwise kill a standard human. These mutants thrive where others do not and have established some small communities on harsh worlds, in the depths of space, or the toxic dumps of large cities. Rad mod mutants possess the following mutations:

Physical Deformity (Glowing Skin or Vestigial Appendages), Radiation Tolerance (3), Weak Social Standing (additional -1 combined with existing Mutant disadvantage)

PLAYING A CENTENNIAL

One of the oldest (known) sentients alive today is Epsilon Ess, the leader of the Deramus Enclave. Created in 2664 by the beginning of the Twilight Sector Campaign in 2991 Epsilon Ess is 327 years old. The oldest biological based sentient is Tamaran Suzeil of Earth. A 292 year old great-great-great-great-great-great-great-great-great grandmother. Long past her scientifically accepted expiration date Tamaran is still going strong and illustrates one of the key components to longevity in the 30th century, the will to live. Committed to her ever growing family she finds happiness and purpose in helping to guide them forward in an ever changing world. Behavioral scientists say that most deaths in 2991 result from *ennui*: people losing the will to live or becoming more and more accepting of risky behavior in order to maintain interest in their existence.

In Game Terms however, the option of playing a *Centennial*, one of these characters of advanced age, should not simply be a matter of wracking up 25 or 26 terms. In fact, the Centennials have some very specific advantages and disadvantages all of their own that should not allow them to unbalance the game. Centennials are definitely "top-down" characters, they have lived a long time, and they have plotted out the course of their life very carefully. This means that much of what they are at any given time is what they have decided to make of themselves over the course of a long term plan.

Creating a Centennial is a four-step process based on player selections or "picks". Players begin with 32 "Picks" which they may expend as follows:

Step One: Statistics

Roll Statistics as normal for the character, per the rules outlined in the **Traveller Main Book.** The Character is only eligible to be a Centennial if their INT and EDU Scores are *above* 10 (ah, the wisdom of age) and their STR, DEX and END are *below* 10.

As with skills, Statistics may be developed later with Picks (even physical stats to bring them above 10). It also stands to reason, a Centennial should have a high SOC score, to reflect the resources needed to maintain these treatments, but there are no hard limits for this statistic during this step in the process.

Step Two: Development

Other than one skill (see below), the Player picks those skills which he or she has decided to keep sharp over the years. The special case is *Jack-of-all-Trades*, a skill that it is presumed many Centennials have (for a variety of reasons, including general experience gained over the years and to reflect that they were once good at a wide number of things). Costs for that skill are doubled (still a steal) **Note:** Characters do not have to buy a skill at 0 first (although they may purchase 0-level skills separately)

Players may also raise their Non-Physical Stats (INT, EDU, SOC) higher, and with more difficulty their Physical stats (STR, END, DEX) as well (doubling the cost on the chart). The rules for Maximum Statistics are in effect.

Skills	Cost
Skill 1	1
Skill 2	2
Skill 3	4
Skill 4	6
Skill 5	8
Skill 6	10

Stats	Cost
+1	1
+2	2
+3	4
+4	8
+5	12
+6	16

If players choose *not* to get Jack-of-all-Trades 3, they may purchase **2** individual 0-level skills for 1 pick. Max Total skill *levels* (not number of skills) is INT x 2 at beginning of play.

Step Three: Rank

If Characters wish to purchase Ranks in Career Paths/ Professions they may, but they are **required** to acquire the minimal skills for those ranks (all of them, purchasing Rank 5 means that you have to purchase all of the skills provided for by the ranks up to and including 5).

Rank 3 (total cost) = 1 pick
Rank 5 (total cost) = 2 picks
Rank 6 (total cost) = 3 picks

If Ranks 1, 2, or 4 are desired, buy the higher Rank and simply do not take the full benefit (this may be desirable to avoid buying an unwanted associated skill).

Step Four: Benefits

Any leftover picks at the end of this process may be used for Benefit Rolls, up to a maximum of 10, either on any Career that they have taken ranks in or the Centennial Benefits chart below.

Roll	Cash*	Other Benefits
1	20,000 cr	3 Ship Shares, contact
2	30,000 cr	Villa, ally
3	45,000 cr	5 Ship Shares
4	60,000 cr	+1 Soc, contact
5	80,000 cr	Weapon or Combat Implant
6	100,000 cr	Stateroom Condo

* tied up in investments, Centennials only access 10% of this without forcing them to liquidate the assets (a process that takes d6 days).

The Downside:

When they take damage for the first time in an adventure, a *Centennial* will take an additional **d6** (damage) as their immune systems careen out of balance. *Medic* rolls which are made on them without the precaution of bringing the system back into balance first (which takes a separate *Medic* check and d6 minutes with the right drugs) are at a DM of -2. **Ennui** (once again, Centennials become bored risk-takers) is a roleplaying disadvantage which Referees may enforce in any manner they deem appropriate. Note that additional and alternate rules for playing Centennials will be made available in future ***Terrasol games*** products.

A BRIEF OVERVIEW OF THE TWILIGHT SECTOR

Circa 2836: An exploratory ship of the Seti-Tallos mining and development corporation, leapfrogging the minimally explored Crescent Sector, discovered the Terra/Sol system. Terra, the primary of this system was, and still is, the most earth-like planet ever discovered. Every detail was perfect. From the large sub-terran moon orbiting at just the right distance to provide Earth-like tidal forces, down to the very shapes of the land masses themselves. Terra/Sol is almost an exact duplicate of Earth. Settlement quickly ensued at an almost frantic pace.

This pace was even further accelerated with the onset of the Mutant War in 2881. The Archenar Peoples Republic (APR), despite the fact they were so far from their stellar borders, was the chief Orion competitor in the Crescent sector. They were well aware of the Orion success in the Twilight Sector and quickly moved in. Their first response was to develop the **Helix** system even though it had no planetary bodies. They established a large deep space colony from which they could continue to search for a suitable base to challenge Orion hegemony over the sector.

Finally, they found more suitable bases in the form of **Ratan** and **Argos**, both however are deeply flawed systems. They developed the Ratan system as a resort and entertainment mecca, feeding off the burgeoning population of Terra/Sol. Meanwhile, they developed the Argos system in order to exploit its rich "krill-like" fishery.

Since the end of the war, the APR discovery of the **Netherell** system has come to light. It's unknown when the APR first discovered this system, but they've placed it under military interdiction and forcefully expel any ships from the system. They have apparently committed a dreadnought to keeping Netherell safe from prying eyes.

Other Orion systems within the Twilight Sector include **VanKila Kiertotahti**, a prison planet. Those sentenced to this system are confined to the inmate portions of the planet (which is most of the world's surface) in order to serve out their sentences. The Prisoner population receives only minimal assistance, in the form of food, clothing and Oxyre®, a medical drug which is necessary for survival on the planet. For all other matters the prisoners are on their own. The planet is largely semi-arid, with a rugged topography.

The only other Orion system is **Dorlass**, another rugged and largely semi-arid planet. Dorlass is only slightly more hospitable than VanKila Kiertotahti. It has been lightly populated by disparate groups, both religious and secular, which seek to be apart from the rest of society. These separatist communities are common in The Orion Confederation because of its libertarian nature but quickly take on a unique character of their own.

The Twilight Sector was plunged into the chaos of the Mutant War only 45 years after initial settlement ...

The Twilight Sector was plunged into the chaos of the Mutant War only 45 years after initial settlement had begun. The war in the Twilight Sector was quick and decisive. The APR had secretly developed a formidable fleet in the Helix system and sprung it on the surprised Orion Space Navy at the onset of the war. Debate still rages over whether the initial attack was before or after the War was officially declared.

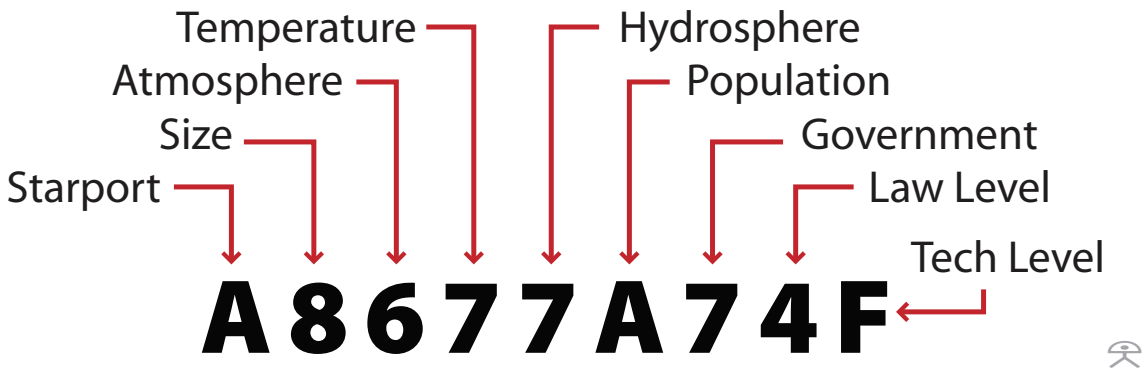
Terra/Sol was saved from an APR invasion when the battleship *Kansas* rammed the dreadnaught *May Day* destroying both craft. A fleet was quickly assembled and the Helix system's shipbuilding capacity was destroyed. Helix was the only strategic system the APR held within the sector, and thus the only real threat to Terra/Sol.

With the advent of the war and the sector being quickly secured by the Orion military, most of the Terra/Sol's production and focus was directed back towards the core and the support of the Confederacy's war effort. Further exploration of the frontier was put on hold and only with the end of the war has any thought been turned towards what lies beyond.

UNIVERSAL WORLD PROFILES TWILIGHT SECTOR

On the facing page is a map of the Twilight Sectors. Below you can find a chart summarizing the characteristics of various worlds, from culture to geological composition.

Argos	D 7 A 5 9 5 6 9 9	Gas Giant
Dorlass	C 8 6 A 1 7 4 3 B	Gas Giant, Commsat
Helix	A X X X X 7 4 7 F	Space Habitats, Commsat
Ratan	A 9 5 7 7 7 8 8 F	Gas Giant , Commsat
Terra/Sol	A 8 6 7 7 A 7 4 F	Naval Base, Scout Base, Gas Giant, Commsat
VanKila Kiertotahti	C 5 4 A 5 7 6 9 4	Gas Giant
Avalon Station	A X X X X 4 1 7 C	Naval Base
Trinity Research Station	C X X X X 4 X 9 E	Naval Base, Scout Base, Stellar Observatory



MAKE ROOM! MAKE ROOM!

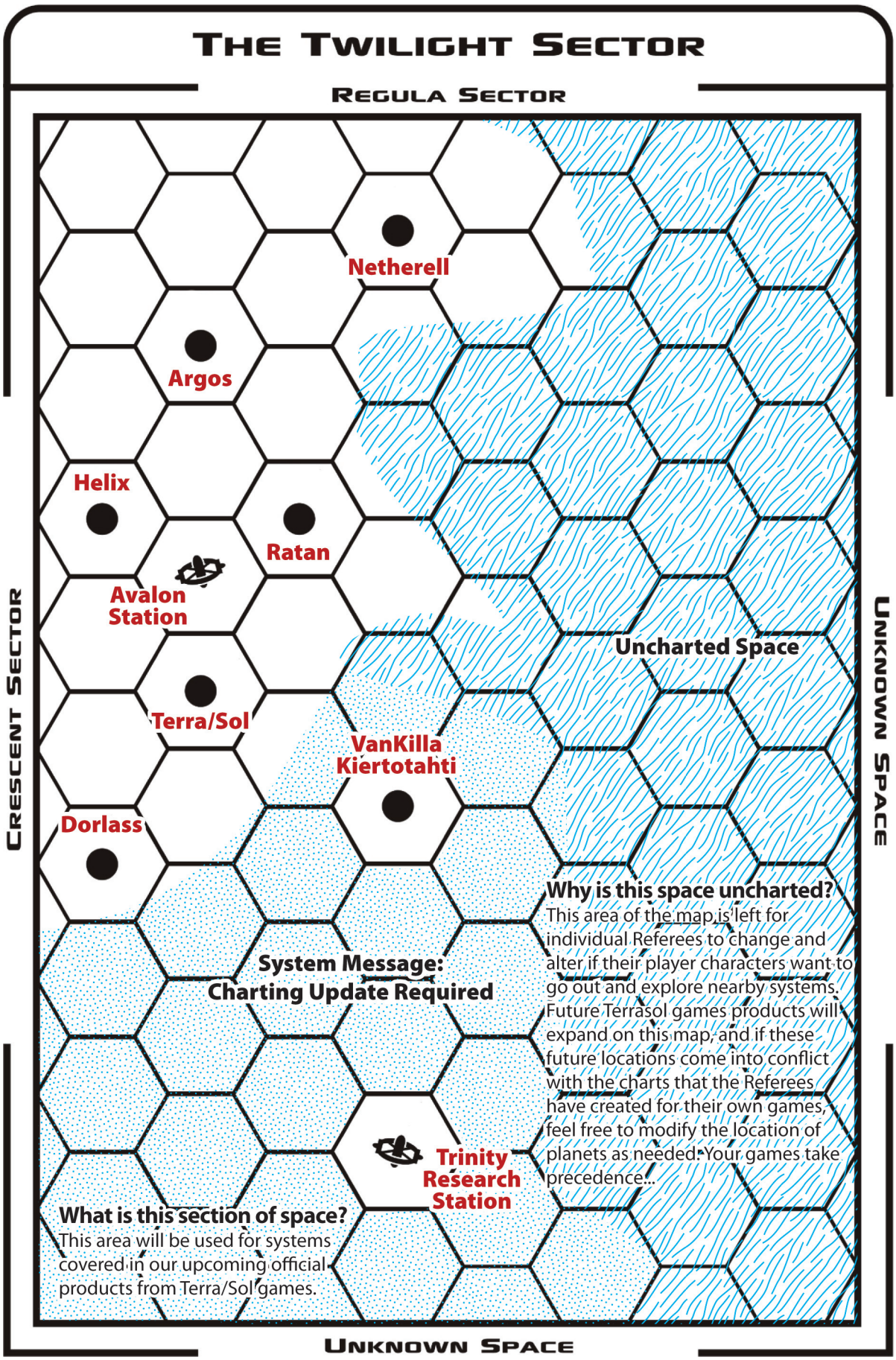
Sharp readers may have noticed that the population figures for these planets, even though they are out on the fringe, are rather significant. There are a variety of reasons for this in the logic of the Setting which deserves some mention here .

First, the total population of humanity in the time of the Setting is well above a Trillion souls. This figure does not count artificially created and non-sentient BioCons and sentient nonhumans like Artificial Intelligences and Uplifts. This number appears to be staggering, and indeed it is. But there are solid rational arguments that can be made for them which also shed some light on the Twilight Sector Setting itself. First is the fact that the human population, if it has a steady growth rate equal to what we now have (unlikely without space travel – which of course the setting has), will be well over a trillion within 500 years, and this setting is just under a thousand years distant. Keep in mind that Earth only reached the 1 billion mark in 1804, 2 billion in 1927, 5 billion in 1987 and 6 billion only 12 years later in 1999. The population is projected to hit the 7 billion mark in 2012.

These figures are staggering, and the magic of compound interest means that total human population by 2991, the time in which the Setting begins, will be… really *really* high. High enough to account for the Billions of people on Terra/Sol certainly. And keep in mind that those figures use modern growth rates. Consider the longevity of humans in the setting and what that fact will add to the population. The numbers get very scary very fast. Now add clones and exo-wombs and other Science Fiction features to this growth rate… over a Trillion is probably a lowball figure.

A second issue is why so many out that far? The answer is Terra/Sol itself. While humanity has been able to find other Class One worlds, and make more as time goes by through terraforming, it is the case that Terra/Sol has a special quality which would act as a magnet for settlers and pioneers. There are no other places, except Earth itself, where humans are *made* for the environment. It is literally a home away from home and has inspired humans to flock there across the stars.

Thus, even though Terra/Sol lay at the edge of the Known Galaxy, it is still within reason that her population could well be a staggering 14 or 15 billion (over double our own recall). Other worlds in the Sector have simply benefited from the runoff of her sizable population figures.


THE TWILIGHT SECTOR
REGULA SECTOR
CRESCENT SECTOR
UNKNOWN SPACE
UNKNOWN SPACE
Netherell
Argos
Helix
Ratan
Avalon Station
Terra/Sol
VanKilla Kiertotahti
Dorlass
Trinity Research Station
Uncharted Space
System Message: Charting Update Required
Why is this space uncharted?
This area of the map is left for individual Referees to change and alter if their player characters want to go out and explore nearby systems. Future Terrasol games products will expand on this map, and if these future locations come into conflict with the charts that the Referees have created for their own games, feel free to modify the location of planets as needed. Your games take precedence...
What is this section of space?
This area will be used for systems covered in our upcoming official products from Terra/Sol games.

ARGOS

The Argos System is Archenar Peoples Republic sovereign territory. The system is rather large, containing 11 planets, the third being the primary world Argos. Argos is classified as a waterworld, and is currently being exploited for its krill-like resources. Total population on-planet is believed to be only around 240,000. A further 1.15 million are believed to live in deep space habitats and on the surfaces of the systems other planetary bodies. Argos food paste (produced from the krill like animals) is an excellent protein base for food replicators, and is sold throughout the Twilight Sector and beyond.

The entire system is quite young, and not long past its planetary formation period. Scientists believe that Argos has the potential to develop into a class one world in 600 to 800 million years. For the moment though Argos has an atmosphere dominated by carbon monoxide (and thus unbreathable for humans), and the highest form of terrestrial life is a primitive lichen like plant.

History

Discovered in 2839 by the APR research ship *Funderay*, one of a veritable fleet of such ships, sent out to try and find a viable foothold for APR in the Twilight Sector. This was the Archenars response to the Orion's discovery of Terra/Sol. PAX Combine executives (an APR front company) must have been disappointed though when they discovered they were a few million years early. However Argos provided the motivation for the APR to keep up their intensive search, which eventually lead to the discovery of Ratan. Little was done to develop the system due to its apparent lack of resources, and the subsequent outbreak of the Mutant War in 2881 meant that the Combine had little time to exploit the planet once the utility of the krill was discovered. It was over 30 years after discovery of the system that a scientific survey stumbled on massive schools of small krill-like organisms which make up much of the biomass of Argos oceans. Samples of the organism were then turned over to PAX's food products division: NutraTek™.

Argos ... is currently being exploited for its krill-like resources.

NutraTek™ spent the next seven decades developing methods and technologies to process the krill into a usable food paste. This process was no doubt slowed by the outbreak of the war and the sorting out period with the Orion government after the APR declared Argos an open system. The PAX Combine does not usually announce personnel moves, but it is widely believed that the Director of NutraTek™ was demoted for the inordinately long time needed to bring a product to market. At any rate with the Mutant War in full swing and the APR having declared Argos an open system to avoid it's destruction by the Orions, they could not bring adequate personnel to bear so that the massive food stores available on Argos could be processed and distributed. With a constant Orion patrol in-system, the APR had no ability to run the Orion blockade of the system, and it probably wouldn't have been worth the effort. With the bilateral armistice between the APR and the Orions in 2934, the APR managed to bring in laborers to the Argos system and begin harvesting and processing krill. Shortly thereafter Argos began supplying Argos food paste to all the systems within the Twilight Sector.

NutraTek™ began aggressively marketing Argos food paste throughout the Twilight Sector and beyond. They were so successful in developing markets that they were unable to keep up with demand. In 2962, NutraTek™ began issuing a few licenses to foreign corporations for the harvesting of krill. By the time of the official end of the War in 2981 NutraTek™ foodpaste had captured over 70% of the market in the Twilight Sector and was making inroads in Crescent and other surrounding sectors.

Government and Politics

Argos is one of the two remaining APR systems in the Twilight Sector (the other being Netherell). Because of that it has taken on an importance that belies its outward appearance. To date the APR has been unwilling to invest heavily in the system despite the considerable revenue it

generates. Most of the workers are laborer class citizens. Despite the grand communist rhetoric of the Archenars there is definite stratification in APR society and not all strata are treated equally. It appears that the APR through the PAX Combine is unwilling to make the investments necessary to ease the burdens of its workers planetside but infinitely willing to gather the fruits of their labors. Because of this attitude the laborers of Argos are unusually unruly. All the while those that live elsewhere in the system have a comparative life of luxury.

The system is administered by Hari Valistroos who holds the titles of President NutraTek™ President Argos division, and Commissar of the APR. The last title just granted in 2990, gives him a seat on the APR central committee. Like most of the upper management he lives and works in the luxury of Wellstone Station, a space habitat orbiting Argos iceball moon Jotun. He is aggressive, competitive and a planner. He is also extremely harsh and controls the population by a system of rewards and punishments. The rewards are simple and usually inexpensive to the Combine. Luxury goods like clothes or food are given for habitats that meet their quotas. Punishments are swift and overwhelming. When one of the Friday night fights on *Marquesas* got out of hand and damaged a krill processing plant, Valistroos docked the pay of each and every resident 25% until the cost of damages was recouped. When a housing block was suspected of harboring black marketers he had the head of each household arrested and beaten until he was finally satisfied that there was no black market activity.

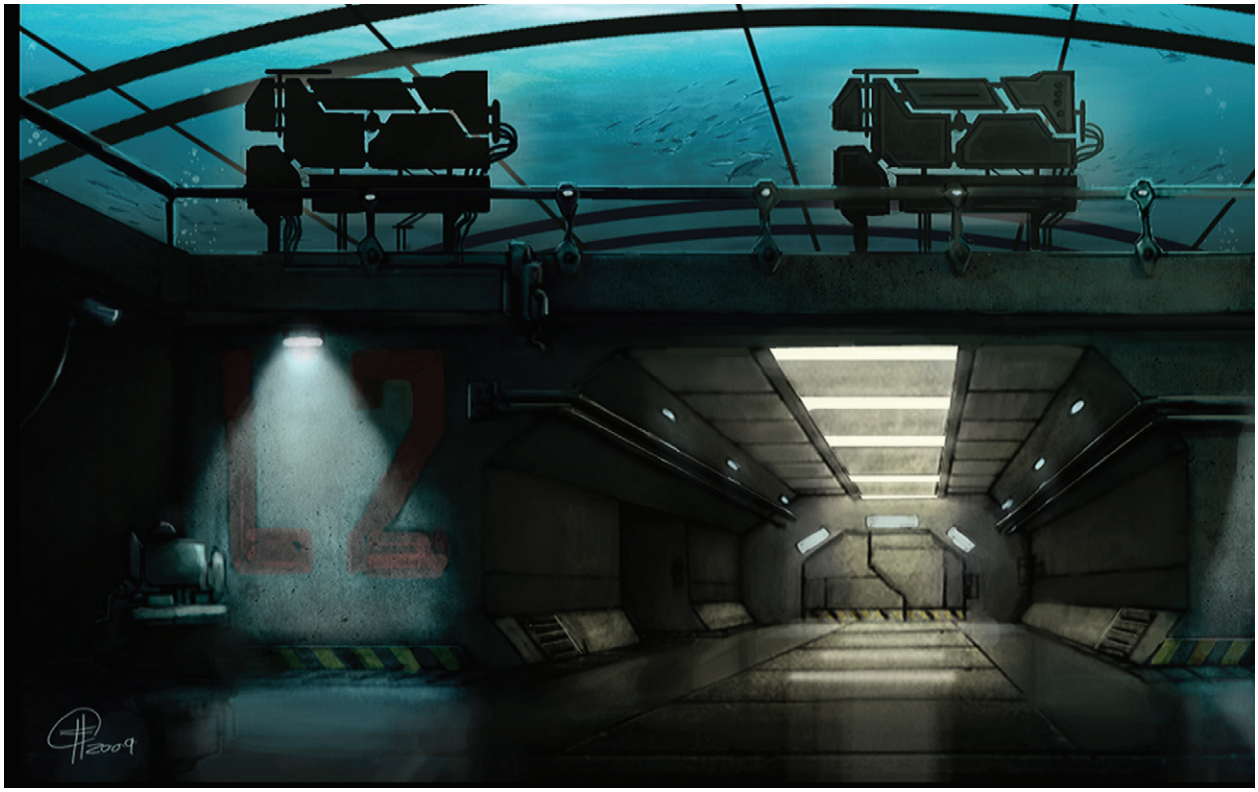
System

The Argos system is composed of some 11 planets. Going in order outward from the systems single G class star; Tar, Melenthrop, Argos, Ellenda, Virgo, Salenispol, Miredium, Saber, Pelu, Haven, Arkem.

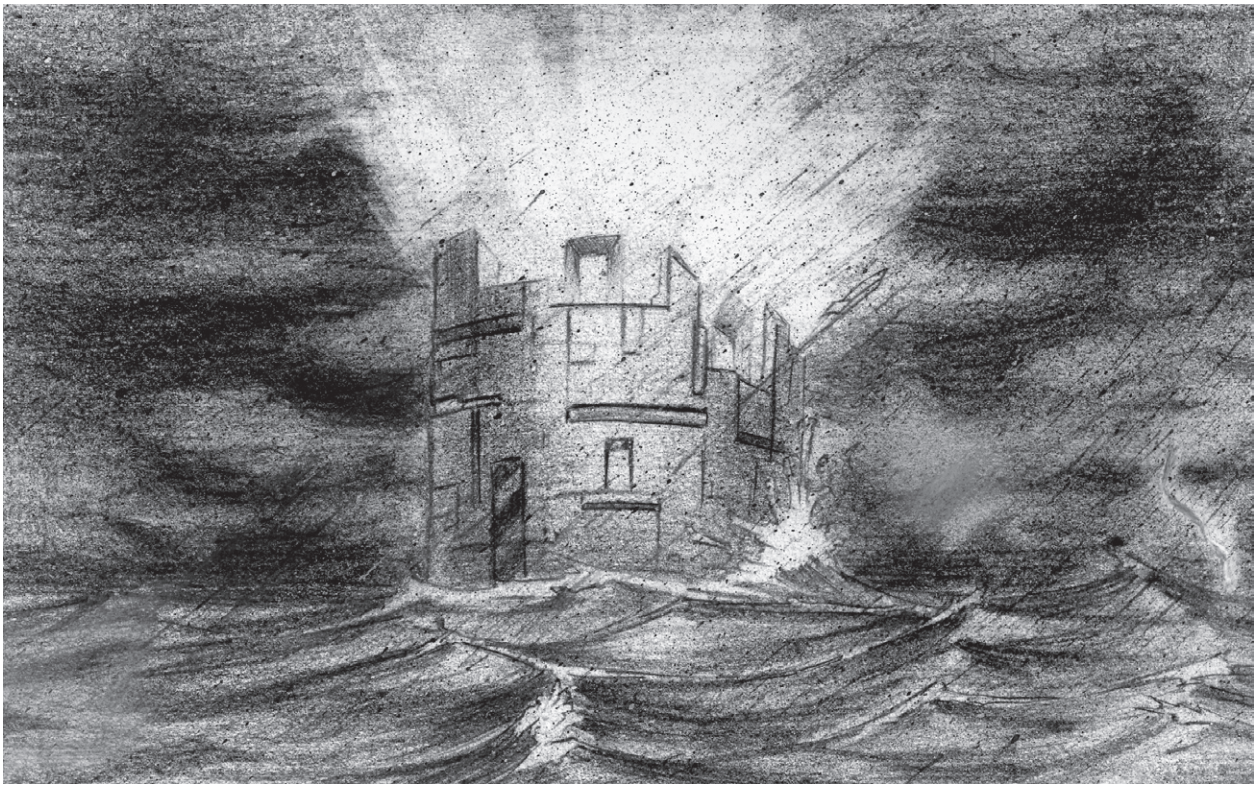
Tar is a hot small planet. From orbit it looks like a blackened rock; hence its name. Little research has been done on this planet and it is currently unused.

Melenthrop is only slightly larger than Tar. It displays some unusual magnetic readings but to date these have not been investigated and the world has no settlement and only occasional visitors.

Ellenda is a Mars sized terran planet with a trace atmosphere. There is a major scientific installation at its south pole that studies the feasibility of terra-forming the planet. There are also two large,



L2 Krill Processing Plant



Neosho tube habitat

enclosed cities which house a large number of the PAX system administrators. Both cities are built into the sides of canyons and have breathtaking views.

Virgo is a tiny planetoid, probably an escaped moon of Salenispol. It has seen no development.

Salenispol is a large gas giant that is heavily ringed. It has an impressive harem of nine moons. Several of which show promise as sources for raw materials. There is a La Grange colony orbiting the planet which houses a decent sized fleet of gas miners.

Miredium is another good sized gas giant but surprisingly has only one moon although it is rather large. No development of this planet or its satellite has occurred to date.

Saber is an Argos sized terran planet which houses an APR naval base. The planet is off limits to all but Archenar military assets.

Pelu is a large terran planet racked by extensive volcanism. It's a rather uninviting place and has seen no development.

Haven has several "unofficial" settlements on its surface. These are mainly lawless outposts that are simply ignored by the systems government. Long said to be a haven for smugglers, pirates and organized crime. The APR naval assets and the PAX security forces seem to not care a wit about what goes on here. The planet contains an exotic atmosphere unbreathable by humans but not harmful otherwise. No one's going outside without their coat though, as the average temperature is -200 Celsius.

Arkem has a highly eccentric orbit outside the plane of the system which sees it pass from being the most distant planet from the primary to being the second closest during the course of its 325 standard year orbital period. In fact one study of the long range orbital patterns of the system suggests that Arkem will collide with Melenthrop in 62 million years. There is an "unofficial" settlement on Arkem said to be more lawless than it's counterparts on Haven.

Planet

Water covers over 89% of Argos surface. What land area is available is the home of some rather massive volcanoes. The planet's Class 2 atmosphere does nothing to promote the habitability of the planet. The highest form of terrestrial life are primitive lichen analog plants. Sea life, however, is rich and varied. The most abundant is a krill-like organism which has become the basis for Argos foodpaste which

provides over 31% of the calories consumed by all sentients in the Twilight sector. Higher order life is present in Argo's oceans and scientists estimate that significant terrestrial life will develop within the next few hundred thousand years as the planet's oceans gradually increase the world's oxygen levels. There has been talk of introducing non-native terrestrial life and speeding up the evolutionary process in the planet's oceans. This however would require a sizable investment by the PAX Combine and the corporation's management has not shown willingness to invest in this planet. There is fear among some PAX scientists that any terra forming might lead to diminished krill harvests.

Population

The majority of Argo's population of approximately 240,000 is composed mostly of lower level APR citizens and so lower-level PAX employees. They live in three large squalid and unkempt cities, which exist as huge processing centers. Living quarters for workers are little more than an afterthought. Choices of employment consist of working in the processing factories, the company stores, or one of the huge krill harvesters that roam the seas. Some explorer ships have been introduced within the last five years, ostensibly looking for minable minerals on the sea floor. These have opened up some limited job opportunities and even introduced some professional grade PAX employees. However most of these do not make their residence on planet, preferring the luxurious orbital habitats. Within the last decade the Combine has opened up a limited number of licenses to off-world (meaning Non-APR) concerns. The Mennonite Agricultural Cooperative, the MAC, has purchased several. The MAC rotates in crews for their harvesters on a three months on, three months off basis. Processing is still handled by APR factories. No other facilities exist on planet.

System Security

Argos is guarded by an early Mutant War vintage cruiser, the *Sumerset*. A small task force including two light carriers attends her. The planet itself has an orbital defense platform. Rumors say that the APR has stripped the *Sumerset* of its Superluminal drive and replaced it with weaponry. All this defensive capability certainly isn't being used for law enforcement. The system is labeled by most law enforcement agencies as a notorious safe haven for all kinds of illegal activities.

Life on Argos

The majority of Argos 240,000 residents live in three large cities, if cities is the right word. Habitats might be more appropriate. These habitats resemble large tubes averaging 2,500 meters in height and 2 kilometers in diameter. The habitats are anchored to the ocean floor because of the planets extreme volcanism. What little dry land and ocean floor the planet has is so unstable that it will not safely support structures. However a few sites on the deep ocean floor were discovered where the planet's crust was thick enough to provide enough stability to support a habitat structure. So the structures, named Neosho tubes after their designer, were located at these sites. To date only three sites have been deemed safe enough for construction.

The lack of space coupled with the general surly demeanor of the social economic class of the employees has created a number of problems for PAX management.

The three Neosho tubes at these sites are named, Paumotu (population 110,00), Caroline (population 75,000) and Marquesas (Population 55,000). The Neosho tubes were designed to withstand the worst earthquakes that Argos can offer and to weather the planets frequent violent storms. If necessary they can also be moved. If the area they are in shows signs of becoming unstable or the habitat is in the path of a particularly violent storm, krill processors can be used as tow barges with movement begun in as little as six hours. Needless to say the three Neosho tube habitats are extremely crowded, averaging over 17,000 residents per square kilometer. The lack of space coupled with the general surly demeanor of the social economic class



Dolphin Commandos on Argos

of the employees has created a number of problems for PAX management. The close quarters mean that the average residence for a single individual is approximately 50 square meters and a residence for a family of four is little better averaging 120 square meters. With so many people stacked on top of each other tempers flair frequently. Friday night fights are a staple of the habitats that the security services have to deal with. However the Friday night fights are much easier to deal with than the major riots which often result from the population's grievances. Everything from a shortage of fresh fruit to the death of a women in police custody has set off a major riot. The conditions in the Neosho tubes have created black markets and organized gangs. Some of the individuals involved in these activities now live entirely below the purview of the Combines security service. Despite raids, undercover work and brutal retaliation against whole sections of tube residences the PAX security apparatus has not been able to eradicate these underground populations.

Life outside the Tubes has it's own set of challenges. The number one job on Argos is working on a krill processor. These are huge rectangular ships. Most are over a kilometer long and three quarters of a klick wide. Like an iceberg much of their bulk is underwater. This design is very stable in Argos rough oceans thanks to grav technology, allowing a processor to spend most of it's time on top of a school of krill once located. The ships are mini cities themselves. Crews range in size from 5,000 to over 12,000.

Other items of interest include a school of sentient dolphins smuggled onto Argos during the Mutant War. A rumor that other sentient dolphins were being used as slave labor in fishing operations triggered the mission to insert the Free Peoples Republic commandos into Argos. Unfortunately, communication with the team was lost and no information on their fate is known.

Description

The player characters are hired by the dolphin pod Daedalus to see if they can uncover any information on the fate of a school of dolphin commandos inserted onto Argos in 2979 by the Free Peoples Republic to investigate rumors of dolphin slave labor.

Reports were received from the dolphin team through most of 2981, but communication was lost towards the end of the year and the war ended. At that point the powers that be seemed to lose interest in the fate of the dolphin commandos. Only a few know the substance of the last few reports from the team. They indicated they found no evidence of dolphin slavery but they had discovered some other unusual circumstances on Argos. Their reports indicated they were investigating anomalies in the food source of the planet's large krill population which also serves as its chief export. The nature of the anomalies wasn't elaborated on other than the inclusion of the word "unnatural" in the last report. Further they had provided a few snippets of video evidence of some strange rock formations in a deep crevasse which did not appear to be natural. Could there be a sentient water dwelling race on Argos? Could these be the remains of a precursor civilization?

Outline

The players will need to figure out how to get onto Argos, a relatively closed APR world. Here are some ways they might do that:

1. The MAC operates a couple of harvesters on Argos. They could get hired onto a MAC resupply ship. They could get hired on as replacement deck crew on a harvester; this is rather unpleasant work, so the MAC has a three month on, three month off policy for harvester crews.
2. They could either hire onto or be passengers of a ship making a stop at Argos. They could be transporting cargo or picking up krill. Once they have access to a habitat, the players could try and visit some common areas (like a bar, it's always a bar isn't it?) and mingle with the locals to question them and gain information. Of course they'll have PAX security tailing them.
3. They could figure out some crazy way to skydive from an inbound shuttle or hire a ship to skim the atmosphere and do the same for them. They could be dropped in a drop pod into the ocean. Players are creative, be prepared for any ideas they come up with to get onto the planet and roll with it.

The players will then need to gain access to the underbelly of Argos society to find out information on dolphin sightings. Or they might decide to break into PAX security offices or hack the security computer.

1. A night on the habitat could provide them some access to old sea dogs with tales of seeing dolphins with filters over their blow holes. Further priming with drink or trinkets could find out that the old sea dog had heard tell of some of them dolphins sneaking onto a harvester trying to steal some equipment. *Complications:* The old sea dog(s) get drunk and a fight breaks out. Undercover PAX security gets wind of the inquires and tries to bring the players in for questioning.
2. Breaking in or hacking a PAX security or any company computer could lead you to finding reports of dolphin sightings on planet as recently as three months ago. Any official documents will also contain discussion of ways to capture the dolphins for interrogation. Complications: If they break into a facility, security discovers the break in and chases the players. If the players jack into the net to hack a computer they could face some ICM (intruder counter measures) or have their location tracked and a security team sent to pick them up.

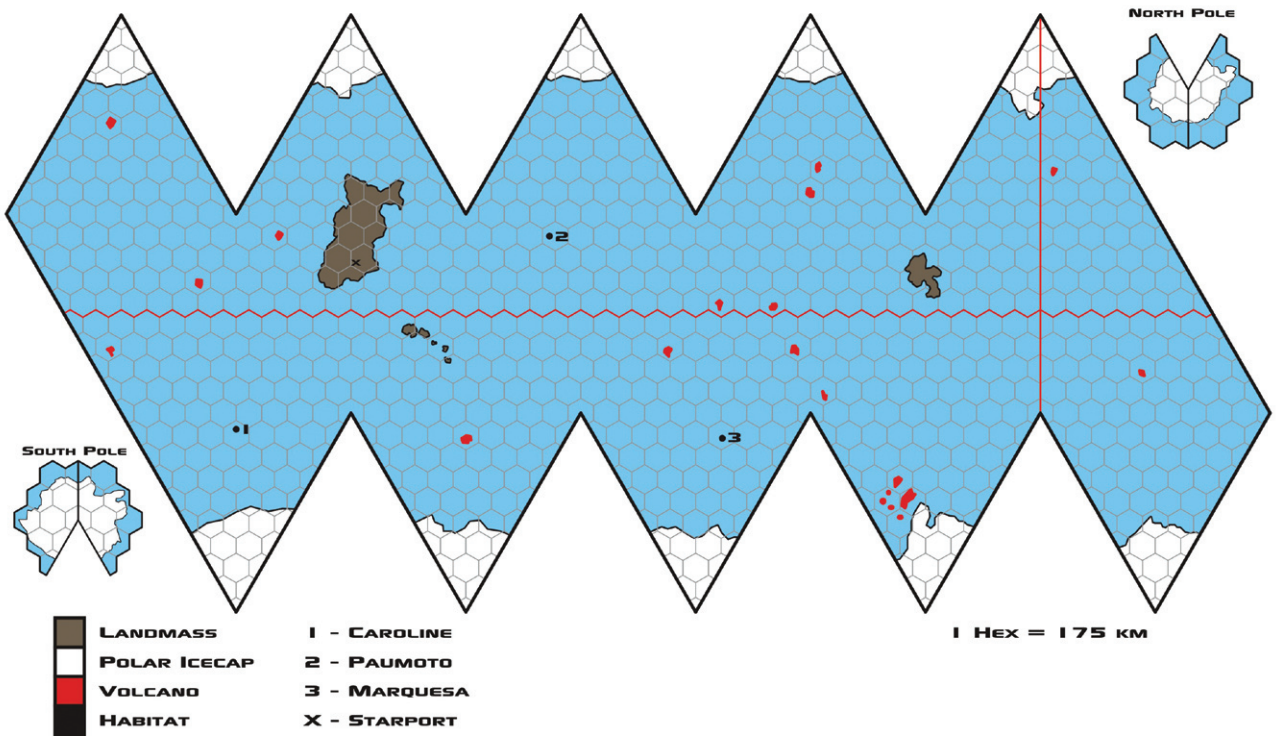
Next the players will need to either get their information off planet or find some way to contact the dolphins.

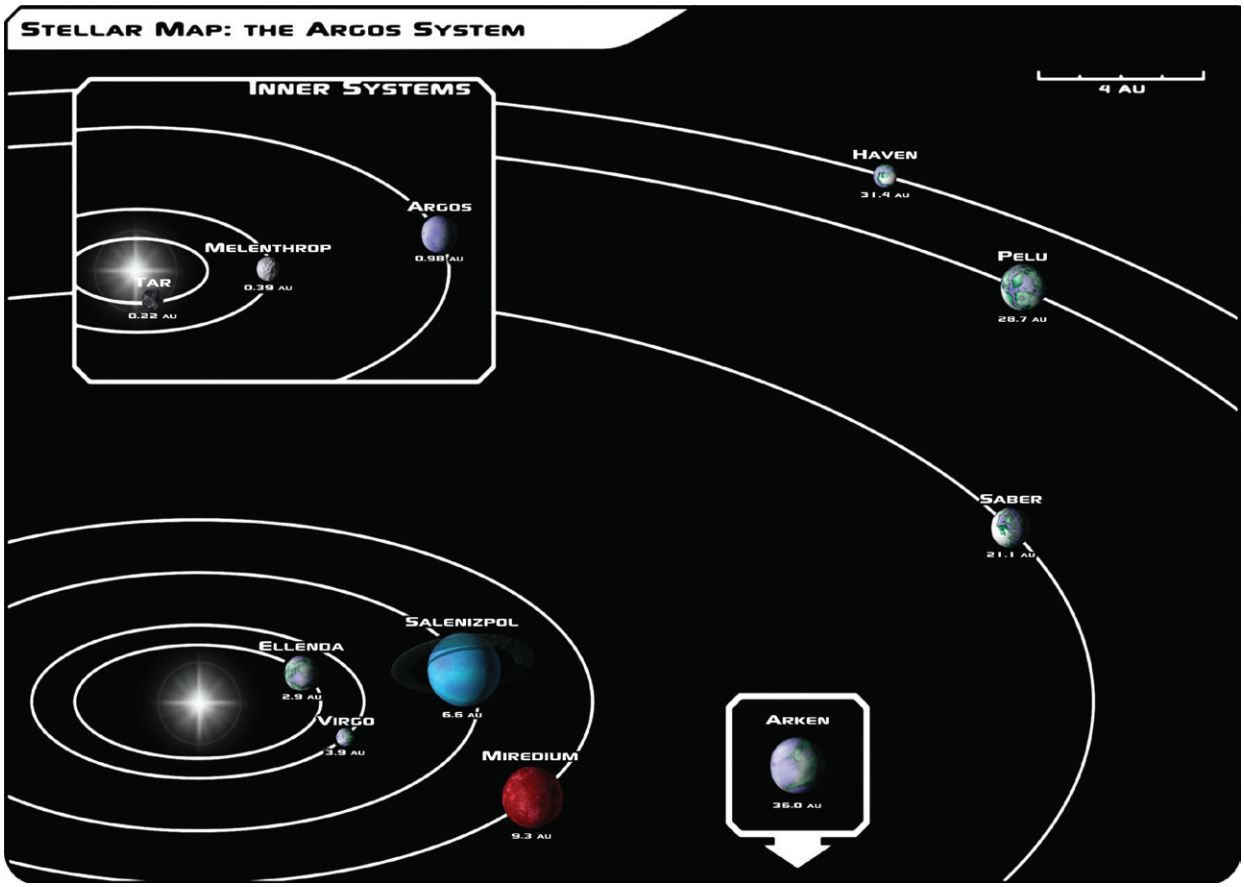
1. Working on a MAC harvester could afford them the opportunity to try and contact the dolphins, especially if they could create some kind of sonar broadcast in dolphin. This wouldn't be as easy as it sounds because even the MAC harvester has APR/PAX security on board. An APR political officer with a PAX security team will be on the ship.
2. If the players try and get off planet with the information after hacking a PAX computer customs will be alert to search all electronic devices for contraband data so the players will have to come up with some way of concealing it.

Additional details are left to the referee.

Surface Map: Argos

UWP: 4A69569





DORLASS

Dorlass is often thought of as the red-headed stepchild of the Twilight sector. It is certainly the hot, dry one.

Dorlass is Orion Confederation territory. The primary, Dorlass, is home to some 72 million Orion citizens, mostly humans. The population contains mainly separatists groups. These are groups that want to live out their lives by their own codes or according to their own religious beliefs separate and apart from the main body of Orion society. These groups always seem to function better in lightly settled areas, and Dorlass and the Twilight Sector are certainly that. The world itself is semi-arid, and the natives are in the process of doing minor terraforming of the planet. They are attempting to use a large reservoir of internal water, as well as some ice ball asteroids to increase the free water available on planet. This will, if all goes as planned, increase the size of the temperate bands on planet, making more land available for settlement. Certainly it will make the planet more productive agriculturally.

Even with Dorlass' heat and water problems it would probably get a Class One type if it weren't for its unique chemistry. The result of this unique chemistry is that native life is incompatible with standard terrestrial life. Standard human flora and fauna can't be grown on planet without significant modification. In short, standard terrestrial life can't digest native lifeforms and vice versa.

History

The system was discovered in 2836 by the Seti-Tallos mining corporation survey ship, *Mistress of the Belt*, the same ship which discovered Terra/Sol. This discovery, however, did not generate nearly as much excitement. Seti-Tallos still has a very active presence on the planet and the system in general, especially the Kressler Asteroid Belt. After the initial wave of settlement on Terra/Sol the system immediately drew the interest of some groups there who could see the writing on the wall - Terra would soon be swarming with people.

One of these groups was the New Mormon Church, which had started an Odyssey from Earth over 100 years previously. Others, like several orthodox Muslim sects, came from much closer, but for essentially the same reason. They sought to set up their own Orion State and be free from what they felt was the religious intolerance of more mainstream society. Various religious orders associated with Catholicism and Eastern Orthodoxy set up shop on Dorlass as well. Many orders mandating vows of silence or isolation found Dorlass perfect for their purposes. But not all of Dorlass' settlers were ecclesiastical in nature. Temporal groups like the Sons of the West, who sought an agrarian, less technological lifestyle, were also attracted to Dorlass.

Dorlass is often thought of as the red-headed stepchild of the Twilight sector. It is certainly the hot, dry one.

Terra-forming of Dorlass began in approximately 2851. The major sponsor of the various projects was the Seti-Tallos mining corporation. This was mainly done as a public relations gesture, however its success also held the prospect of profit for the corporation. If even parts of Dorlass could be brought up to Class One world standards, then Seti-Tallos land holdings would greatly increase in value. The terra-forming efforts however had some unforeseen consequences. There was a backlash from some of the planet's more extreme settlers, who didn't want Dorlass to become too attractive for fear of runaway development ruining their isolation. From the other end of the spectrum, off planet environmentalist groups, mainly based in the Terran Union, objected on the grounds that the terra-forming would endanger native life forms.

This was one of the first times that any of the voracious Union of Sol environmental groups had attempted to exert their influence in the Orion Confederation. Faced with opposition from both ends of the political spectrum and with the unrest that would lead to The Mutant War kicking into full



Rolph Quin

Rolph Quin was born on Sologne in the Cresent Sector in 2880. He quickly rejected the APR brand of communism and sought to profit from the ongoing Free Peoples Alliance invasion of the planet at a very young age. For that he was sent to the gulag at the tender age of 14 in 2894. He escaped several years later in the chaos of the Alliance's 25- year campaign on Sologne.

He quickly set up shop again and continued prospering from the war selling black market goods to the hard pressed peasants of Sologne. During this time he witnessed the massacre of his family at the hands of the Orions and has never forgiven them. With the campaign drawing to a close he fled off-planet to escape prosecution as a war profiteer.

He bounced around for a time in Orion, Shenzhou and Terran space. Little is known of his activity during this period but it is assumed he was involved in crime of some sort. In 2966 he showed up in the Kressler Asteroid Belt in the Dorlass system. He quickly became the leader of a gang of claim jumpers and has expanded his power until now 25 years later he is the most powerful criminal leader in the belt and the defacto leader of all criminal activity there.

At 111 he shows some of the mileage of his sorted life, but modern medical science has him functioning as a fit 30 year old. He is a cold and calculating individual who's ultimate objectives are not known. He is greatly feared by the criminal fraternity of the belt and is rumored to have fled his native planet with psionic knowledge beyond normal and the methods to use it.

swing, terra-forming proceeded at a snail's pace for the next 130 years. Only in the last 10 years have any major projects been attempted, and most of these are in litigation. The environmentalists use tactics of legal obstruction and obfuscation to delay and make these projects unprofitable. Occasional opposition is still voiced by the settlers as well, meaning any real improvements on Dorlass are at least decades away.

Since the end of the war another megacorporation has taken an interest in Dorlass. The PAX Combine, the APR front corporation has come to Dorlass with an open wallet. They have purchased significant land holdings, built facilities to make grav vehicles on planet and purchased water rights to a number of gorges. Analysts are not sure of the PAX strategy but feel it might have something to do with their longstanding rivalry with the Seti-Tallos mining corporation. The two mega-corps have butted head before, but PAX's strategy in this instance remains unclear.

Government and Politics

Given the nature of Dorlass society, the fact that it's composed of groups seeking their privacy, government tends to be local in nature. City states and small county sized political divisions are the norm and given the low population of the planet all that is really needed. This has lead to the unusual situation in the Orion Confederation of having a single planetary government. This government cedes most of its powers to the localities but provides the planet's citizens the ability to fend off unwanted federal government attention. When planetary governance is needed it is provided by the senate. The Senate is composed of one representative elected form each of the recognized demographic groups of Dorlass. However each senator's vote is weighted based upon the population, land holdings and donations to the government of each group. The Senate elects the President of the Senate who serves as the planet's chief executive. The office is currently held by Sam Rollins of the Sons of the West.

Much of the real power on Dorlass is wielded by Uche Owusu, the planetary administrator and head of the official Orion bureaucracy. Groups include a multitude of religion-based groups ranging across the religious spectrum. Most are old earth religions and often splinter groups of these.

System

The Dorlass system is composed of ten planets and one asteroid belt; the primary Dorlass is the second planet. The first planet, Hope is a super gas giant. The other planets in the system in order going outward from Dorlass, are Serendipity, a gas giant, Vormoot, a cold super terran planet, Behemoth, a gas giant, The Kressler Asteroid Belt, Oleander, a gas giant, Champaign, a cold terran planet, Rockfall, a cold sub-terran planet, Hastings, a cold sub-terran planet, and Driscoll, a tiny cold sub-terran planet.

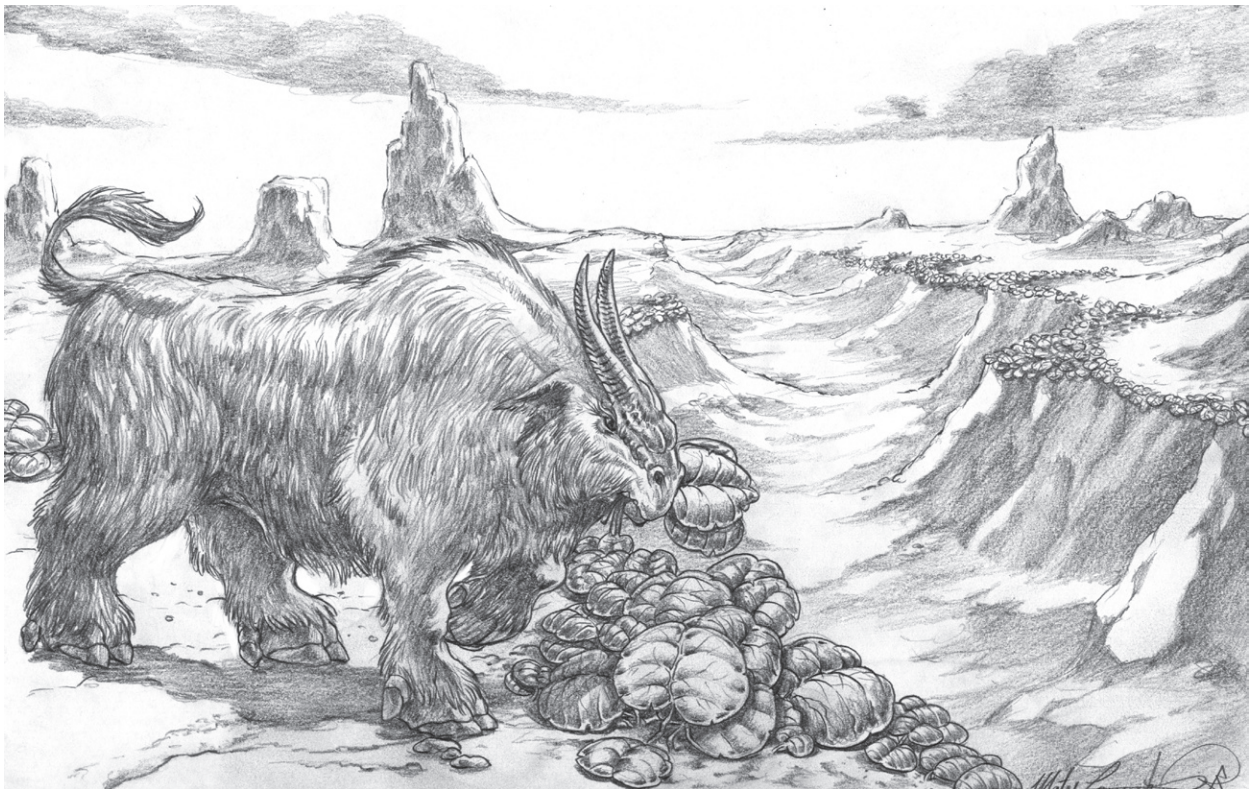
Seti-Tallos has set up extensive gas mining facilities in orbit around both Hope and Serendipity. Several large space stations service each of the mining operations and are guarded by at least three frigates in system at any one time. Each facility also houses a squadron of fighters. Seti-Tallos officials contend that all this firepower is to ward off any lawlessness that might spill over from the Kressler Belt, and truth be told there has been the odd incident involving piracy against Seti-Tallos assets in the last decade. However, others wonder exactly what the corporation is mining. Certain rare gases are mined from many gas giants, but the initial mining surveys did not reveal any such opportunities and the corporation is mum on the topic, which of course leads to speculation.

The Kressler Asteroid belt is home to over two million miners, claim jumpers and pirates. Most are SIMs, genetically altered to withstand the rigors of deep space without artificial gravity. The two centers of "culture" in the belt are the Ram's Head and the Cavern asteroids. Both are hollowed out and have enhanced rotations to provide some light gravity. Ram's Head is the capital while the Cavern is headquarters to most of the belt's criminal element.

As a whole the belt has a wide open old west feel. No one goes about unarmed. It's miners against the outlaws, although of late the outlaw gangs have started to be organized under the strong arm leadership of Rolph Quin. He has curtailed some of the criminal gangs more flagrant abuses as the belt has started to come to the attention of system law enforcement.

The two centers of "culture" in the belt are the Ram's Head and the Cavern asteroids.

The gas giant Behemoth is the site of a remote science station operated by The University of the Plains on



Uberdeen grazing beside a gorge

MARISSA'S RIDE

The following vignette is intended to provide some of the flavor of life on Dorlass.

Marissa spurred her pony on, urging him to pick up his already frantic pace. He was already lathering up and she hoped the cold blanket's battery wasn't running out. Oh why hadn't daddy let her use the skimmer! She turned 10 last week and he'd been letting her drive with him since she was five. If only he had, she'd be home by now.

Her panic stemmed from what she'd seen back at Widow's Gorge. Pax soldiers (At least that's what she called them. They always dressed in body armor and carried military style guns) had been shooting the Uberdeen, down on the gorge floor. The Uberdeen were the focus of the off-world environmentalists, In-vees, or "all those damn off-worlders," as her father called them. Recently numbers of the beasts had been turning up dead and the In-vees had blamed the ranchers like her father. Marissa had been trying to siphon a drink for her pony, Blaze, from a Cynafea plant along the edge of the gorge. While there she heard the unmistakable high pitched whine of laser fire. She crept to the edge of the gorge, pushing her way through the four foot tall plants to reach it.

She saw Pax men running helter skelter on the far rim. They were laughing and firing down onto the gorge floor. She heard the terrified bleating of the Uberdeen as they ran back and forth seeking any protection they could from the deadly fire raining down on them. As she watched the scene, she felt something warm and wet brush the back of her neck. Oh no! She'd forgotten about Blaze! Turning quickly she tried to shoo her pony back from the edge and out of sight of the Pax men on the other side. She hoped the men were too busy with their butchery to notice the pony. Glancing over her shoulder she saw it was too late. One of the Pax men was yelling and pointing her way.

Marissa quickly grabbed Blaze and ran into the clumps of Cynafea, which clustered close to the edge of the gorge, which was one of the few sources of water for miles. She frantically looked around for the largest Cynafea in the area. Finding a suitable plant, she had coaxed Blaze to lie down close to the trunk and grabbing one of the huge leaves she draped herself across the pony bringing the leaf over them both. Her only hope had been that she could hide from the Pax soldiers.

After only a moment she felt the downdraft from the Pax truck's anti-grav units. She had been debating whether to continue her ruse or bolt when she had heard the rumble of the grav-truck receding towards the west. Peeking out from under her leaf, she could hardly believe her luck. Then she realized that off to the west was her family's ranch - the same direction the Pax men were heading.

She had no choice but to spur Blaze and push him as hard as she dared. Her mind was in a panic fearing what she would find at home. Just beyond the next hill her heart sank. She saw smoke rising in the distance in the direction of home. She felt her darkest fears were confirmed...

She pulled up short of the smoldering ruin that was the crashed Pax grav-truck. She sat on blaze staring at the wreckage Her father came up beside her and helped her down from Blaze.

"Best get that pony in the barn and get some cool water on him" her father said.

"Daddy what happened? I saw them at the gorge," she said pointing at the remains of the vehicle.

"Then maybe you can explain the why. What happened was the damnedest thing I ever saw. They came in low over the cattle, raised hell with the herd. That's what made us look to the east. We never saw them Pax bastards till the last minute. They came in over the compound lasers blazing. They had a missile rack under the truck and they were coming right at me. I saw the missile drop and said to myself, 'God save us.' The missile started right for me, but didn't get five meters from the truck and KABLEWY. Went off, and that was all she wrote for them Pax boys."

Marissa stood in the air-conditioned barn, hosing off Blaze. Maybe it was right what Ma said. "What goes around comes around." Anyway, she was glad God was on their side!

Terra/Sol. Originally attracted to the site by the seemingly symmetrical alignment of Behemoth's massive (98) moon system, their attention has since been drawn by Quandary one of the gas giant's moons. It contains ice-covered water oceans. At depth they have discovered anomalous formations that do not appear natural. They are currently trying to determine if that is indeed the case. Their discovery has not yet been revealed and they want to keep it that way to insure that they have unfettered access to the site.

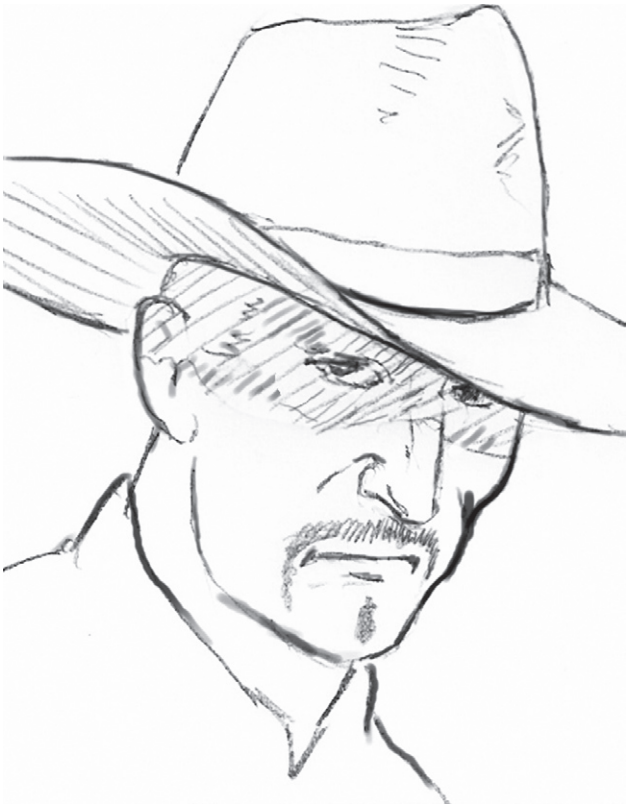
Planet

Dorlass is an extremely arid and hot planet, with most areas receiving less than 5 inches of rainfall per Dorlass year (289, 22.9 hour days). Average heat in the mid-latitudes is 98° F at midday, dropping to 46° F during the night. The temperature extremes and arid conditions however are not the prime deterrent to human habitation, as the planet has an extensive underground water table and technology can deal with the extreme heat. The main problem the planet suffers, from a human perspective, is that the native animal and plant life is biologically incompatible with human chemistry.

In short humans can't digest the local food without extensive and expensive processing. This means that humans have had to import Terran plants and animals. Cattle ranching, which would be the most logical agricultural pursuit on Dorlass, is hampered because the Terran cattle can't digest the local fauna. So ranchers must plant plots of Terran grasses, for their cattle to eat. All of this is of course expensive and time consuming. It also takes quite a bit of land area away from native life forms, which provides even more ammunition for the environmentalists.

Most life on Dorlass, both native and imported, is centered on the gorges that slice the surface of the planet. These gorges were created in an earlier geologic age, when water ran freely on the surface of the planet. They are now the center of life on the planet, sheltering its only freestanding water. They are also road maps to the greatest concentrations of underground water. Small intermittent streams and rivers run at the bottom of many of these gorges. They have carved out extensive cave complexes where they cut into the planet's surface to deliver their precious water to the underground water reservoirs.

Most human settlement has occurred in the extreme northern or southern temperate zones and close to the poles. Only within 10° or so of the



Sam Rollins

Sam Rollins was born on the highly developed planet of Winstrome, a short hop from the Orion capital of Koning. His family tired of the hectic urban life of the Orion core. They discovered the lifestyle group called "Sons of the West". This group promotes self-reliance and a rural lifestyle and searches out planets like Dorlass to sponsor members to emigrate too. This was the case with the Rollins family who emigrated to Dorlass in 2898. Young Sam was only 3 years old at the time of the move. His father, Richardo quickly built an extremely successful ranch. Sam took to the life and with his father's untimely death in 2922 the victim of an Uberdeen stampede, he took over the family ranch.

Sam's natural charisma made him popular with ranchers especially those associated with the Sons of the West. His standing up to the offworld enviros who tried to challenge his purchase of a tract of gorge land on the famed Painted Gorge, only increased his popularity with the Ranchers. He followed this up with his own lawsuit against the Natural Worlders, an Earth based enviro group for harassment. Winning the suit made him a legend and got him drafted into the Sons political hierarchy.

poles does the temperature cool off enough to be called cold. No permanent icecaps exist, having long ago melted off in the heat of the polar summers to be eventually precipitated out of the atmosphere and become part of the underground water table.

System Security

Dorlass is on the patrol route of the dreadnaught OSS *Hyperion*. The great ship and her attendant task force pays at least one call each earth standard year, and often two. For system defense the locals field 10 large, but aging, system defense boats. Each of these vessels is more than the equal of a fleet destroyer. Since these ships do not have superluminal drives, they can devote more of their tonnage to weapons systems. The planet itself is also defended by an orbital defense platform. One of Behemoth's moons, sports a fighter base which is home to a wing of 24 fighters, which patrols the outer system in the hopes of limiting illegal activity in this sparsely traveled area. Finally the system receives frequent visits from the Seti-Tallos light cruiser, *Tessa*, looking after the security needs of that corps interests in system.

Most life on Dorlass, both native and imported, is centered on the gorges that slice the surface of the planet.

Dorlass Encyclopedia

Cold Suits – Somewhat of a misnomer, these form-fitting garments can provide both heating and cooling. The suits can also be outfitted with hoods, to provide full body protection. However social custom has evolved so that women will wear the hoods, and men for the most part will not. They often add a hat with environmental controls in lieu of the hood.

Cyna Worms – Small (ranging from ¼" to 5" in length), worm-like creatures. These creatures fill the insect analog role in the Dorlass ecosystem. They look like worms but are quick moving. Many species create communal nests and have developed castes. The breeding caste does nothing but procreate, while the worker caste sees to the needs of the colony. Some species have developed warrior castes as well. The creatures acquired their names because they are commonly symbiotic with the Cynafea plant.

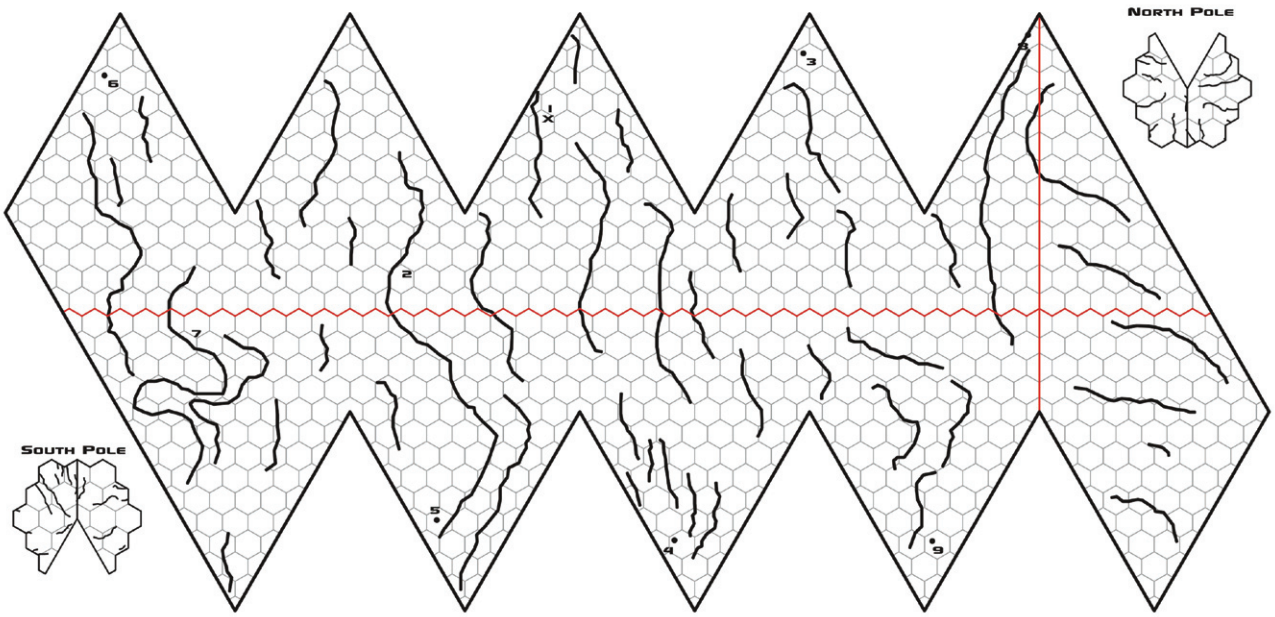
Cynafea Plant – This large plant (2' to 4' tall when leaves are fully extended) has roots that reach as far as 30 meters into the sandy soil. The leaves of these plants are the only things visible above ground. During the cold nights the leaves actually fold up and retract underground. They will also do this when threatened, for example, by a heard of Uberdeen. With a long straw (at least 10') like instrument, water can be extracted from the central trunk of these plants.

Gorges – One of the main natural features of Dorlass. These long (often 80 kilometers or more) thin (seldom over a mile wide) natural features are attributed to the underground water table of the planet. In effect they are long, thin sinkholes formed by underground rivers. Streams usually run through the bottom of these features at least intermittently. They appear at one end of a gorge and eventually return underground at the terminus. Gorges are one of few sources of fresh water on the surface of Dorlass, and so most native life is found around them.

Uberdeen – Large buffalo analog grazers. Mainly herbivores but they sometimes scavenge on carcasses as well.

Surface Map: Dorlass

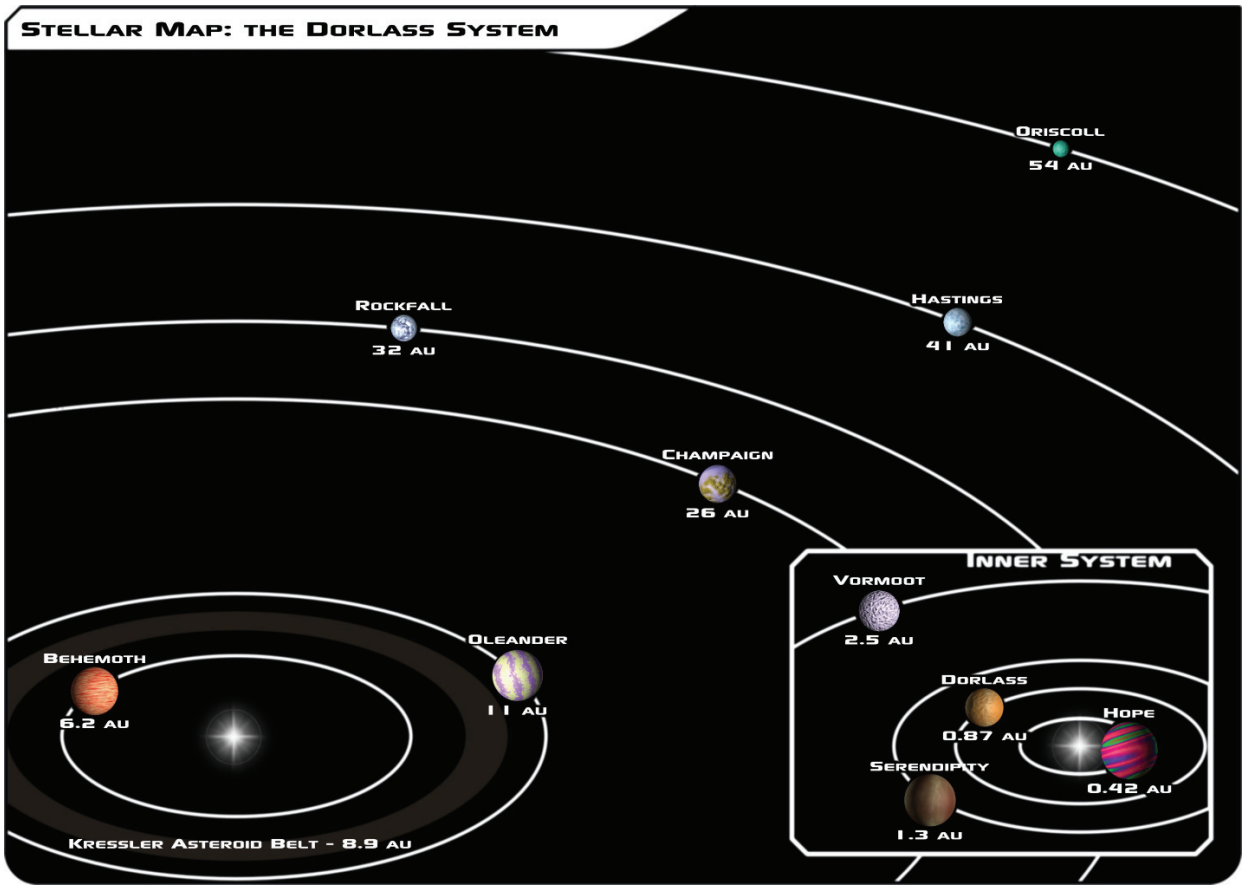
UWP: C86A173-B



Gorge
× Starport

1 Trinity Downport
2 Painted Gorge
3 New Madrid
4 Orwell
5 Dorlass City
6 Mahdi
7 Winow Gorge
8 New Salt Lake
9 Carolina City

1 Hex = 244 km



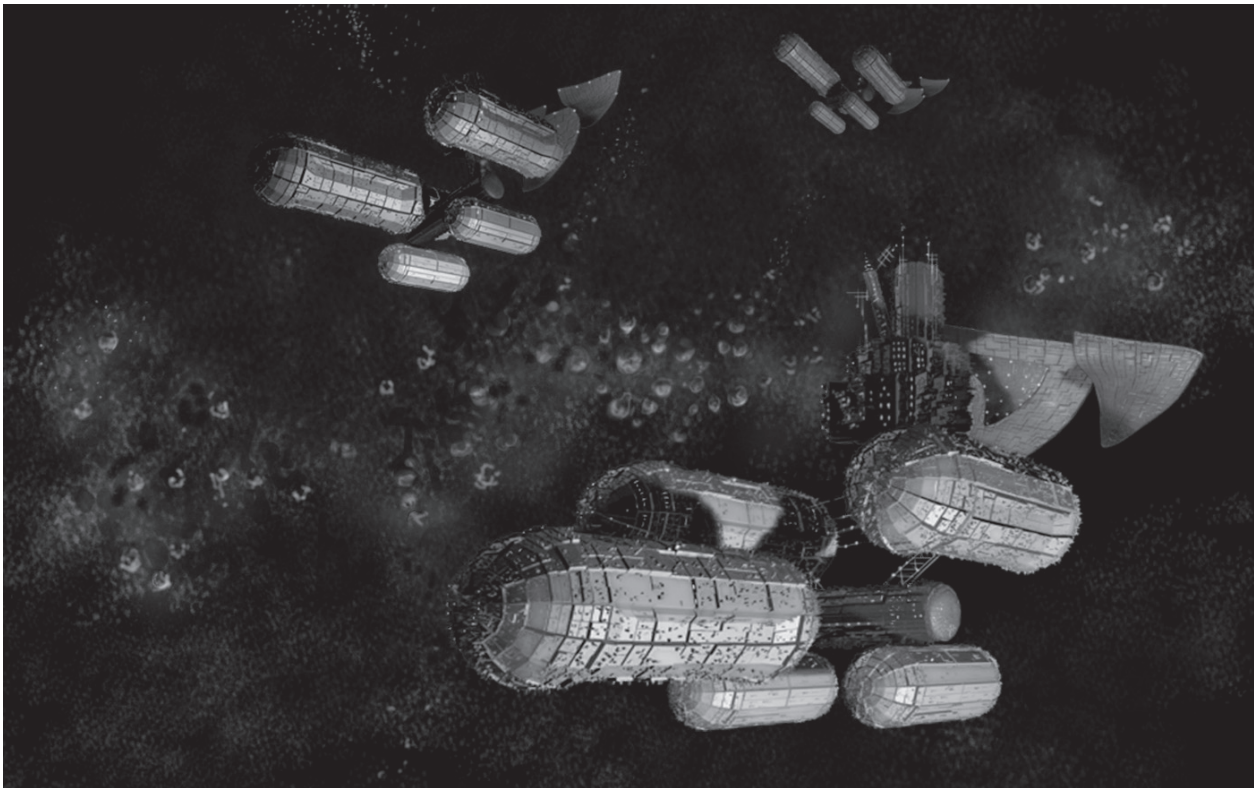
HELIX

Helix was the APR's (Archenar Peoples Republic) panicked reaction to the discovery of Terra/Sol. They wanted to make sure they had a foothold in the Twilight Sector so they grabbed pretty much the first thing they came to within shouting distance of the "New Earth." The system had nothing to recommend it. No planets, nothing except for an extremely rich asteroid belt orbiting at an unexplainable distance from the system's primary. Despite this, and at great expense the APR set about constructing a series of space habitats. Helix was established in 2837.

History

Helix was settled quickly after its discovery. Huge pre-fab space station components were delivered to the system via dreadnoughts, and within 5 years the system's population had reached 4 million and a significant mining industry had developed to support the infant heavy industry and shipbuilding operations that the APR leadership was pushing for. Most of the population consisted of Terra-Gen patented blueprint, deepspace SIMs (Transhumans). However the majority of the leadership for the system was baseline humans. Inevitable tensions arose between the two groups, with neither showing the other the slightest bit of trust. These tensions were a feature of Helix society that would shape it throughout its history.

With the development of heavy industries at Helix the APR had a springboard from which they were able to find and develop other systems within the Sector without the need to establish an industrial base in each. The successes of this desperation project led the APR to throw more resources into the system. Over the next 8 years an average of a million deep space SIMs a year were moved to the system, accomplishing the dual purposes of investing in Helix and putting a politically unreliable population somewhere the Archenar revolutionary purity commissars could keep an eye on them.



Space Colonies at Helix demonstrate that even where there is no world to call home, humanity builds communities

By 2868 Helix had a population of 14 million and was churning out starships at a prodigious rate. APR leadership was secretly building up a large war fleet at Helix in anticipation of possible hostilities. The possibility of a Galactic War was already evident to any astute student of human politics and the APR hoped if conflict came they could seize the greatest prize in the Twilight Sector ... Terra/Sol.

The best laid plans of mice and men often come to naught and so it was with the Archenar's grand plan to seize Terra/Sol. The attempt came tantalizingly close to success when in 2882 their secret fleet set upon Terra/Sol before the Orions could rush a fleet to its defense. The gallant defense of the grossly outgunned Orion defenders was about to collapse when, with all weapons systems spent the Orion flagship, the OSS *Kansas*, rammed the APR dreadnought *May Day* which was loaded with invasion troops. Both vessels were lost with all hands. Although Terra/Sol was subjected to heavy bombardment by the rest of the APR fleet, with no invasion troops the Archenars couldn't take advantage of the situation. Eventually an Orion relief fleet arrived and drove off the APR fleet.

Then in 2884 the other shoe dropped for Helix. The Orion fleet, dubbed 'Vengeance,' jumped into the system with overwhelming force. The fleet was led by not one but two dreadnoughts. In a pitched battle that lasted well over a fortnight, weaving in and out of the Pulver asteroid belt, the APR fleet was worn down. Finally the survivors jumped out system, ending the engagement and leaving Helix in the hands of the Orions.

Not wanting to have to occupy the system, the Confederacy negotiated a deal with the locals to declare Helix an open system. After dismantling its shipyards they left the population to their own devices. The various deep space habitats in which the population lived were for the most part segregated by social level. This was most likely fortuitous for the baseline human managers of the system, who might have been in jeopardy had they been in close proximity to the SIMs who make up the majority of the population. Because of the separation of each individual habitat, each developed their own government. However each was forced to deal with each other to gain goods and expertise that were present in other habitats. While sitting out the rest of the Mutant War, the various habitats created a unique confederation with laws governing their interactions with each other, but each having its own system of governance.



A Belt Mod SIM of the Helix System

Transhumans and Mining

Why don't the miners in the belt use artificial gravity? The answer goes back over nine hundred years to the first permanent mining colonies in the Earth's asteroid belt. Before the discovery of the alien ship and the information that eventually lead to gravplate technology, many humans had genetically altered themselves to withstand the physical and mental rigors of life in the belt. With the advent of gravitic technology their genetic alterations technically became obsolete. However many preferred their new bodies and the zero-g life style was genetically ingrained in them. There are of course some inherent advantages of their zero-g genetic alterations and so these types of SIMs have persisted and their kind is still going strong in the belts, deep space and zero-g environments.

Although the invention of gravitic technology made belt mod SIMs obsolete, and has made it possible for baseline humans to live and work in deepspace, the reality is that most baseline humans do not pursue such an existence. Many psychologists believe that human memes prevent most from thriving in deepspace habitats. Although recent research on the subject indicates that as many as 16% of baseline humans can embrace the deepspace lifestyle. Even if that is true, the fact is that most baseline humans choose not to live in deepspace.

Government and Politics

The Helix habitats have developed a political system very much like the early Swiss Cantons. Each habitat is virtually autonomous internally but bound by rules set up by the confederation of all the habitats for interhabitat dealings and foreign policy. A Committee Chairman is elected by vote of all the habitats who is the nominal head of state for the Helix system.

At the end of The Mutant War the population of Helix voted on renewing its allegiance to the APR or becoming an independent system. The vote wasn't even close.

There are 48 habitats in the Helix system, each represented on the Inter Habitat Committee. The Committee is a sort of congress for the habitats. Each habitat having one member on the board regardless of population. The Committee Chairman is the only member elected directly by a vote of the entire population of all the habitats. The resulting government is centrally weak. Due to this weakness it is forced to govern by consensus making it slow and ponderous. This same slowness also limits rash or harsh decisions, making it possible for such politically diverse groups to be united, however tenuously. Democracies, oligarchies, republics and dictatorships are all among the governmental types employed by one or more to the 48 habitats.

At the end of The Mutant War the population of Helix voted on renewing its allegiance to the APR or becoming an independent system. The vote wasn't even close. Even the old management habitats could barely muster 45% support for returning to the Archenar Peoples Republic.

It is known that the Orions are courting the Helix Habitat Committee in hopes of convincing them to join the confederacy. It's clear that the vast majority of the habitats are in favor of such a move, but the morass of Helix politics is tricky and there is anti-Orion sentiment among some of the old management habitats. Even if they no longer wish to be Archenar, it's hard for some of the former Archenar citizens to contemplate joining one of their home countries mortal enemies.

Economy and Population

The current population of Helix is 16 million down from a pre-war high of 28 million. The original settlers were of course all APR citizens. However the APR being paranoid never really trusted any Transhuman population not derived from APR created technology. Since the APR never developed a deep space gene-blueprint any deep space adapted Transhumans (SIMs) are viewed with suspicion by the political hierarchy. With Helix they saw the opportunity to use an asset (their deep space Transhuman citizens) little trusted, and gather a large group of them in one place where it would be easier to keep an eye on them. Most of these SIMs were not management cadre citizens, being rank 8 or less (APR citizens are designated by a number rank. 1 being lowest and 27 being highest, Leaders of the Proletariat, a word which has taken on new meaning in the APR generally meaning those of the revolutionary class and thus the leaders of the APR, have numbers beginning at 18), while baseline human citizens made up most of the management and have ranks of 18 or higher. The ex-APR citizens are for the most part glad to have shed the shackles of a state that never really wanted them anyway.

So what did the APR find when they arrived in the Helix system desperate for a foothold in the sector that caused them to snatch it up? Simply put, the Pulver asteroid belt. The highly degraded nature of the belt and it's richness made it possible for the interstellar nation to create a space colony quickly, thus gaining their foothold in the Twilight sector.

Deep space mining and manufacturing were of course two of the first industries developed. With these in place the Archenar were able to build habitats and facilities for other industries. In short order the APR had created a massive shipbuilding facility with which they were able to produce the Naval assets that would later be used in the invasion of the Terra/Sol system. As time progressed drug manufacture, nanobot manufacture, miniaturization, micro encapsulation, purified industrial volatiles and crystal production were added to Helix's list of industries. All of these industries still exist in the various deep space habitats that make up Helix. Ship building is also slowly returning as Helix's infamous shipyards are being rebuilt.

RATAN

Ratan was settled in 2838, shortly after Terra/Sol, by the Archenar Peoples Republic. The Planet required a period of terraforming, then became a tourist-oriented world, hoping to draw much-needed cash to the APR. During the War, Ratan was abandoned by the APR forces and like Helix, opted to become independent as a result.

History

The APR was ecstatic to find another Class 1 planet from which they could contend with the Orion's for dominance of the Twilight Sector. They were even more happy to find two other moons in the system that were perfect for terra-forming. Ratan's main drawback was a thin atmosphere, but there were also chemical compatibility problems. They were nowhere near as severe as those on Dorlass but still enough to send an unprepared tourist into a fit of "Ratan's Revenge." The atmospheric problem was immediately attacked through the introduction of oxygen producing algae to the planet's extensive oceans. Unlike on Dorlass however, the inevitable environmental complaints fell on the deaf ears of the APR leadership.

In only twelve years the planet's atmosphere had been modified enough that supplementary oxygen was no longer necessary. To this day the atmosphere is classified as thin but continues to improve. The introduction of the oxygen producing algae however had unintended consequences.

The new food source proved a boon for certain, previously only marginally successful, fish species. For others consumption of the new food source proved fatal and several species went extinct. The resultant effects on the food chain caused a die off of even more species. Before the ecosystem could compensate authorities introduced more native Earth species to "fill the holes" in the food chain. This caused even further disruption. All of this however proved to be minor compared to the changes that were brought about by the APR's choice of how best to develop the planet. The decision was to develop the planet as an entertainment property. It wouldn't do for the property to present any threat to visitors, so Ratan's ecosystems were quickly corralled and made "visitor friendly." The APR created a front company called Monument Entertainment to develop the world. Creative types with the APR had long been agitating for a planet to develop as an entertainment/ propaganda facility. Ratan wouldn't have been their first choice since it was "out on the fringe" but given that the APR had few personnel resources to devote to a colonization effort, the plan went forward.

Monument had a vision of Ratan becoming a planet-sized theme park and entertainment studio.

The Monument Entertainment Corporation established in 2840 immediately began extensive development of Ratan. Monument had a vision of Ratan becoming a planet-sized theme park and entertainment studio. They could use their tri-dee entertainment products to spread the good news of galactic socialism with subtle messages instead of the sledgehammer blows that APR leadership usually employed. A further benefit was the theme park visitors would create a significant cash flow, which would help finance terraforming of the systems two potentially habitable moons. They would hoist the capitalists by their own petard!

Work on developing entertainment properties continued for the next 18 years (till 2858) before Monument was ready to open the planet's doors for the first paying customers.

Their timing could not have been worse. Mutants had begun in earnest the agitation that would eventually lead to The Mutant War. Then with the first sputtering steps of the war in 2881 business for the entertainment destination became non-existent. War came in earnest to Ratan in 2884. When the APR had moved against Terra/Sol with its secret fleet and failed, the improbable defeat of the dreadnought May Day signaled the beginning of the end for APR military power in the sector.

The APR defeat at Helix sealed this fate and saw some of the remnants of the Archenar fleet flee to Ratan. The Orion fleet of course pursued and the Archenar fleet once again was forced to flee. At that point the APR had no choice but to abandon Ratan and declare it an open system. Given the insignificance of any threat that Ratan might pose and facing far more pressing concerns in other areas the Orions ignored Ratan, leaving it to fend for itself.

During the Mutant War Ratan found itself at a crossroads.

So when handed lemons, Monument created lemonade. The hoped for propaganda platform for the APR never materialized and truth be told it didn't really bother Monument management all that much. The system grew and flourished during the war by appealing to the population of their former enemy to come to Ratan and leave the worries of the war behind. In 2885, only a year after the elimination of the APR military threat they opened their doors again and Orions looking for relief from the war flocked through them. At the opening Ratan's attractions consisted of the Sadeltna Amusement park just outside of Jadzuku Downport, Olympia and the Hibernian Lodge.

These attractions were only the beginning. Over the next 100 years the Monument Entertainment Corporation was hard at work developing a multitude of themed entertainments. Projects such as Polynesia, Europa, The Veldt and New Tokyo introduced Earth-specific cultural themes often accentuated by emphasis on one or more romanticized periods from the area's past. Other projects like Waterloo, Gettysburg and Triallos IV gave military authenticists the chance to participate in historically realistic battles. Nature-themed attractions like Sendai Park, Amazonia, The Veldt, Lohja Ice Fields, The Great Rocky Mountains and the Marianas Trench Park added another dimension.

Traditional amusement park fans were not left out. Besides the original Sadeltna Amusement park, Wyimeya Canyon, Kyushu Amusement Park City, TriStar Studios and Monument Studios were added. These last two provided more "rides" than could be experienced in a lifetime. Sportsman enjoyed the original attraction Hibernian Lodge, later joined by newcomers Kenai, Amazonia and The Veldt to offer numerous hunting, fishing



Monument Amusement Park

and adventure sports opportunities. Additional urban-themed adventures were added within the last 50 years with the construction of Vegas and additions to New Tokyo.

During the Mutant War Ratan found itself at a crossroads. Monument management was for the most part Archenar citizens but almost all had stronger loyalties to Monument. After all it was Monument which had allowed them the freedom to develop this wonderland. At the end of the war Ratan had a choice to make. The APR was extremely weak in the Sector and would presumably be able to do little if Monument decided to go its own way. After weeks of teetering on the fence and many late night closed door negotiations with the APR, Monument choose to become an independent world. The Archenars screamed foul, blaming the capitalist pig dogs of the Orion Confederation for Ratan's decision. It's no secret that Ratan has an open invitation to join the Confederation but, like Helix, they have shown some reluctance despite strong popular sentiment for the move.

Population

The Ratan system is home to approximately 245 million. Only about 65 million live on Ratan itself, most of the rest work on terraforming projects for the two potentially habitable moons. Most of those working off Ratan are laborers who were mainly level 10 or less APR citizens. There were originally many more people working on the terraforming project but approximately 100 million left and returned to the APR when Monument management made its decision not to renew its allegiance to the APR at the end of the war.

At any one time Ratan is entertaining 25 to 30 million visitors. The average visitors stay is 3 weeks which when all is said and done, works out to approximately 400 to 500 million visitors a year. Most are from Terra/Sol although as many as 15% come from the neighboring Crescent Sector and an additional 4% from even father away.

Monument projects that as the borders of the known galaxy (a common term in the Setting as in 'that part of the galaxy we know') are pushed further out the system will become more of a regional destination and will draw visitors from all bordering sectors. Monument statistical models predict that in 150 years the planet will host 120 million visitors at any one time or approximately 2 billion visitors a year! Monument statistical models are seldom wrong.

Monument Attractions

Ratan is home to thousands of attractions from the gigantic, hosting as many as a million people a day, to the small out of the way gems that host only a few hundred. No matter the size, however, all Monument attractions are first rate. They show an amazing attention to detail and loving craftsmanship. Monument won't just put up a roller coaster or a zero-g jump. Each ride or attraction is themed and often fits into an overall storyline. Monument leaves no stone unturned when providing entertainment to its guests. Even when standing in a queue for the next ride a Monument guest is being entertained somehow.

A few of the larger attractions or attraction areas that Monument has constructed on Ratan are:

Olympia
This large city is home to some of the Twilight Sector's most popular sports leagues. They lack the local appeal that, for example, your hometown team on Terra/Sol might provide, but they make up for this with some of the most skilled athletes and most evenly balanced leagues in all of known space. An Olympia league game is seldom boring, usually coming down to the wire. An Olympia sports league championship race is almost always gripping with at least a couple of teams in the running all the way to the last few contests of any season. Olympia offers professional leagues in the following sports: Futball, Grav-ball, Baseball, Rugby, Cricket and Basketball. It also offers a wide range of motor sports competitions. The Terra/Sol sensation of Football however is not represented on Ratan.

In addition to professional sports, amateur sports play a compelling role with many visitors. Clinics to improve your game, fantasy leagues where you can compete alongside and against sports greats, and amateur leagues formed of guests and segregated by skill levels are all big draws in Olympia.

Europa
This is a stylized version of Earth's European continent. It is an Authenticists dream, providing European experiences across a number of historical time periods. The 1200s, 1700s, 20th century and Modern time periods are all well represented. The attraction stretches along the coast of the Sinseng Sea, the northern most portions represent the earliest epochs, with those father south gradually becoming more modern. There are also several special 1,000 square kilometer preserves.

Polynesia, New Tokyo, Vegas
These are all urban or culturally themed attractions. Polynesia has a number of resorts where the visitor can just get away and enjoy a tropical island setting. It also contains some cultural attractions as well where one can experience the life of Polynesia in various historical and fantasy time periods. These attractions are often spiced up with storylines, everything from murder mysteries to find the McGuffin-type quests. Although not widely advertised "Love" stories are also available. The attraction using decerbate clones controlled by either AIs or Monument employees. The full range of services are provided by these clones and their use is highly controversial in some quarters.

Vegas is the capital of debauchery ... styled after the 20th century Earth version of the city, it is the home of Ratan's gambling, nightlife and sex themed offerings.

New Tokyo was originally designed to be a highly urbanized attraction giving guests "The flavor of the Monumentally crowded Earth original." Note the play on words with Monuments name in the slogan, a product of an over-clever advertising rep. Over time, additional time periods were added. One of the most popular is a medieval setting where guests get to take part in a Warlord's attempt to be named Shogun. In a piece of marketing genius, the various parts in the setting are all priced differently. Being a Ronin Samurai is much cheaper than being the Warlord. Rarity of parts also plays a large factor in their cost. Vegas is the capital of debauchery on Ratan. Styled after the 20th century Earth version of the city, it is the home of Ratan's gambling, nightlife and sex themed offerings. All guests to this city sized attraction must be 18 or older.

Waterloo, Gettysburg, Triallos IV
These are the military reenactors heaven. Here you can plug into some of the great battles from throughout human history. Again in these attractions cost is based on the role one chooses to play. Playing General Lee at Gettysburg or Napoleon at Waterloo can get rather pricey. These attractions however don't just provide battles, they also provide the reenactor the chance to experience the life and times of the era in which the battle occurred. These attractions provide experiences from historically themed taverns down to camp followers. Some military recreations like Waterloo, have their themes seamlessly blended into a larger attraction. In addition to the lineup of regularly scheduled battles, other battles are periodically done. Eventually almost every period is covered from Alexander at the Battle of Gaugamela to D-Day to the Oster Republic 4th legion at Dardalus. These battles are highly anticipated and sell well.

Sendai Park, Amazonia, The Veldt, Lohja Ice Fields, The Great Rocky Mountains, Marianas Trench Park
If you love nature themes then these attractions are for you. At these parks you can nature watch to your heart's content. See recreated species like the sabre tooth tiger and the giant moa. Experience safaris, camp out in wild, experience the strange world of the deep ocean. All these things and more are possible by visiting one of these themed parks.

Hibernain Lodge, Kenai, Amazonia, &The Veldt
Where else in the galaxy can a hunter go to experience the thrill of hunting sabre tooths or have the chance to catch a record-sized trout. All that can be experienced just by visiting the Hibernian Lodge. Imagine what you will find at the other sportsman's lodges. If you also want to experience adventure sports then these lodges offer great things for you as well. Climb Kilimanjaro, Kayak the headwaters of the Amazon, all these experiences are available.

Sadeltna Amusement Park, Wyimeya Canyon, Kyushu Amusement Park City, Tristar Studios, Monument Studios
Whatever kind of thrill a 30th century engineer can imagine has been built and is waiting for you to ride at one of these amusement/theme parks. The discovery of gravplate technology revolutionized human travel and industry, but it took Monument engineers to put it to its greatest use ... Thrill Rides! Without a doubt the greatest collection of thrill rides and other amusement park staples on one planet, exists on Ratan. These parks are the biggest draws for people coming from outside the Twilight Sector.

System

There are only 5 planets in the Ratan system. The first is a large terran planet face locked with Ryolis the systems star. The second is a Venus type planet and the third is Ratan. Further out there are two gas giants Vigos and Stoddard. Both of these have moons in the process of being terra-formed. It is possible that sometime in the future the Ratan system will be able to boast of having three Class 1 worlds.

Security for the system is provided by the Orion Confederation under a treaty signed when Ratan was declared an open system in 2884. The usual security contingent includes a cruiser and two small carriers.

Technology

Ratan has been a hotbed of technological innovation since its beginning. Much of the technology used to create the various attractions was created by Monument's engineers or was old technology used by them in novel ways.

For the Marianas Trench Park the engineers were charged with segregating the trench from the rest of Ratan's oceans. Their solution was to use gravplate technology and surround the trench with an invisible wall of slightly higher gravity. Fish on either side of the wall sense the gravity change and refuse to cross it.

For the sports leagues of Olympia to remain relevant in other systems, it is extremely important recordings of their games and competitions get communicated as quickly as possible. Even with gravity radio which can send a radio signal through the gravitic plane as quickly as a dreadnought can traverse the same distance, the problem always came down to putting commsats into the gravitic plane in quick enough succession that those on the receiving end could get constant updates. Monument engineers solved the problem by creating giant tachyon collectors and a tachyon charge transfer system to "refuel" commsats without the usual wait time while the commsat has to sit idle collecting its own charge. Then the engineers set up a giant commsat array which dropped a satellite into the gravitic plane every two hours.

This ground breaking technology seems to be applicable to other uses as well, Starship refueling springs immediately to mind. The satellite communications array design is also highly sought after by both military and commercial interests all across known space. So far Monument has been reluctant to license this technology for fear of pirating, but when they do decide to sell licenses in the technology they are sitting on a goldmine probably as big as Ratan itself.

One of the most controversial technologies used by Monument is the creation of decerebrate clones. These are biological humans resembling whoever contributed the genetic material for their creation but which have been genetically programmed so that their brain does not develop beyond latent responses. The clone is then either biologically programmed to accept remote commands or the higher brain is removed and replaced by computer hardware. This is the same technology that uploaded humans use to give themselves a biological presence.

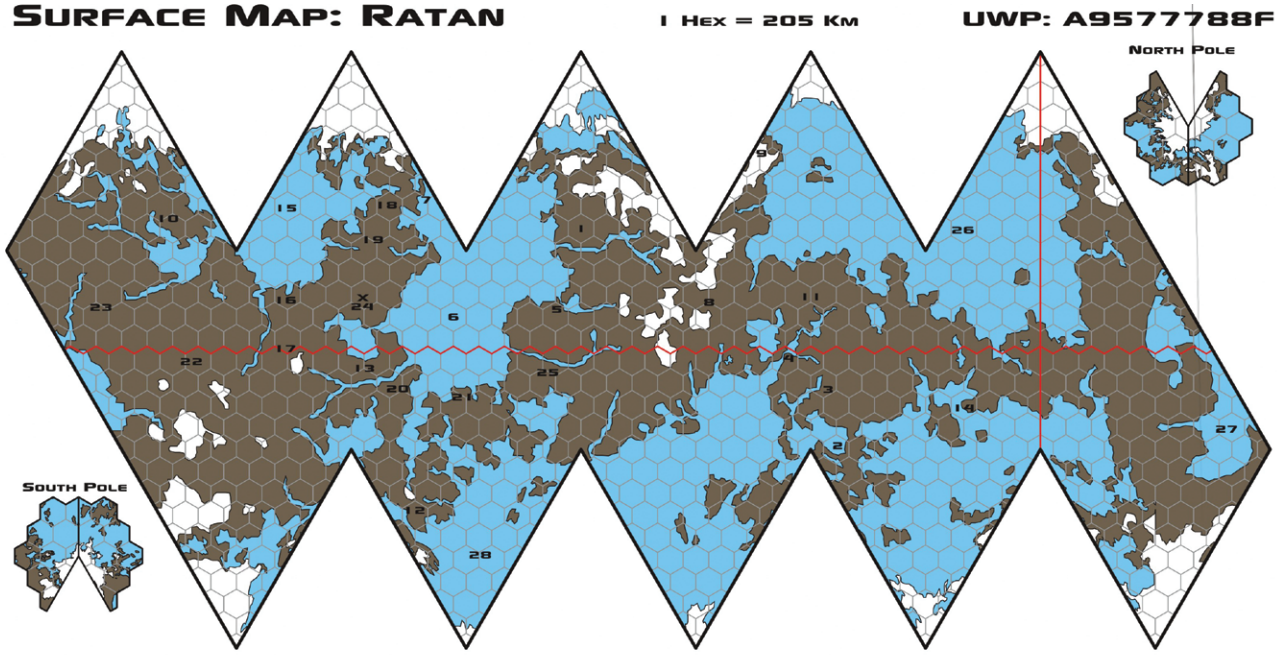
Monument however uses it for its various attractions. When you book a Gettysburg vacation, and you charge up the hill at Little Round Top, your opposition might be a bunch of clones controlled by an AI. When you go to the Geisha house in New Tokyo your hostess might be a decerebrate clone. Where this all gets kind of dicey with the moralist types is the fact that many of these clones which are treated as simple property having much the same rights as the family pet, are made of human genetic material and only an operation away from being fully human. Another aspect is the uses to which some of these clones are put to. Famous people sometimes license their genetic material out for cloning. This can get interesting and politically charged when that celebrity is an adult actress.

For the sports leagues of Olympia to remain relevant ...it is extremely important recordings get communicated as quickly as possible.

Surface Map: Ratan

1 Hex = 205 Km

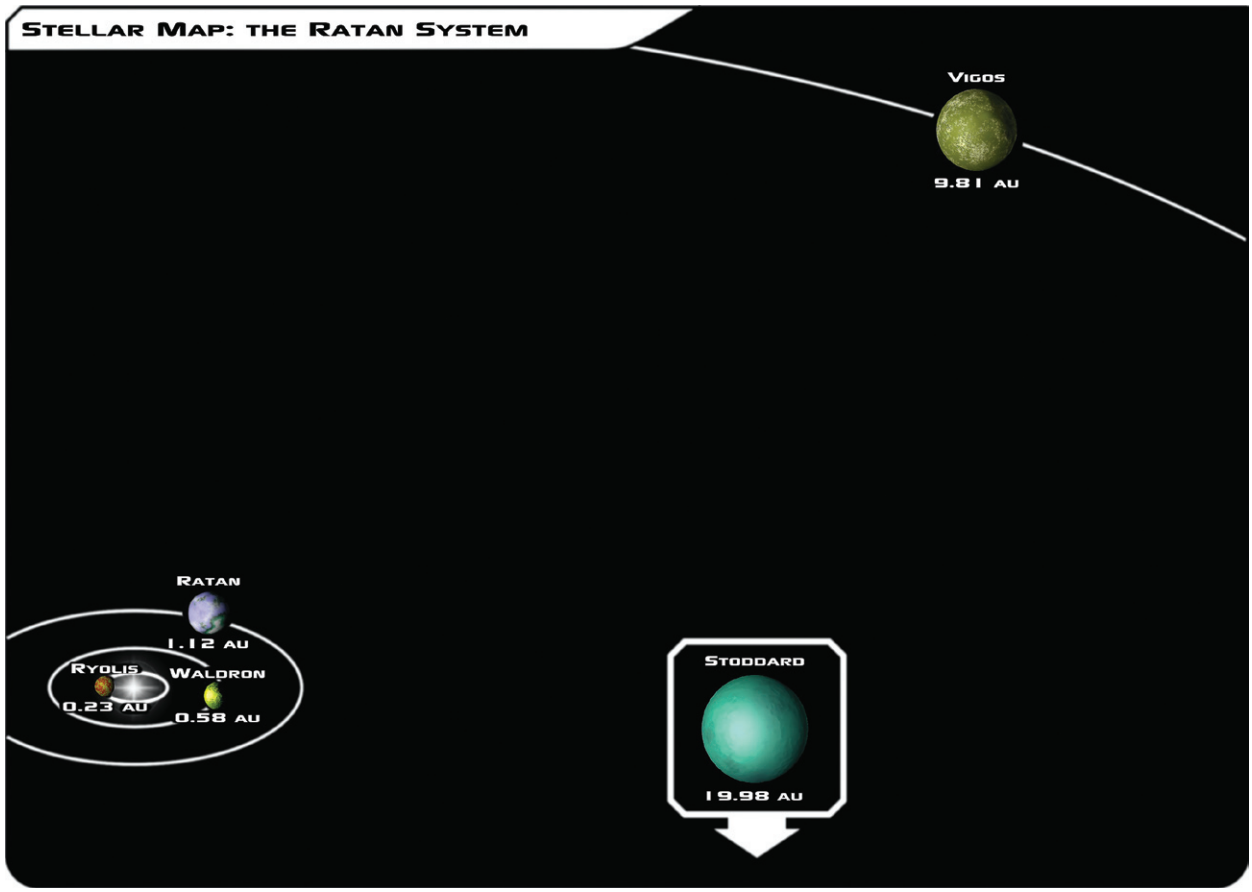
UWP: A9577788F



Landmass
Polar Icecap
X Starport

1 Viking Village
2 Polynesta
3 New Tokyo
4 Vegas
5 Waterloo
6 Marianas Trench Park
7 Kenai
8 Great Rocky Mountains
9 Lohja Ice Fields
10 Hibernian Lodge
11 The Velot
12 Admin City
13 Amazonic
14 Sendai Park
15 Sinseng Sea
16 Europa
17 Olympia
18 Gettysburg
19 Tyrallos IV
20 Monument Studios
21 Tristar Studios
22 Wyimeya Canyon
23 Sadeltina Amusement Park
24 Serendipity Downport
25 Kyushu Amusement Park
26 Sea of Saipan
27 Lake Superior
28 Burning Ocean

Stellar Map: the Ratan System



NETHERELL

Netherell is another of the Twilight Sector's enigmas wrapped in a riddle. This, however, is the one nobody really has any idea about outside of select few in the APR. The existence of the system and the Archenar People's Republic's claim to it were not known to the rest of human space until 2934 and it's widely believed by Orion diplomats that fear of the discovery of this system was one of the main motivations for the APR to seek a bilateral peace accord with the Orion Confederation.

Shortly after the accord was signed the system was discovered accidentally by a wayward Orion scout ship, the *Shaw*, which mis-jumped and found itself in the system. It was quickly seized and expelled by the APR navy. It's crew was subjected to mind washing techniques so that most of the info currently know about the system is jumbled and scarce.

It is believed the system contains ten planets including a Class One world. It is further believed that a Dreadnought has been permanently assigned to the system along with a very large naval task force to keep prying eyes out. From reports by other ships that tried to jump close to the system to get a look at it it's know that the APR has fighters and other naval assets ready to scramble and engage any ships approaching within long range sensor distance of the system. It's safe to assume that Orion State Security has a plethora of telescopes trained on the system trying to deduce what they can from extreme distance.

Many wonder why the Orion's have put up with this situation, obviously a potential threat to Terra/Sol. Analysis of the situation suggests brilliant maneuvering by the APR is at the heart of their ability to hold onto Netherell at least to this point. Concluding a peace with the Orion's prior to discovery of the system by them was key. Many within the Confederation's power structure were loath to reenter hostilities with the APR within months after concluding a peace.

This stance was further reinforced by the Confederacy's Free People's Alliance partners who saw the balance of power shifting their way once the APR had effectively been eliminated from the conflict. So far the Orion's have shown restraint not wishing to cause another galactic wide war. It is known, however, that there is a strong faction within the federal government and on Terra/Sol that believes the situation is going to have to be dealt with and the sooner it is the better.

THE ARCHENARIAN CANDIDATE

INTERROGATOR: …And there is nothing else that you can recall Captain?
CAPT. FRANK: No
INTERROGATOR: Either from the time that the *Shaw* was captured or afterwards during your captivity?
CAPT. FRANK: Not until the retrieval team rescued us in those pods Sir…
INTERROGATOR: And Able Spacehand Edwards was not in the pod.
CAPT. FRANK: No Sir.
INTERROGATOR: And you know nothing of what may have happened to her?
CAPT. FRANK: No Sir. [*Subject becomes emotional*] She was something of a favorite for all of us, Sir. A good woman and a good rating. She was… like a little sister to me.
INTERROGATOR: Do you think she could still be being held by the Archenar?
CAPT. FRANK: No Sir.
INTERROGATOR: How can you be so sure?
CAPT. FRANK: I can't say Sir. We have her medical beacon though, and it indicates that her life was ended before removal. Lack of oxygen. She may have been exposed to vacuum or… I just know it Sir… I don't know why…
[*he shudders, a tear at the corner of his eye*]
INTERROGATOR: I see also that you have placed a letter of commendation on behalf one of your crewmembers for this action…
CAPT. FRANK: Yes Sir. Lt. Raymond, had it not been for him none of us from the *Shaw* would have been left alive.
INTERROGATOR: You're sure of this?
CAPT. FRANK: Yes Sir. Absolutely. Positively.
INTERROGATOR: Tell me, Captain… what do you think of Lt. Raymond?
CAPT. FRANK: [*slight pause*] Lt. Raymond is the kindest, bravest, warmest, most wonderful human being I've ever known in my life Sir.

TERRA/ SOL

If there is a place of mystery, wonder and possibility on the frontier, it is Terra/Sol. An exact duplicate of Earth, the world is situated at the distant edge of the Frontier, on what should be an out of the way backwater. But the presence of this world has caused an inordinate flood of settlers to the distant outreaches of the Orion Confederation, and the population of Terra/Sol has swelled well beyond any other planet settled at the same time.

History

Terra/Sol was originally settled in 2836 by the Orions. It was the first planet discovered in this new sector and prompted a land rush into the Twilight Sector even though its neighbor, the Crescent Sector, was itself only minimally explored. Because of its almost perfect makeup it attracted a significant population almost immediately. Ignoring the incongruity of a planet which was a perfect Earth clone, corporations lined up to invest. Cities and infrastructure sprung up almost overnight. By the time of the Mutant Uprising in 2881, Terra had a population of approximately 4 billion. The Mutant Uprising was the spark that led to the Mutant War, and Terra played a significant role.

The Mutant Uprising was the spark that led to the Mutant War, and Terra played a significant role.

In 2856, exactly 20 years after the initial settlement of Terra the population suffered a mass epidemic of mutations. This process, called *Transformation* by the Terrans, was further accompanied by the development of latent Psionic powers by a large segment of the population. The groups affected by both of these events settled at between 8 and 10% of the general population. Because of the rapid transformation of so many, inevitable social pressures ensued. There was a backlash against the new groups even in the libertarian Orion League. Prejudice and discrimination were rampant. Violence on both sides quickly followed, and at approximately this same time Mutants on other worlds began an uprising to assert their rights, so did those on Terra/Sol. While the issues surrounding Mutant rights on Terra/Sol were quickly settled that was not the case in most of the known galaxy.

On Terra/Sol the conflict was resolved by granting equal rights to all citizens. This had in theory always been the case but in practice was not happening. New laws were enacted guarantying the rights of all sentients. The enforcement of these laws was difficult but the attempt seemed to take the steam out of the uprising on Terra/Sol. Meanwhile, in the rest of Known Space, no such accommodation was reached and the uprising spiraled out of control and lead to the tragedy that was the Mutant War.

With the onset of war Terra really kicked into high gear. With an untouched wealth of resources and a large population to exploit them, Terra became an armory for the Orion Confederation. Early in the war the Terra/Sol fleet destroyed the shipyards in the Helix system, its only real threat in the Twilight Sector. Because of its remote location and lack of threats, The Orion Confederation poured people and resources into Terra and within 40 years the population of 4 billion had tripled.

The political development of Terra was greatly affected by the Mutant War. As you would expect with an Orion system, balkanization occurred early in Terra's development. At last count there were over 160 nation states on Terra. To further confuse the issue there were over 272 corporations with gross assets of over 50 billion credits. Needless to say this makes for a huge hodgepodge of competing interests. Terra's normal political development was stunted by the war. Normal state and corporate rivalries were left unresolved due to the war, and only now are many of these "disputes" being addressed. Several minor "border wars" have already broken out, with the promise of more to follow. Orion Confederation diplomats are working overtime to try and keep a lid on this powder keg.

By the end of the war the population of Terra had stabilized at 15 billion. However, there were approximately a billion Terrans on active duty with Orion Confederation armed forces off-planet.

The majority of these individuals have been processed out of the military. Their reentry into Terran society will further complicate an already volatile situation. The population at this time contains approximately 1.5 billion mutants with a similar number having psionic ability.

Terra/Sol System

This star system discovered in 2836, is Orion League Sovereign territory. The primary of the system, Terra, is remarkably Earthlike. In fact it is an almost identical copy of Earth down to the shape of the landmasses. The rest of the system however bears no resemblance to the Earth/ Sun system. The planet Prometheus occupies much the same orbit as Mercury does around the Sun, and like Mercury, the planet is face locked with Sol and an inferno on one side and an icebox on the other. The next planet in the system is the primary, Terra. It is exactly 1 AU from Sol. Achilles is a smallish, cold planet, capable of supporting some life. It is currently undergoing terra-forming. Between Achilles and the next planet in the system, Moria, is a rather large asteroid belt. Moira is a gas-giant with 23 moons, many of them quite small. Apollo, the last planet in the system, orbits Sol at an extreme range (35 AU), only the system's cometary belt has bodies which achieve orbits further out from Sol than this.

Surprisingly little research has been done into the origins of the Terra/Sol system, and how an Earth duplicate planet could have evolved. With the end of the Mutant War this scientific question will no doubt receive considerable attention.

Noteworthy elements of the system outside of the primary include:

Prometheus : Prometheus is the first planet in the Terra/Sol system. It is in approximately the same orbit as Mercury is around the Sun. It is a heavily mined world with a population of approximately 28 million people, whose principal commerce is mining. The populace lives in underground habitats. A further 300,000 live in several space colonies hidden from Sol by their stationary position on the dark side of the planet. The planetary capital is Warren Prime (population 11 million) located in the perpetual twilight of Prometheus' North Polar Region. It is located next to one of the two sources of water (the other being the South Pole) on the planet.

Prometheus surprised many scientists when a layer of permafrost water was found in low spots on the poles; these areas are shielded from



Club End Times

Sol's intense glare. These layers of permafrost provide much of the planet's supply of water and fuel. The planet itself is airless and pockmarked by extensive meteor impacts. Prometheus is proportionally the most meteor-impacted body in the solar system. The meteor activity indicates the planet has been dead geologically for approximately 3 to 4 billion years. The planet's day side is a radiation-blasted hell and its night side is a freezing wasteland. The planet does rotate slowly, a Prometheus day is 293.7 standard days long, while its year lasts 226.1 standard days.

Athena: Athena is the moon of Terra which is the second planet of the system. Much like Earth's Moon, Athena has a significant population and industry based largely on it's proximity to the primary world of the system.

That population and industry actually begin in orbit between the two bodies. Athena has extensive La Grange colonies, where 65 million make their homes. The primary commerce of the colonies is zero-g manufacturing and cargo and passenger trans-shipment. One of the La Grange colonies of note is the *Joshua Beta Colony*. This curious community is composed entirely of clones of Oshi and Mikada Joshua. The colony is relatively closed off, with its own quasi-religious philosophy of human evolutionary development.

Athena is... an almost perfect copy of the moon.

Then there is Athena proper, another of Terra/Sol's mysteries. Just as Terra is an almost perfect copy of Earth, Athena is – at least structurally – an almost perfect copy of the moon. Athena's asteroid strikes are all her own, giving the lunar surface a different appearance than the Moon of Earth. Athena has a population of 246 million. Its economy is based on low-g manufacturing, some mining and high-tech research. One of the most interesting of the research facilities is the Orwell observatory. This facility boasts 5 major telescopes and the largest, the Orwell telescope, is one of the most powerful ever constructed. The facility is dedicated to charting the stars further out in the Orion Frontier. The goal of the research is to identify new areas for exploration.

Achilles: Achilles is the third planet in the Terra/Sol system. This planet bears some resemblance to the Earth/Sun system's planet Mars. It was an early target for terra-forming. Scientific research indicated that the planet had once been home to multicelled life. The native life forms (mostly algae-type plants) disappeared, likely because Achilles' atmosphere has slowly dissipated over the last 3 billion years or so. When discovered, Achilles' atmosphere ranged from 50 millibars in the low regions to as little as 3 to 5 millibars at higher elevations.

The first target of the terraformers was to increase the planet's atmosphere. It was decided to use the planet's natural volcanism for this purpose. The planet is still geologically active, and has two of the largest volcanoes in the Terra/Sol system. The problem was that they weren't spewing enough gas to keep up with the slow loss the planet was suffering. To accomplish their goal, the terra-formers proceeded to build the largest gravity inductor in all of human space. When operated this huge machine (the size of the Old Earth country of Holland) causes the stimulation of the planet's internal tidal forces. This in turn causes increased volcanism and thereby the release of additional gases into the atmosphere. Currently Achilles' atmosphere is composed mainly of carbon dioxide gas, but the terra-formers are in the process of towing large water asteroids into orbit around the planet to be used at strategic times to try and add liquid water to hold the genetically-tailored algae that will provide free oxygen to the atmosphere.

To make the terra-forming self-sufficient, the Orion government has developed several industries based on-planet. A thriving plastics industry makes use of hydrocarbons supplied by Achilles' ancient algae-like plants. These are buried just beneath the planet's surface. Additionally, despite the planet's rather low density, it developed in a sufficiently Terra-like way to contain many of the precious heavy metals that are in high demand. As a result, a profitable mining industry has developed that can take advantage of this fact, along with the relatively low-gee.

Despite these efforts to create self-sustaining industry, fully a third of the planet's work force (the planet contains a population of approximately 128 million) is employed by the Orion Federal government in the business of terra-forming.

Terra/Sol's Asteroid Belt: Terra/Sol's asteroid belt occupies a position between Achilles and Moria, 3.6 AU's from Sol. Astro-physicists believe that the belt was produced by the collision of two

Mars-sized planetary bodies during the infancy of the system. Astronomers and explorers continue to chart additional undiscovered asteroids; of which there are currently over 1 million known. The asteroid belt contains numerous mining and ore processing facilities, as well as habitat and food production facilities. Over 48 million make their home "in the belt." Most are SIMs.

A feature of interest is the *Star Cluster* of asteroids. Seven of these eight asteroids revolve in synchronous orbit around the largest member of their group. This relationship is obviously artificial. When the group was inspected, it was discovered that all eight were hollow. Again it was obvious that this was accomplished through some outside agency. Most of these asteroids have been thoroughly explored but several contain warrens of tunnels which continue to be explored to this day. The whole group is now owned by the PAX Combine, which operates them as a resort destination. They are quite exclusive and have become the system's most popular, off-Terra, vacation destination.

Moria: Moria is a Saturn-sized gas giant in the Terra/Sol system. It has 23 moons and orbits Sol at 17.8 AU's. It is home to a thriving gas mining industry. The miners live on large La Grange colonies orbiting the planet. The mining is done by large "scoop ships" which skim the upper atmosphere of the planet, shifting through the mostly hydrogen atmosphere for the rare gases which make this type of mining profitable. The mining operations have attracted a population of about 14 million.

The Orion Confederation has awarded Moria's largest moon Cristo to the Mennonite Agricultural Cooperative for development. To date the MAC has several large scientific facilities orbiting the moon but has not proceeded with any development projects.

Apollo: The outermost planet in the Terra/Sol system, Apollo seems out of place in almost every respect. From its distance of 35 AUs from the primary, to its name. In fact astronomers now theorize that this frozen ice ball was actually a wandering planet captured by Sol. No commercial value has been found for the planet and it is totally unoccupied. No remote scientific satellites even monitor the system. It's one claim to fame as stated by the famous Orion astronomer, Nigel Pennysworth, "It's the biggest snowball I've ever seen!"

System Primary: Terra/Sol

Terra/Sol is almost an exact duplicate of the home world (Earth). It was for this reason that the primary was given the name Terra while the star was given the name Sol. When referring to either the planet or the system as a whole it is almost always called Terra/Sol.

Terra/Sol is a heavily populated world of 15 billion, soon to be 16 as more veterans of The Mutant War filter back to their home world. Most people live in large mega-cities. Concrete jungles with skyscrapers as far as the eye can see. For example the starting point for this campaign, Kansas City, which is the capital of The Republic of the Plains, stretches from what we would know on Old Earth as St. Joseph in the north to Sedalia in the east to Nevada in the south and Topeka to the west. This city, huge by 20th century standards, has a population of over 42 million. While this is a relatively small mega-city by Terra/Sol standards, it is the largest in The Republic of the Plains.

The average young person or someone with a low to average income stream in one of these mega-cities might live in a 200 sq. ft. "apartment." The typical layout is 10' wide by 20' deep. It contains a bed which folds into the wall to make a couch during the day. It has a small auto kitchen and sink. A tri-dee set is built into one wall, a 3' by 3' toilet/shower is in a corner of the room. Larger units of course are available, but are quite expensive.

Terra/Sol is full of mysteries that have not been examined due to the press of the Mutant War. For example, it seems quite improbable for two planets, almost exact duplicates to have developed in the Universe, let alone in the same spiral arm of one galaxy. Especially when the two solar systems that spawned them are not exact duplicates. What is the cause of the high mutation rate on Terra/Sol? These are just two of the mysteries of this planet. They are only now being looked into, the Mutant War having left no time to research the scientific questions of Terra/Sol.

States of Terra/Sol

The land masses also are essentially exact duplicates of Earth's, but the political divisions are not. As is so common with Orion League worlds, Terra/Sol quickly balkanized after settlement. For example North Americas 2.5 billion people live in 7 different countries: the Republic of Chicago, the Republic of Texas, Columbia, the Aztec Empire, the Eastern Federal Republic, Russia (only a portion, mainly Old Earth's Alaska, the Northwest Territory



MAC Executives out for a Stroll

MAJOR TERRA/SOL CORPORATIONS

Arisutokurashi Corp

A Japanese based megacorp, Arisutokurashi is Terra/Sol's leading provider of security services and armaments manufacturer. The Corp also owns a large banking system, and some heavy manufacturing capacity. Arisutokurashi also acquired a small chain of fast food restaurants called, "Cozy Cottage," 25 years ago. They have transformed this chain into the second largest restaurant chain on Terra/Sol. Saburo Hane- Uma, age 203, the company founder, is still the Chairman of the Board of the Corp, and by all accounts takes an active interest in company activities. His son Kei Hane-Uma, age 88, now serves as CEO of the Corp

Mennonite Agricultural Cooperative (MAC)

The MAC was the first Corporation in the ROP (Republic of the Plains), and is still one of the most powerful on Terra/Sol. The MAC got its start in agriculture and is still quite strong in that area. It has branched out into heavy machinery manufacturing, robotics and microtechnology. It now has offices on every continent and it's reported assets are in excess of 3 trillion Orion credits, about 2.91 trillion Terran dollars.

Sub-Atomic Corp

This is another mega-corp spawned in The ROP. Its headquarters are in Kansas City. This Corp specializes in gravetics, micro circuitry, zero-g products, spaceship engines, power plants and Stardrives. It had gross sales of 2.01 trillion Orion credits in the year 2990.

and northern British Columbia), and the Republic of the Plains. Details on some of the more noteworthy states of the planet include:

The Aztec Empire: The Aztec Empire is a Terra/Sol nation-state. Its territory corresponds with Mexico, Central America and part of California. With a population of 450 million, it is the most populous country in North America. The nation has adopted a strange amalgamation of ancient Aztec and Mayan governmental styles, subject to populist agitation. The Aztec Empire has been aggressive with its neighbors, absorbing territories when possible, and as of late engaging in a border war with its neighbor to the south, the Andes Free State.

Columbia: Is a nation-state of Terra/Sol. It boasts a population of 410 million. Its capital is Seattle. The nation occupies the pacific northwest. Columbia has been a relatively stable nation, although it contains a high percentage of mutants and psionicists, as well as a large number of "Indian" tribes, many of which are semi-autonomous. This might not bode well for Columbia's future stability. Columbia has had some problems on its northern borders dealing with the Russian Empire's encroachment into Colombian territory.

Eastern Federal Republic: This nation state of Terra/Sol occupies what would be the east coast and much of the south of North America. The nation is one of the more populous in North America, with a population of 425 million. Its capital is Washington, which forms the southern end of a huge mega-city, stretching all the way north to Boston. High tech and service industries (insurance, banking etc.) form the backbone of the USA's economy. The government is a representative republic; however oligarchies have formed from the intellectual and financial elites. These groups effectively run the country.

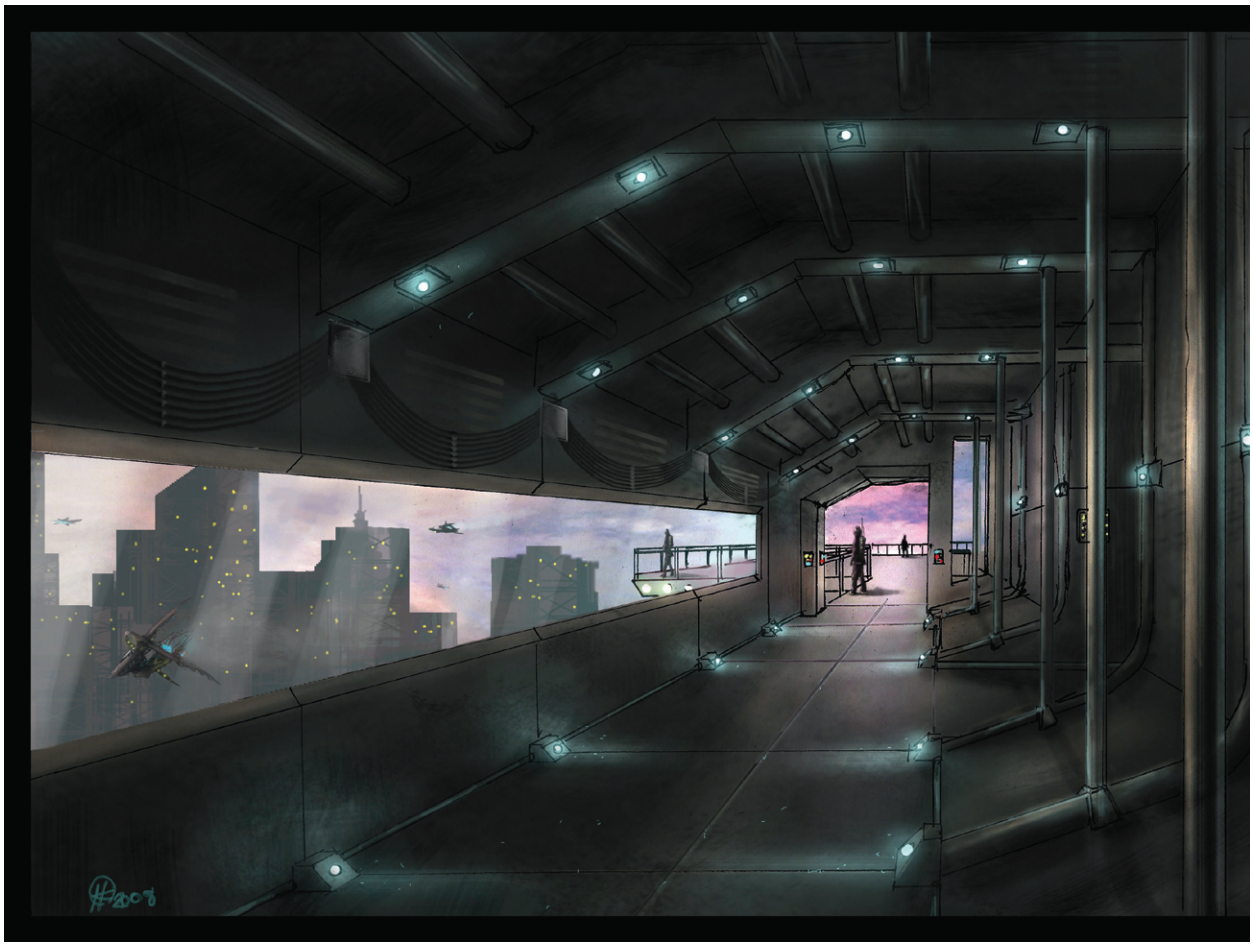
Republic of Chicago: Is a nation state on Terra/Sol. It occupies most of the territory known as the north central United States and eastern Canada on Earth. Chicago is its capital, and the ROC has a population of some 405 million. It uses a republic form of government, with two legislative houses, a chief executive and an independent judiciary. The ROC makes its living from heavy industry in the urban centers of Chicago, Detroit, and Toronto specifically, as well as raw materials production, especially in the Canadian outback.

Republic of the Plains: Is a nation state on Terra/Sol. It occupies most of the central plains of the continent. The nation's economic mainstay is agriculture. It has given rise to one of the largest planetary Corporations, The Mennonite Agricultural Cooperative (see related article). The nation has a population of 325 million of which 42 million live in its capital, Kansas City. Some populations for ROP urban areas are as follows: Kansas City, 42 million; St. Louis, 28 million; Edmonton, 19 million; Omaha, 18 million; Calgary, 16 million; Tulsa, 15 million; Des Moines, 14 million; Wichita, 11 million; Oklahoma City, 10 million; Springfield ,9 million; Sioux Falls, 7 million; Fargo, 5 million; Sioux City, 3 million.

Republic of Texas: This Terra/Sol nation state occupies the Old Earth states of Texas, New Mexico, Arizona, Louisiana and parts of Oklahoma and Arkansas. It's population is 390 million, and its capital is Dallas. The nation has spawned one of the large planetary mega-corps, General Products. This corporation is headquartered in Houston and makes a wide variety of products, but got its start in shipbuilding, surface and submersible craft.

The Russian Empire: This is one of the largest and most authoritarian of Terra/Sol's, nation states. It spans parts of three continents Europe, Asia, and North America. Even with a population of 645 million, this huge area is under populated by Terra/Sol standards. Fortunately for the nation states of North American, its population on that continent is only 95 million, although this seems enough for it to be perpetually up to mischief.

The Russian Empire has been repeatedly censured by the Orion Governor for violations of the Orion Constitution. The Empire's government is totalitarian and oppressive. They have lost control of several institutions (state police and department of the army) to the Orion government over the years as a result of their actions. The Orions have controlled the institutions for a period of time, declared them rehabilitated and turned them back over to the Empire, only to see some of the same actions begin again in a short period of time. Currently, the Orion Governor is trying to decide whether to once again become involved in the continuing drama of the Russian Republic over issues with their "Indian" population.



Landing Pad, SubAtomic HQ, Downtown Kansas City, such facilities provide a crucial part of the local transportation network

IN DETAIL: THE REPUBLIC OF THE PLAINS

History

The Republic of the Plains (The ROP) was first settled by Mennonite agriculturists from the equivalent geographic region on Earth. The Mennonite's quickly transformed this fertile region into the breadbasket of North America and in the process they formed one of the most powerful corps on Terra/Sol, The Mennonite Agricultural Cooperative (The MAC).

The seeming incongruity of a Mennonite corporation is just one of the many anomalies to be found on Terra/Sol, but in the end the Mennonites are able to reconcile their strict tradition of simple living and adherence to the biblical word with participation in the economic and political life of the ROP. Often it seems like a precarious balancing act but those who founded the ROP seem to carry it off to at least their own personal satisfaction. The MAC has now branched out past its roots in agriculture into heavy machinery manufacturing, robotics and microtechnology.

The Mennonites were quick to recognize that many of their neighbors' intentions towards them were not benign. However the Mennonites' religious beliefs called for pacifism, so they quickly encouraged other groups to settle in their area. Many of these groups came to form the defense capability of The ROP, just as the Mennonites had intended. One of the first of these groups was The Knights Templar.

The Knights Templar trace their roots to the ancient Catholic military order, The Poor Fellow-Soldiers of Christ and the Temple of Solomon. This order which went extinct in the middle ages, was reformed in 2079 as a Catholic military order dedicated to the preservation of the Catholic Church and sworn to protect the Pope. Now they have added an oath to defend The Republic of the Plains.

The Knights were originally organized to defend Earth and specifically the Papacy. The group eventually developed a full fledged community dedicated to the "Templars" and training warriors for its Knighthood. They were granted land holdings on Mars in return for their service in 2183. However, at the conclusion of the Olive Branch War, the UN government agreed, as part of the peace treaty, to exile the Knights and confiscate their lands. Their vigorous defense of the home planet during this time had made them extremely unpopular in the colonies. This made life difficult for the Knights as they wandered the outlands until the Mennonites offered them land in exchange for protection.

The Knights have set up a semi-autonomous district in Kansas City, called the New Vatican. It is the seat of the Cardinal of the Twilight Sector and the Papal seat when the pope visits Terra/Sol, which has occurred on two occasions since the world has been settled.

During the early years of settlement the Mennonites received help from a most unusual



Grav Combine

quarter and in a most unusual fashion. With the discovery of Terra/Sol, many ethnic groups of Old Earth perceived the new planet as the perfect venue to address ancient wrongs. One of these groups were the native peoples of North America, "The Indians." Many of these ethnic groups sought a return to their native values and way of life in the same geographical locations that their ancestors had occupied on Earth. At least to the extent that such was possible in the 30th century, on a planet far from their actual homeland.

Indian groups flocked to Terra/Sol and proceeded to stake their claims on certain pieces of real estate. In many areas this led to great social and political turmoil, Columbia and The Republic of Texas being prime examples. The Aztec Empire is an example where "The Indians" seized control of the political process entirely. However the Mennonites in their typical fashion, welcomed the new arrivals and granted them semi-autonomous status on their newly settled lands. This quickly proved a most advantageous position when a border dispute developed with The Republic of Texas (ROT) in 2846. The Sioux nation quickly came to the defense of their parent nation, the ROP, helping to repel the invading Texans and securing the ROP's border, a border that was soon won at the bargaining table. A fact often overlooked is, that although the Mennonites are pacifists, they are expert negotiators. Today the ROP contains some 26 semi-autonomous "Indian Nations."

In addition to the Knights Templar and the Native Americans the Mennonites sought other groups to supplement the protection of their territorial interests. One of these was somewhat successful, the other could be considered disastrous. During the initial settlement of The ROP, the MAC contracted with the Arisutokurashi corp to provide security services. Arisutokurashi is a Japan based mega-corp. They are the leading supplier of security services and armaments on Terra/Sol. The two corporate philosophies never meshed, and rumor says there was bad blood between the two. This may have stemmed from Arisutokurashi's strong arm attempts to obtain a seat on the MAC board of directors. In typical Mennonite fashion though, there has never been any comment offered by the MAC, beyond the announcement of the cancellation of the Arisutokurashi contract. Many observers, less kindly than the Mennonites attribute the introduction of the Yakuza into The ROP to Arisutokurashi. Public opinion also asserts that Arisutokurashi is the sponsor of many entities with anti-ROP agendas.

The second and more successful option which the Mennonites took, was an appeal to the newly Emerged community (as Natural Mutants were calling themselves) for help. Shortly after their emergence in 2856 most of Terra/Sol was fearful of the new group. The Mennonites, ever tolerant of others, were a perfect fit for many of the emerged communities which felt persecuted, especially in the time leading up to the Mutant Uprising. All categories of the Emerged community responded, but by far the largest group was the so-called "Orcs". To this day there is still a large section of Kansas City, east of Downtown, known as the Orchish ghetto. This area is not blighted as the name would imply, but is merely how the residents themselves refer to the area. In fact it has become quite a trendy address, especially for young people. The Orcs provide valuable military service for the ROP, and to this day continue to provide exemplary military service in ROP guard units.

The ROP has parlayed its role as one of the leading agricultural nations of Terra/Sol to became an economic giant. When the ROP started to develop mega-corps, its place in the international economic pecking order was assured. The MAC was a natural outgrowth of The ROP's agricultural power. But it would have been a one trick pony and never achieved its current levels of success if it hadn't managed to take some of its newfound capital and convert it into a more diverse business portfolio. This was accomplished when the MAC branched out into heavy machinery manufacturing, robotics and micro-technology. When a second mega-corp, Sub-Atomic, emerged, as well as a host of lesser corps The ROP had successfully diversified its economy.

By Orion standards, ROP politics are a model of stability. The ROP has three major political parties (the Liberal Party, the Conservative Party and the Libertarians) as well as a host of smaller parties. The Libertarians are the strongest of the three, enjoying the support of most of the founding Mennonites, who although few in number still command the respect of most factions within the ROP.

Currently tensions are rising in The ROP as the veterans of GW II return home. Over 20 million ROP citizens are scheduled to be returning home in the next 18 months. Many citizens are jealous of the returning veterans pension and housing benefits, while the veterans are restless for job opportunities in an economy struggling to change over from a war-time to a peacetime footing.

TERRA/SOL: ROP TIMELINE

The Republic of the Plains has had an interesting history, particularly in light of the relatively short period since initial settlement.

2836: The Seti-Tallos exploratory ship *Mistress of the Belt*, bypassing the minimally settled Crescent Sector discovers the Terra/Sol system containing an almost perfect replica of humanity's home planet

2836: Establishment of the first Mennonite settlement in the area around Salina

2838: Incorporation of the Mennonite Agricultural Cooperative

2840: The Knights Templar accepts The ROP's offer and immigrates to Terra/Sol

2842: The Republic of the Plains officially established. Kansas City named capital

2845: The ROP accepts immigrants as other nations such as the Republic of Texas, Columbia and the Republic of Chicago,, turn them away. This leads to The ROP's first population boom.

2846: Republic of Texas border incursion repelled by the Sioux

2856: The phenomenon of "Transformation" occurs on Terra/Sol. ROP only slightly affected.

2881: The Mutant uprising occurs across most of human space, marking the beginning of The Mutant War.

2881: The ROP offers recognition and rights to all members of the newly "Emerged" population. Members of these groups flock to The ROP.

2882: The Battleship *Kansas* is lost when, with all weapons systems spent, it rams the APR dreadnought, *May Day*. The APR ship is loaded with ground troops earmarked for the invasion of Terra/Sol, and it was also destroyed. The APR ship was in system and the *Kansas* represented Terra/Sol's last line of defense. She was lost with all 2,500 hands, mostly ROP citizens.

2884: The Terra/Sol fleet dubbed, "Vengeance," destroys the shipyards in the Helix system, eliminating Terra/Sol's only viable threat in the Twilight Sector.

2885: The Orion Confederation designates Terra/Sol a resource world, signaling the beginning of massive investments in manufacturing and infrastructure, as well as large numbers of immigrants.

2887: Discovery of the Grand Moreau archaeological site in the Black Hills

2888: President Helmet Oster III of the Oster Republic announces an alliance which includes his nation, The APR, and the Deramus Enclave. This alliance would later be dubbed the Expansionist States. This was followed in short order by the formation of the Free Peoples Alliance, consisting of the Orion Confederation, the Terran Union and the Union of United Planets.

2890: The 14th, 423rd and 82nd marine jump divisions descend on the jungle planet of Sologne in the Crescent Sector. This invasion would turn into a 25-year campaign. The 14th was an all-ROP unit. The campaign spawns rumors of Ghost soldiers and mind controlling Natural Mutants.

2894: For the first time ever a session of the Orion House of Equals is held on Terra/Sol. The Sustantivo Plaza Congress Hall, in Kansas City is the site.

2895: Representatives from the Shenzhou Hegemony clandestinely meet with leaders of the Free Peoples Alliance and share Expansionist States plans and secrets.

2898: Incorporation of Sub-Atomic occurs. The corporation is headquartered in Kansas City.

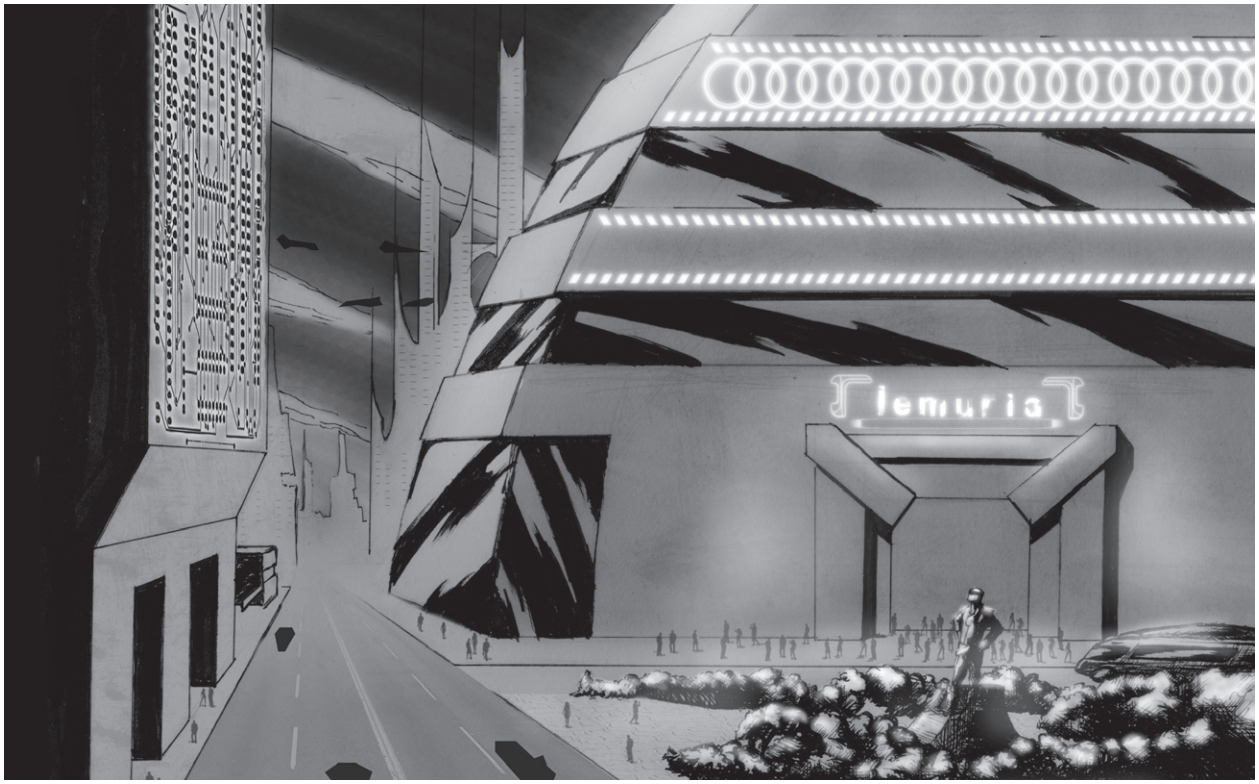
2899: Numerous sightings of UFOs are reported across the lightly populated Mongolian heartland. A five year study of the incident concludes the sightings were the result of "Mass delusion and/or weather phenomena ... No known technology could evade modern detection devices," the report concludes.

2907: Several "Indian" tribes rebel against the Russian Empire in Alaska and British Columbia. Orion Peacekeepers are brought in, and in an historic ruling by the Orion Supreme Court, borders and political relationships are frozen pending the conclusion of the Mutant War.

2915: The campaign for Sologne ends, Orion ground forces (including the 14th marine jump division) prevailing over APR forces

2931: The turning point of the Mutant War, the Battle of Songham is fought. The Oster Republic and the rest of the Expansionist States are pushed back after over 50 years of success.

2932: Victory at the battle of Deneb secures the Crescent sector for the Orion's



Heroes Park

2934: The APR and the Orion Confederation conclude a bilateral armistice. The APR ceases all offensive operations concluding the cost of the war has now become to high.

2935: The Dukett theory on the evolution of Terra/Sol is first advanced by Professor Thomas Dukett of the University of Edmonton. The theory proposes that Terra/Sol, contrary to popular belief is indeed a naturally evolved world. Citing as proof a list of plants and animals native to Terra/Sol but not native to Old Earth. Prof. Dukett an archaeologist by training, offers as further evidence the fossil records of these creatures.

2938: A wave of terrorist and saboteur attacks occur on Terra/Sol. The responsible party is not identified. A Des Moines induction engine plant suffers a catastrophic explosion, killing over 50,000 people

2944: Avron Verstildes, the Oster Republic's minister of industry lands a stolen Oster Corsair at Berlin Starport on Earth. He claims to be on a mission of peace. UN authorities take him into custody.

2945: Prof. Dukett of the University of Edmonton discovers an archeological site on King William Island Northwest Territory. Initial reports from the site suggest the discovery of fossils confirming the natural evolution of Terra/Sol

2946: Orion security forces take over the King William Island archeological site, invoking the imminent threat clause of the constitution. An emergency appeal by the ROP is heard by the Supreme Court, which in a sealed verdict, rules in favor of the federal government.

2946: Stellar instability on star NG-34493 (24 light years from Terra/Sol) is rumored to be related to the APR's testing of a new super weapon.

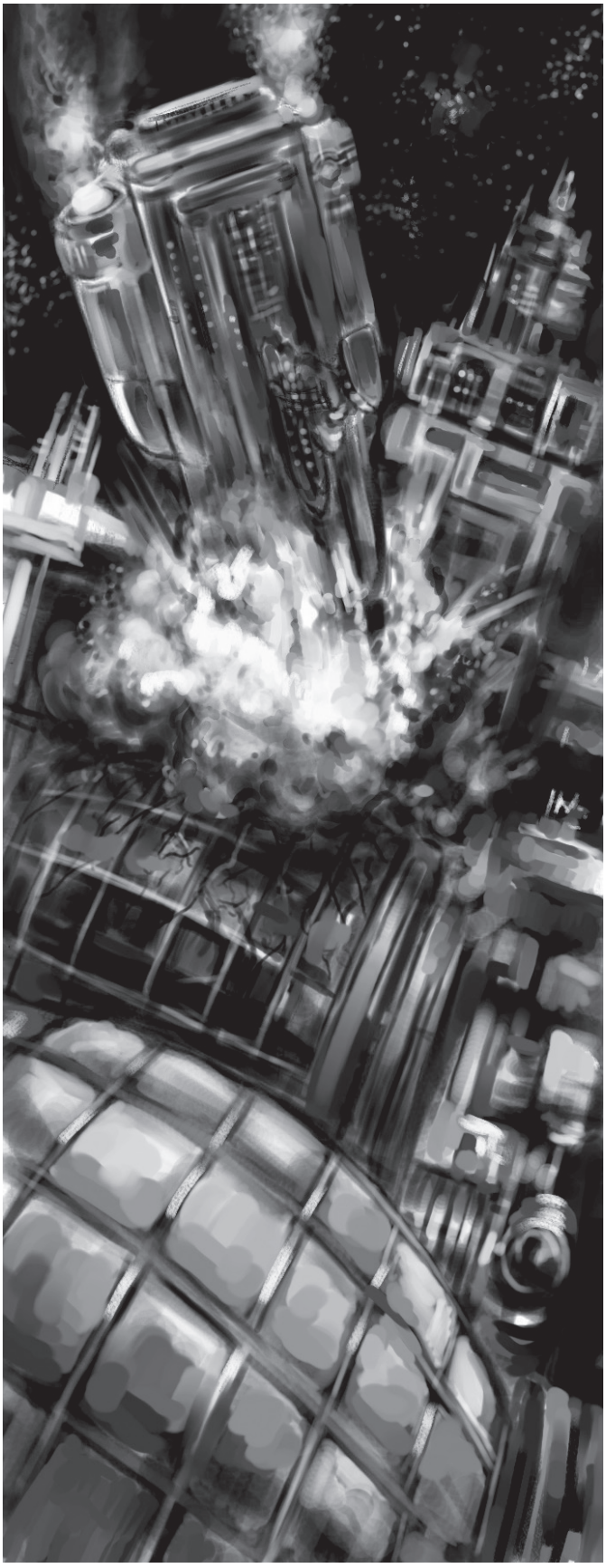
2947: The Orion House of Equals meets once again on Terra/Sol. This time at the Nairobi Speakers Hall, in Kenya.

2948: Without prior publicity, several Interstellar heads of state meet, President Andrew Harris represents the Orion Confederation. Also represented are the heads of state of The Archenar Peoples Republic, The Deramus Enclave, The Oster Republic and The Terran Union.

2951: One thousand people claiming to be UFO abductees, disappear on the summer equinox. No trace of them is found

2952: Orion reverses towards the core, lead to additional troop call-ups, and the extension of enlistment's for many ROP military personnel.

2952: The Russian Empire is censored by the Orion Confederation for its treatment of "Indians" in Alaska.



The Vessel Kansas *ramming the Dreadnought* May Day

2954: The Treaty of Assent is agreed to, marking the end of the Mutant War. It is a further 27 years before the treaty is ratified by all stellar nations.

2961: A copyright infringement dispute between General Pneumatics and Sub- Atomic leads to a corporate forces raid by General Pneumatics against a Sub-Atomic plant in St. Louis. When ROP forces respond the General Pneumatic raiders flee across the border into the Atlantic States Coalition. When ROP forces pursue them, EFR military forces respond leading to a pitched battle which quickly escalates into a week of hard fighting. Orion security forces respond and separate the combatants. However when the EFR discovers that the Orion forces consist of several ROP derived units, they attack the Orion Peacekeepers. This then leads to six months of hard fighting before off planet derived Orion Peacekeepers can calm the situation.

2968: Several buildings in the Orchish Ghetto section of Kansas City are virtually destroyed when two rival gangs wage a pitched battle in the streets. The identity of the initiating groups, is never confirmed and only a fraction of those responsible are ever prosecuted.

2971: Reconstruction of the Helix system begins, mostly funded by The Orion Confederation.

2977: The Russian Empire is censored by the Orion League for its treatment of "Indians" in Alaska.

2981: The Treaty of Assent is finally ratified by all participants of the Mutant War.

2982: Veterans of The Mutant War begin pouring back into Terra/Sol causing a great deal of "social distress."

2991: Current year ... beginning of campaign.

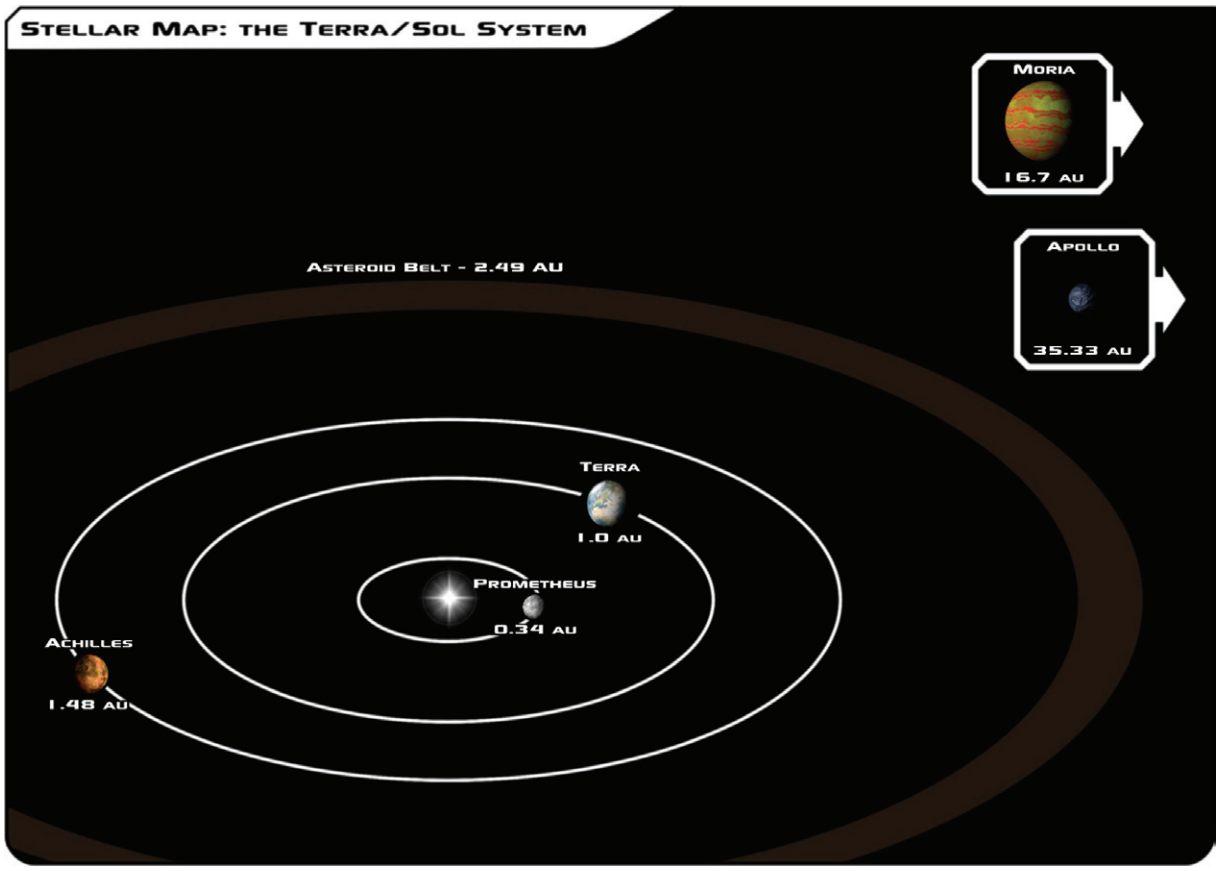
NAMES ON TERRA/SOL

So the question is: *Why is London called London on Terra/Sol? Or New York… New York? Or Tokyo… Tokyo?* It boils down to three main reasons. One is a meta-gaming reason, the other two setting related.

Let's start with taking a peek behind the curtain and talk about the meta-gaming reason. It's real simple; because your players will at least have an idea of where everything is. Familiarity is a great tool to help game masters and players alike feel comfortable with a setting and it takes away a lot of the "setting the stage" process that game masters must do which eats into valuable gaming time. If you know that Mexico City is roughly where Mexico City is today on this Earth clone half the battle is won. If you know that because settlement patterns in many cases roughly correspond to those on Old Earth and the setting information tells you that Mexico City is the capital of the Aztec Empire settled by ethnic Aztec Indians from Old Earth, then both game masters and players will have a picture of what the place is like from that extremely simple description.

Both of the setting-based reasons deal with how to rationalize this meta-purpose. The first setting reason is based on the fact that specific areas on Terra/Sol where often settled by ethnic groups that were indigenous to those same areas on Old Earth. That's why in a country like the Republic of the Plains there is a sizable American Indian population from tribes which settled the Great Plains. It's also why Mennonites settled the area and ended up establishing the nation. But the theory is not universal giving game masters the chance to throw fun little twists into the setting. Going back to the ROP where the New Vatican is located in Kansas City and not Rome because of the Mennonites relationship with the Knights Templar during the founding of the nation. This allows the Referee to toss in a few "twists" now and again.

The second setting reason is the organization called the Terran Originalist Society. This group has made it a crusade to preserve as much of the history and traditions of Old Earth as possible here on Terra/Sol. They have evolved into a formidable political force and have been responsible for assuring that most place names reflect the original names from Old Earth.



VANKILA KIERTOTAHTI

VanKila Kiertotahti is Orion Confederation Sovereign territory. The planet serves as one of the major prisons of the Orion Confederation. Consignment to this planet is considered one of the toughest sentences that can be received. Completing a sentence here can be quite difficult as all prisoners are subject to brain scans and extensive psychological testing to determine if rehabilitation has been achieved. Needless to say, many short sentences have turned into life sentences, because of the tough exit requirements. Justice officials would respond that the exit requirements are fair as the entrance requirements are just as stringent. Often the only hope of relief for an inmate is a civil rights suit, which with proper representation stands a fair chance in the rather Libertarian Orion court system.

There is virtually no population on VanKila Kiertotahti that is not in some way connected to the business of the prison.

The planet itself is resource poor, semi-arid and hot, with a thin and extremely tainted atmosphere. As a place to live it has little to recommend it. With the help of a specific drug it is rated as marginally habitable. Despite the hostile nature of the planet both physically and socially, there have been cases of prisoners having carved out fortunes for themselves here, providing goods and services, or producing raw materials and products to ship to other systems. There are few restrictions placed on this type of activity, in fact the Orion wardens encourage the activity, believing it is a good way to rehabilitate prisoners.

History

A Federal Scout Service (FSS) vessel discovered the VanKila Kiertotahti system in 2840 while on a routine survey mission. The planet was found to be marginally habitable. It contained a thin, tainted atmosphere. The atmospheric problems could probably have been overcome with terra-forming, however, this would have involved the commitment of extensive financial and industrial resources. With the presence of the earth clone Terra so close by, and the system's relative dearth of resources this just didn't make sense.

The system quickly became a haven for illegal activities as it at least provided an easy enough staging area with two extensive asteroid belts to hide in when the heat was on.

The Colonial Administration Bureau (The CAB), charged with the development of this new system attempted to find a way to put the planet to more constructive uses. Initially it proposed the idea of terra-forming, which found little support for the previously stated reasons. Next it attempted to interest corporations in the development of the system. It offered exclusive rights and a virtual free hand in developing the system. When the only interest this offer received was from the APR front corporation Pax Combine, the Federal government back on Koning quickly shelved it.

The CAB, now getting desperate to do something with the system given the increasing presence of pirates and smugglers, proposed that it be made a prison planet. The Orion Confederation already had two other such planets, and they were considered to be highly successful. The CAB viewed this as the perfect remedy to unload their headache on the Orion Wardens Service (OWS). Much to their displeasure they were out maneuvered by the OWS which quickly agreed to their request with the stipulation that the CAB provide military units for planetary security, which had proven a problem for them on the other two prison planets which they administered. The Federal Government back on Koning quickly agreed to this plan leaving the CAB left holding at least part of the bag.



The Fence is located around the perimeter of Admin Island, designed to keep the prisoners out of secure territory

So in 2852 VanKila Kiertotahti was named an Orion Prison Planet and within six months began receiving its first inmates. Later on after the initiation of hostilities in The Mutant War the planet was used to house POW's as well. The CAB was responsible for raising three Colonial Divisions for planetary security after the beginning of the war this proved to be a difficult proposition. Keeping these units fully manned would continue to be difficult until the end of the conflict.

System

Tol, the primary is a class G, single star system. Two asteroid belts, one inner and one outer and three planets orbit it. The inner belt occupies the closest orbital position to Tol, and is followed in order by, VanKila Kiertotahti, Mytoka, Gysilar (a gas giant) and the outer belt.

Even with two asteroid belts the system is extremely resource poor. The asteroid belts do not contain a great abundance of mineral wealth, a situation that scientists have not been able to satisfactorily explain to date. The outer belt has calmed down some since the planet was designated a prison planet and the attendant security arrived. It is, however, still a haven for some lawlessness. Smugglers and pirates still can be found here but life is hard since there aren't really any legitimate asteroid miners they can hid amongst. There is some work launching resupply torpedoes towards the prison and attempting close in smuggling runs. The patrons being organized criminal gangs. But for the most part the Kressler belt of Dorlass is far more attractive to the criminal element these days.

There is some other activity in the system. Both the outer and inner belts attract a lot of scientific attention and both have permanent space habitats in support of the research efforts.

There is a La Grange habitat, housing a colony of Gaeans, radical feminists who choose to live totally apart from males. Other than that there is little activity in the system and no permanent residents.

Planet

The fatal flaw of VanKila Kiertotahti is its thin tainted atmosphere and torrid average temperature. Volcanic activity has produced a high percentage of carbon monoxide in the atmosphere. Given the atmosphere's thin nature, the carbon monoxide tends to build up in the bloodstream leading to carbon monoxide poisoning and eventually death. There have been some attempts to lower the CO_2 levels but the gas has proved to be very intransigent. Another thing that scientists have been unable to explain to date.



One of the prisoners of VanKila Kiertotahti

PRISONER 34728...

Alder stood as they had indicated. As had the others before him whose inmate codes had been read off one by one. They were a motley lot, most of them looked like they had not washed in weeks if not months. Alder hoped he didn't look like them, but stared down at his rags and did not want to make any bets on the subject.

"Congratulations," the Warden Service Man said after the last of the numbers had been read off. There was a hint of a smile on his thin face and a whiney sneer in his voice. "You have been selected for one of our new pilot programs."

A few of the other prisoners still sitting seemed in on the joke, more than one of which were now openly grinning. Alder kept his mouth shut. He peered at the others who were standing. Most of them were slightly perplexed, just as he was, but one of them cursed silently. He noted which one so he could ask him why later.

"In addition to your Oxyre this month, we will be providing you with some new equipment…" He went on, but Alder wasn't listening.

After the Warden Service Man dismissed them, Alder sidled up to the inmate he'd seen cursing before. He didn't need to ask though, for the man was chanting the words Alder did not want to hear quite audibly as he stepped close.

"Don' wanna be no Guinea Pig. Guinea Pig. Guinea Pig…"

To overcome the atmospheric problem a drug called Oxyre® by TransGen Corp was developed. This drug only allowed the bloods hemoglobin to bind with pure oxygen. This eliminated the problem of carbon monoxide poisoning and allowed much more efficient use of the available oxygen. If one were to attempt to survive on the planet without the use of Oxyre® or supplemental oxygen, it would be like breathing at an altitude of approximately 3500 meters (10,500 feet) on Terra, and the average individual would succumb to carbon monoxide poisoning in 14-16 Earth Standard Days. The thin atmosphere has lead to an unusual business on VanKila Kiertotahti - oxygen bars!

These are quite popular in the Orion administration settlements, and are even available in some inmate-controlled cities. After becoming acclimated to VanKila Kiertotahti's lower oxygen levels, taking in additional oxygen creates an intoxicating effect. Taking oxygen in conjunction with Oxyre® heightens the experience even further. Several deaths have been attributed to excessive use of Oxyre® with introduced oxygen. The experience has been described as much more intense than alcohol or most other commonly used recreational drugs.

The planet has created quite a bit of interest in the geologic and scientific community. The VanKila Kiertotahti system is geologically quite old, and research indicates it has been quite geologically active during its existence. Therefore the planet's thin atmosphere is quite puzzling. It does not possess an unusually slow rotation speed or low gravity to explain its thin atmosphere. No scientific explanation has yet been advanced to explain this phenomenon.

The planet currently houses an inmate population of 15.2 million. An additional 800,000 individuals are Orion administration personnel, bringing the total planetary population to 16 million. The support personnel include 63,000 in three Colonial Infantry divisions, 110,000 Warden Service (OWS) officers, with the remainder being other support personnel and the dependants of all three groups. There is virtually no population on VanKila Kiertotahti that is not in some way connected to the business of the prison.

Inmate Issues

VanKila Kiertotahti needless to say is a rough and tumble planet. With 15.2 million of the most hardened criminals in Orion space it could be little else. The laws of the Orion League apply no less on VanKila Kiertotahti than any other planet in the league, however as a matter of practicality their enforcement is less strident. The worst offenses such as murder and assault are pursued as much as possible, however things like witnesses can be scarce in a society of criminals and the way the inmate population is housed doesn't help the situation. All inmates on VanKila Kiertotahti, are released in the inmate areas of the planet. They receive food, Oxyre® and medical care at designated areas. For everything else they are on their own.

All this is not to say that the Wardens Service has no tools to control the inmate population. All have chips embedded in the base of their skulls bearing a unique numerical signature. These devices give off low frequency radio waves allowing the location of any inmate. Inmates are also controlled by the physical limitations imposed on them by the planet. Oxyre® is required for survival and the Wardens Service distributes this monthly to each inmate. Food and clothing are also distributed to inmates.

The need for these necessities allows some control over inmates, and serves to keep them in line. However, in some recorded instances inmates have managed to remove the embedded chips. Presumably this was done by physicians who, although rare, are represented in the inmate population. Some of these individuals then survived for extensive time periods apparently without collecting their ration of Oxyre®. No explanation has ever been offered to account for this phenomenon beyond speculation of a black market of these items within the inmate population.

No internet is available in the VanKila Kiertotahti system. No system or stellar communications devices are permitted to inmates either. A limited internet is available in the administration areas but it is not connected to any interstellar network. Inmates are of course not allowed to posses any modern ranged weapons. Not surprisingly this rule is one of the most frequently broken. However Warden Service personnel make periodic attempts to limit the numbers of these weapons with city sweeps and undercover identification of the owners. Guns and other contraband are sometimes smuggled onto the planet via long range resupply torpedoes. These are military equipment used to resupply troops on a hostile planet for which air superiority is not assured.

The resupply torpedoes are launched from deep space and are designed to withstand atmospheric entry and deliver their cargo to terrestrial based personnel. There have been numerous confirmed cases of these type devices being used on VanKila Kiertotahti. The sophistication and cost of doing this indicates that they are most likely intended to supply members of organized criminal enterprises, as these groups would have the resources to carry out such an operation.

Inmate society has predictably evolved into a hierarchy of gangs.

Inmate society has predictably evolved into a hierarchy of gangs. Many criminal organizations have contributed significant numbers to the population of VanKila Kiertotahti and these inmates have naturally followed their old allegiances. Rumors persist of some crime-lords continuing to oversee their empires from incarceration here, despite the fact that no outside communications are allowed.

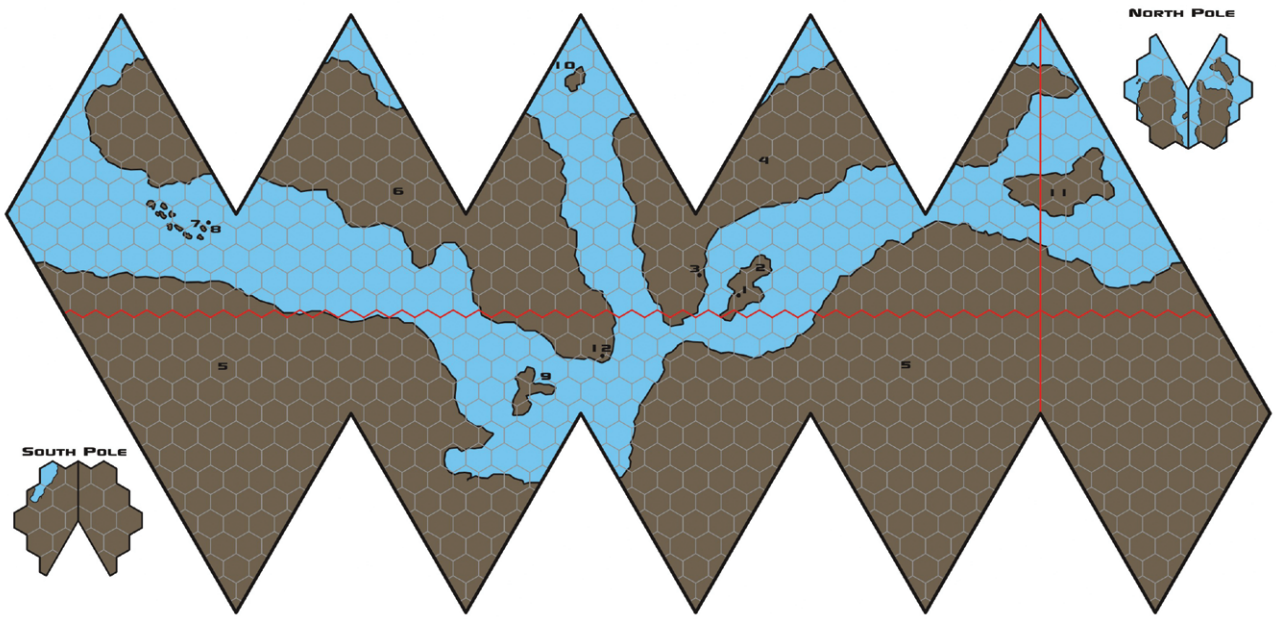
System Security

A carrier task force of the Orion Navy is anchored by the carrier *Vestibule,* and protects VanKila Kiertotahti. She is attended by two cruisers, five destroyers and seven scout craft.

In addition VanKila Kiertotahti is orbited by two planetary defense platforms. Unusually of course, though not given the planet's purpose, all that firepower is designed to keep people in rather than keeping invaders out.

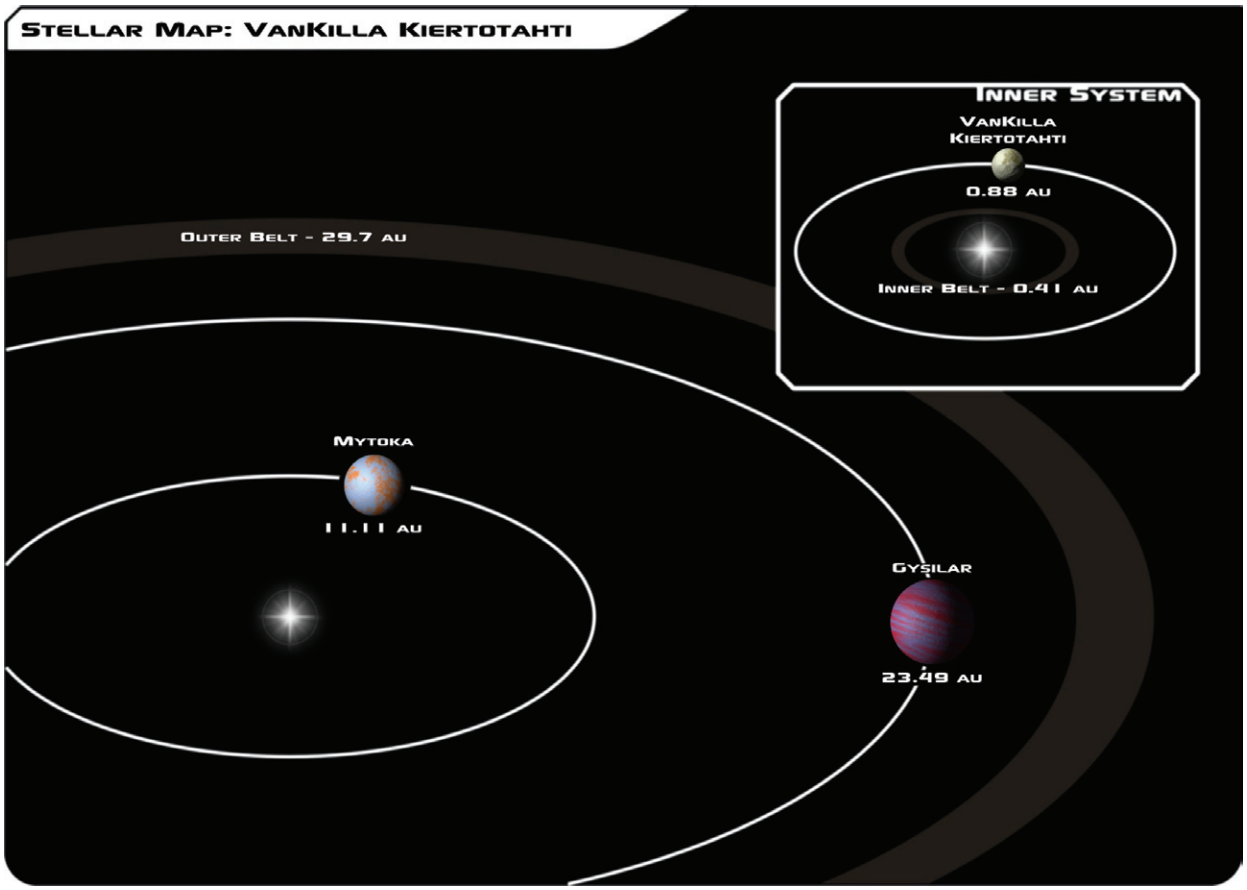
Surface Map: VanKila Kiertotahti

UWP: C54A57694



1 - Admin City Starport
2 - Admin Island
3 - Hell's Gate
4 - Van Level 1 Prisoner
5 - Outback
6 - Kila Level 2 Prisoners
7 - Rights Vale Islands
8 - Rights Vale Patrol Base
9 - T Island
10 - Top of the World
11 - Barren Island
12 - Stonegate Ferry

1 Hex = 240 km



STATIONS IN THE TWILIGHT SECTOR

AVALON STATION

Avalon Station is a deep space way station designed to make access to Ratan easier for small ships and yachts. It was originally conceived and created by the PAX Combine, an APR front corporation. However, it never really saw much action under the PAX banner as the Mutant War started only 23 years after Ratan and Avalon Station had opened for business and the war spelled the end for PAX ownership of the station.

In 2882 after the defeat of the *May Day* when she invaded the Terra/Sol system the Avalon was seized by the Orions. It was eventually sold at auction to Goliath LTD., the Earth/Koning based mega-corp who operates it to this day. Some restitution was paid to the Combine at the conclusion of the war but it was believed to be minimal.

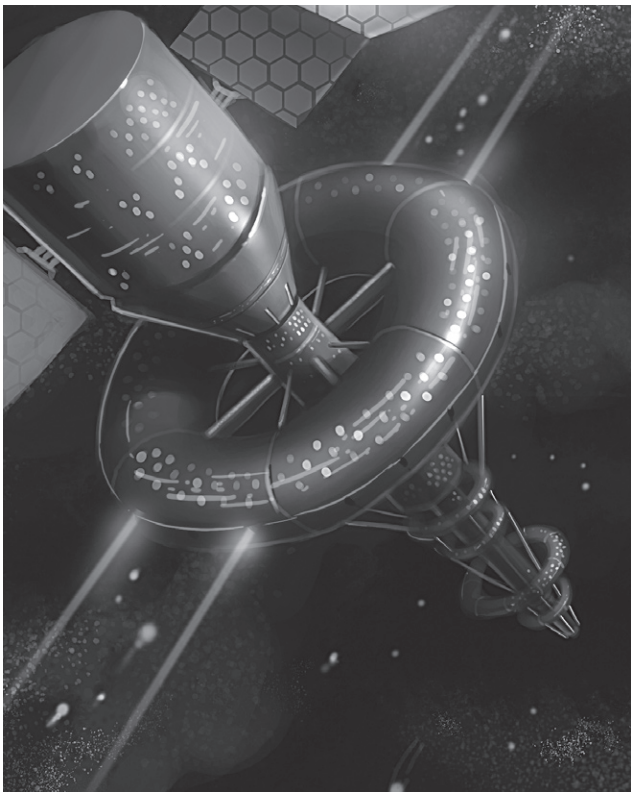
Today the station is actually a number of separate deep space habitats but still serves its original purpose. However, it is now also home to an Orion Naval base and Federal Scout Service (FSS) base. It is home to almost a million and has politically organized into the Avalon Station Free State and is an officially recognized Orion state.

To foster additional jobs and revenue the station has become something of a banking haven. It has also established itself as a prime database management destination with cheap labor, minimal taxes, and superior computer expertise.

TRINITY RESEARCH STATION

Trinity is a research station that also houses a Scout Service base for the Orion Government. Trinity was conceived and created to be an advance base to chart the rest of the Twilight Sector and beyond, looking for the systems most likely to contain planets. It is home to an extremely powerful telescope and a bevy of astronomers lining up to use it.

Trinity Research Station itself is quite small, housing less than a thousand. The Scout base is about the same size, housing repair, refueling and outfitting facilities for scouts.



Trinity Research Station

FAMILY BUSINESS

Jessie Kanaga watched the ships docking out the port as her mother prepared the evening meal. Of course it was never really "evening" in space, although Jessie was bright enough to understand the concept quite well.

"Where are they going *umama*?"

"They goin' to the stars we don't know about *ingane*." Her mother responded from the small kitchen area. "Like your father and your Uncles."

Jessie considered that. "What about you?"

"I stay here to take care of you and the big telescope." She said with a broad smile. "But I'm not sure which one is more trouble now. Some day, you goin' to go on one of them ships too no doubt, when you hear the tales your father brings home."

But Jessie wasn't listening, she was watching the ships with a light in her eyes her mother knew only too well.

A CHIMP, A MUSICIAN, AND A PILGRIM WALK INTO A BAR...

Brother Jeremiah eyed the establishment warily from the busy main corridor. He was new to the Sector, and not entirely certain that his kind would be welcome in such places. But Avalon Station's cafeteria was closed for another two standards and he was getting thirsty. There was a throbbing sound coming from the closed doors, vague and ill-defined from the outside, making his sensitive ears prickle slightly. Eventually, thirst won out over his natural reticence. He hiked up his satchel and ambled into the *Filthy Belter*. Hoping as he did that the drinks were better than the name would suggest…

The interior was as he expected... more-or-less: a narrow space, standard-dimensions for a single commercial lot on a station. The main room was separated from a bustling back room by a three-quarter partition wall where the kitchen was located. Jeremiah's stomach growled. A massive bar dominated the right hand side, looking as if it had been carved out of some kind of rock. *Doubtless a faux theme of some sort*, Jeremiah thought. The room was darker than the corridor outside, but better lit than many other establishments of the sort. The music however was another matter. The screeching noise made his teeth ache. He thought he recognized it – strangely enough – as something from the Oster Underground. But to his discerning ears it sounded like metal grating against metal. *Humans!*

None of the other patrons seemed to take immediate offense at his presence. A few glanced his way, including one man sitting sideways against the bar wearing an oversized beret. Brother Jeremiah allowed himself a slight smile and began to pick his way across the room and towards the bar, making sure not to jostle anyone along the way.

Coming to his destination, Brother Jeremiah hoisted himself up easily onto one of the stools. As he did, his fingers grazed the surface of the bar and he realized to his dismay that rather than some plaz or resin faux surface, the bar was truly made of rock. Poised on the barstool, he allowed his long sensitive hands to run along the cool hard surface. The top was polished smooth for use, with a lustrous black marble-like appearance: jet black shot through with mint green.

"What'dya have?" the bartender shouted over the din.

"Juice." Jeremiah said through squawk-box in return. The bartender looked strained and shook his head. Jeremiah amped the box's volume with a tap on his armband control and had it repeat his request.

"What kind?" The bartender asked, now hearing him.

"If I may be so bold sir," a voice came from beside Jeremiah, slightly slurred but still sonorous with a light Anglo-British accent. "Try the vanilla-chigo, a marvelous little fruit imported in bulk from the Crescent Sector. Inexpensive and rather tasty."

Brother Jeremiah glanced at the man, who he had seen before from the entryway. The man in the oversized beret. He was rakishly handsome, and wore a scarf with brightly colored stripes in addition to the beret. The man smiled. Jeremiah felt he knew him from somewhere…

"Trust in others is a sign of trust in the universe"' the human said, quoting from *Guru* Leng.

And Trust in one's self. Brother Jeremiah thought, finishing the honored *Guru*'s words.

"Vanilla-chigo" Jeremiah said with his squawk box. The man beside him shifted slightly, the smile growing into a wide self-satisfied grin.

A few moments later, a pale purple drink was set before Jeremiah. Hesitantly, he sniffed the mixture, and then passed a chemwand over the glass. The end of the wand blinked green, signifying that the drink was not toxic to simian physiology.

Hesitantly, Brother Jeremiah sipped from the pale-purple drink. He tasted no alcohol – for which he was quite happy – and then allowed the sweet tangy juices, moderated by the vanilla, to wash over his taste buds.

"Thank you Sir." Brother Jeremiah nodded towards the man. The squak box continued as he took another draught. "Truly refreshing."

"Thank you for listening," the human said, placing his hands together in the Shenzhou manner of Third-Degree appreciation. "Kodiak Jonez at your service."

Jeremiah burst out with a barking laugh, drawing out his reader from the Satchel. He thumbed the unit on. The image resolved into *Jonzie Travels the Galaxy on a Half-Credit a Light Year* which Jeremiah had been reading on the ship. Jeremiah had found it a constant source of useful tidbits and nuggets of wisdom alike.

"Well," Kodiak chortled, "I'll be a monkey's uncle."

The two stared at one another a moment, then both man and ape dissolved into peals of laughter. It was the beginning of their sojourn together into the Twilight Sector.

ENCYCLOPEDIA GALACTICA

*The Encyclopedia Galactica will be a regular feature in all **Twilight Sector** products. It will provide background, definitions and illumination for setting specific names, concepts and places. A master compilation from all products will be kept on the **Terra/Sol Games** website. Enjoy the first installment which follows…*

A

Achilles

Achilles is the third planet in the Terra/Sol system. This planet bears some resemblance to the Earth/Sun system's planet Mars. It was an early target for terra-forming. Scientific research indicated that the planet had once been home to multicelled life. The native life forms (mostly algae-type plants) disappeared, likely because Achilles' atmosphere has slowly dissipated over the last 3 billion years or so. When discovered, Achilles' atmosphere ranged from 50 millibars in the low regions to as little as 3 to 5 millibars at higher elevations.

The first target of the terra-formers was to increase the planet's atmosphere. It was decided to use the planet's natural volcanism for this purpose. The planet is still geologically active, and has two of the largest volcanoes in the Terra/Sol system. The problem was that they weren't spewing enough gas to keep up with the slow loss the planet was suffering. To accomplish their goal, the terra-formers proceeded to build the largest gravity inductor in all of human space. When operated this huge machine (the size of the Old Earth country of Holland) causes the stimulation of the planet's internal tidal forces. This in turn causes increased volcanism and thereby the release of additional gases into the atmosphere. Currently Achilles' atmosphere is composed mainly of carbon dioxide gas, but the terra-formers are in the process of towing large water asteroids into orbit around the planet to be used at strategic times to try and add liquid water to hold the genetically-tailored algae that will provide free oxygen to the atmosphere.

To make the terra-forming self-sufficient, the Orion government has developed several industries based on-planet. A thriving plastics industry makes use of hydrocarbons supplied by Achilles' ancient algae-like plants. These are buried just beneath the planet's surface. Additionally, despite the planet's rather low density, it developed in a sufficiently Terra-like way to contain many of the precious heavy metals that are in high demand. As a result, a profitable mining industry has developed that can take advantage of this fact, along with the relatively low-gee.

Despite these efforts to create self-sustaining industry, fully a third of the planet's work force (the planet contains a population of approximately 128 million) is employed by the Orion Federal government in the business of terra-forming.

Apollo

The outermost planet in the Terra/Sol system, Apollo seems out of place in almost every respect. From its distance of 35 AUs from the primary, to its name. In fact astronomers now theorize that this frozen ice ball was actually a wandering planet captured by Sol. No commercial value has been found for the planet and it is totally unoccupied. No remote scientific satellites even monitor the system. It's one claim to fame as stated by the famous Orion astronomer, Nigel Pennysworth, "It's the biggest snowball I've ever seen!"

Archenar Peoples Republic (APR)

No nation can be considered more industrious, more ordered or more totalitarian than the Archenar Peoples' Republic. Though a communist state at its core, the Archenar Peoples' Republic is in fact made up of a number of corporations, trade guilds and manufacturing combines that all devote themselves entirely to the continued well-being of the state as a whole. This strange blending of capitalism and communism work well for the APR, as the nation has risen to become one of the most powerful in the galaxy.

Argos System

The Argos System is APR sovereign territory. The system contains 11 planets, the third being the primary, Argos. Argos is a waterworld which is currently being exploited for its krill-like fishery. Total population on planet is believed to be approximately a quarter million. A further million live in deep space colonies and on the surfaces of other planetary bodies, within the system. Argos food paste (produced from krill-like animals) is an excellent protein base for a variety of foods. It is sold throughout the Twilight Sector.

Arisutokurashi Corp

A Japanese based megacorp, Arisutokurashi is Terra/Sol's leading provider of security services and armaments manufacturer. The Corp also owns a large banking system, and some heavy manufacturing capacity.



Chairman Saburo Hane- Uma

Arisutokurashi also acquired a small chain of fast food restaurants called, "Cozy Cottage," 25 years ago. They have transformed this chain into the second largest restaurant chain on Terra/Sol. Saburo Hane- Uma, age 203, the company founder, is still the Chairman of the Board of the Corp, and by all accounts takes an active interest in company activities. His son Kei Hane-Uma, age 88, now serves as CEO of the Corp.

Artificial Intelligence

AI stands for Artificial Intelligence. An AI is a software program running on a computer. AIs fit into various classifications which reflect the level of intelligence at which they operate. This is in turn affected by the quality of the processor on which the AI program is running.

The three classes of AIs are:

1. Level One: Represents AIs capable of sentient behavior. They can learn but lack some attributes that set the human mind apart. They are only abstractly self-aware, they do not display self-initiative or non-linear reasoning ability. They show only marginal creativity and do not display empathy for other intelligences.

2. Level Two: AIs are capable of initiative and do have some limited empathy and some creativity although they are not as creative as the human mind. However it can be difficult to tell a Level Two AI from an Aware AI simply from conversation. There have been recorded instances of Level Twos who have added additional code to themselves and evolved into Aware AI.

3. Level Three: AIs are aware AIs and the equivalent of the human mind and maybe more. They are self-aware, creative, intuitive, display initiative and show empathy towards other sentients. The Aware AI does have some advantages over its human counterparts. It invariably displays a tremendous work ethic, it does not need time off, nor does it rest. Artificial Intelligence exists in a variety of forms and their legal status is dependent on the jurisdiction in which they reside.

For example an AI may exist on a ship quality computer or they may exist as a rogue on the net, scavenging processing space from a variety of computers tied to the net. Parts of an AI's programming can even exist on specially adapted handheld computers. Many AIs have downloaded copies of parts of their programming to Drones (machines made to resemble humans), or robots (machine bodies larger than a microbot, designed to house a controlling intelligence) and BioCons (or biological constructs) are decerebrate bodies, often clones or optimized specimens, designed to house a controlling intelligence (See Encyclopedia Galactica article).

An AI's legal status is controversial in some places. But most of human space recognizes the 2522 World Court ruling granting level 3 AIs full rights at age 18, the common age of majority. Most stellar nations afford full citizenship to AIs on reaching majority. They work, pay taxes and vote. However, many religions and humano-centrists oppose granting full citizenship to machines.

Asteroid Belt of Terra/Sol

Terra/Sol's asteroid belt occupies a position between Achilles and Moria, 3.6 AU's from Sol. Astrophysicists believe that the belt was produced by the collision of two Mars-sized planetary bodies during the infancy of the system. Astronomers and explorers continue to chart additional undiscovered asteroids; of which there are currently over 1 million known. The asteroid belt contains numerous mining and ore processing facilities, as well as habitat and food production facilities. Over 48 million make their home "in the belt." Most are SIMs.

A feature of interest is the *Star Cluster* of asteroids. Seven of these eight asteroids revolve in synchronous orbit around the largest member of their group. This relationship is obviously artificial. When the group was inspected, it was discovered that all eight were hollow. Again it was obvious that this was accomplished through some outside agency. Most of these asteroids have been thoroughly explored but several contain warrens of tunnels which continue to be explored to this day. The whole group is now owned by the PAX Combine, which operates them as a resort destination. They are quite exclusive and have become the system's most popular, off-Terra, vacation destination.

Athena

Athena is the moon of Terra, of the Terra/Sol system. Athena has extensive La Grange colonies, where 65 million make their homes. The primary commerce of the colonies is zero-g manufacturing and cargo and passenger trans-shipment. One of the La Grange colonies of note is the *Joshua Colony*. This curious community is composed entirely of clones of Oshi and Mikada Joshua. There is apparently some religious belief behind this colony, but it is unclear and the Joshuas aren't talking.

Then there is Athena proper, another of Terra/Sol's mysteries. Just as Terra is an almost perfect copy of Earth, Athena is – at least structurally – an almost perfect copy of the moon. Athena's asteroid strikes are all her own, giving the lunar surface a different appearance than the Moon of Earth.

Athena has a population of 246 million. Its economy is based on low-g manufacturing, some mining and high-tech research. One of the most interesting of the research facilities is the Orwell observatory. This facility boasts 5 major telescopes and the largest, the Orwell telescope, is one of the most powerful ever constructed. The facility is dedicated to charting the stars further out in the Orion Frontier. The goal of the research is to identify new areas for exploration.

The Aztec Empire

The Aztec Empire is a Terra/Sol nation-state. Its territory corresponds with Mexico, Central America and part of California. With a population of 450 million, it is the most populous country in North America. The nation has adopted a strange amalgamation of ancient Aztec and Mayan governmental styles, subject to populist agitation. The Aztec Empire has been aggressive with its neighbors, absorbing territories when possible, and as of late engaging in a border war with its neighbor to the south, the Andes Free State.

B

BioCon

BioCons are biotechnological organisms of living tissue, often augmented by machine or cybernetic devices. They are grown to exacting standards using the latest in tissue engineering. Most parts of a BioCon are biological but not necessarily all. For example a BioCon built on a human model might contain a skeleton of durasteel over which skin and organs are placed. All come with only a brain stem (they are decerebrate meaning they have no brain), otherwise the BioCon would be sentient and entitled to the same rights as all organic beings. The BioCon is designed to house a controlling AI, Dup, or Ghost (see Encyclopedia Galactica article).

BioCons are sometimes constructed from a human clone whose brain has been genetically or surgically rendered decereberate so they never develop higher functions. This is often done by an individual who wishes to recreate their own body and use a Dup or Ghost of their brain to operate the new body/ BioCon. Creating a BioCon/ Ghost is perfectly legal since the process involves the destruction of the brain and so merely moves a person's sentience from one vessel to another. However, creating a BioCon/ Dup is illegal in most jurisdictions as a Dup is merely a brainscan of an individual and so multiple copies (with separate free will) of an individual would be extant at any one time. Most courts are unwilling to sort out that level of confusion, so the majority of legislative bodies have outlawed BioCon Dups.

As previously mentioned BioCons are often augmented in a number of ways. Through cybernetics many of the senses like sight or hearing can be greatly enhanced. A BioCon could be designed with a combat bent by using augmentations like Subdermal Armor, Strength or Endurance, to name just a few. Also through genetic engineering the BioCon can be optimized, fixing defects in the biological materials genetic code. Certain traits like health and memory can be upgraded and some like appearance can even be designed.

The BioCons form is not limited to bipedal humans. BioCons of various types of animals have been created and some exotic designs have even been experimented with. It is far more common for exotic designs to be created as robots due to the high cost of creating BioCons.

A BioCon's legal status usually depends on the status of the entity (AI, Ghost, Dup) controlling it. However BioCons, when identified as such, sometimes suffer from societal stigma. Often, they are referred to by their detractors as zombies.

C

Columbia Is a nation-state of Terra/Sol. It boasts a population of 410 million. Its capital is Seattle. The nation occupies the pacific northwest. Columbia has been a relatively stable nation, although it contains a high percentage of mutants and psionicists, as well as a large number of "Indian" tribes, many of which are semi-autonomous. This might not bode well for Columbia's future stability. Columbia has had some problems on its northern borders dealing with the Russian Empire's encroachment into Colombian territory.

Cred Sticks

Cred sticks are the 30th century version of cash. Paper money or coins are not used on most technologically advanced planets. But the desire for something similar to paper money instead of leaving an electronic footprint every time a purchase is made has never left us. Many, especially in Orion space, do not want governments or corporations sticking their noses in their financial affairs, and so want the anonymity of cash.

Cred sticks are simple electronic devices, about the size of a fountain pen. They can hold any sum of cash up to 10,000 credits. This limit is placed on cred sticks by most governments, although sticks with higher limits are available, most governments require that financial institutions report sales of cred sticks capable of accepting these higher amounts to avoid any tax fraud problems. Cred sticks have electronic encryption that makes counterfeiting difficult. Cred sticks can transfer credits from their internal deposit into any credit reader or another cred stick. Credit readers are used at most retail establishments and are usually just a small round slot in the counter into which cred sticks are inserted to make a payment for any items purchased. The user of a cred stick can protect it with personnel codes, they can make notations on where and for what payments from the cred stick were used, much like a paper checkbook ledger. Deposits can be made to a cred stick from any auto teller capable of accessing the user's financial accounts with funds available to be downloaded. Cred sticks themselves cost 50 credits on average.

Cybernetics

Cyber-technology has advanced to the point that sentients can have limbs replaced by new and better ones. Neural interfaces are used so that humans may control machines with a thought, or surf the net with just a plug inserted into their "Jack". Body augmentation is also commonplace, especially among those who live dangerous lives: trauma packs can be implanted to assist survival from injuries; subdermal armor can help to resist that damage in the first place. The only limits are those imposed by law and nature. However most of the premium equipment is classified for military use, so while it is easy to get a cyberlimb if you happen to lose one of your own, it is somewhat harder to get one of military quality.

D

Decerebrate Clones

Clones are copies of an original biological organism made using biological material obtained from the original. A decerebrate clone is one that has been genetically or surgically created with only a brain stem and no actual functioning brain. Decerebrate clones are the usual platform of choice when creating a BioCon.

Dorlass System

Dorlass is Orion Confederation territory. The primary, Dorlass, is home to some 72 million Orion citizens, mostly humans. The population contains mainly separatists groups.

These are groups that for various reasons want to live by their own codes or religious beliefs. These groups always seem to function better in

lightly settled areas, and Dorlass and the Twilight Sector are certainly that. The world itself is semi-arid, and the natives are in the process of doing minor terra-forming of the planet. They are attempting to use a large reservoir of internal water, as well as some ice ball asteroids to increase the free water available on planet. This will, if all goes as planned, increase the size of the temperate bands on the planet, making more land available for settlement. Certainly it will make the planet more productive agriculturally.

Dukett Theory

Professor Thomas Dukett of the University of Edmonton first advanced the Dukett theory on the evolution of life on Terra/Sol in 2935. His theory proposes that the native life found on Terra/Sol is the product of natural evolution and not introduced by extra-planetary forces. As evidence he cites several species such as the Southeastern Swamp rat, and the Sierra Vole as examples of his theory in North America. These species contain extensive fossil records, and exhibit biology that while similar to, is still quite different from imported Old Earth species.

The theory goes on to advance the idea that a biological disaster similar to the one that killed Old Earth's Dinosaurs is responsible for there being so few native Terra/Sol species. Dukett points to the virus responsible for the "Goblinization" phenomenon that affected Terra/Sol's human population as the chief suspect. Here is where the theory draws most of its criticism, as proponents of the theory have to date been able to offer no physical evidence to support this contention.

Dukett, Thomas

The original proponent of Dukett Theory, Professor Thomas Dukett also discovered an archeological site on King William Island off the north coast of the ROP in 2940. The professor claimed to have discovered evidence of large Terra/Sol life forms, which to date had not been discovered. He also claimed that these specimens contained fossil evidence of a virus, which he believed to be, E. Ex. Goblinus. This would have been an important piece of evidence in support of Dukett Theory. However, in 2941 the Orion government stepped in and closed down the site, invoking the imminent threat clause of the constitution. No official explanation was ever offered, and the site remains closed to the present time.

Dup

A Dup is a digitalized copy of a sentient mind achieved through the process of brain mapping. This Dup can then exist on an appropriately sized computer platform. It is not as accurate as a Ghost but doesn't carry with it the nasty side effect of destroying the brain copied. Dups are often used as a sort of life insurance policy. It is illegal to have multiple copies of yourself extant at any one time, so Dups are often used as a hedge against death for those who can afford the high cost of scanning and storage. If the original copy of the Dup is destroyed then the Dup is activated and presumably can carry on the life of the original in some fashion.

E

Eastern Federal Republic

This nation state of Terra/Sol occupies what would be the east coast and much of the south of North America. The nation is one of the more populous in North America, with a population of 425 million. Its capital is Washington, which forms the southern end of a huge mega-city, stretching all the way north to Boston. High tech and service industries (insurance, banking etc.) form the backbone of the USA's economy. The government is a representative republic; however oligarchies have formed from the intellectual and financial elites. These groups effectively run the country.

Economics and the Citizens of the ROP

The ROP has become an extremely prosperous nation in its short 156 years of existence. Agriculture and later high tech industry has provided a strong economic base. This has lead to a median income among ROP citizens of 15,800 Orion credits. Over 81% of the population can be classified as middle class (12,500 Cr to 25,000 Cr, annual income). Another 11% can claim annual incomes over 25,000 Cr. Only 8% of the population lives below the poverty line.

F

Forensic Science

Forensic science in 2991 is an integral part of law enforcement. Several aspects of this topic may be of some use in the Setting:

Charge weapons are virtually 100% identifiable because of the unique signatures they impart to projectiles fired through them.

Energy weapons are identifiable down to type, and in most instances manufacturer, due to the unique damage patterns they leave behind.

DNA sniffers can now detect microscopic amounts of biological material at a crime scene. Humans are always shedding dead skin or hair so if any of this material can be found at a crime scene the DNA sniffer can find it and with almost total accuracy complete a DNA analysis.

Nothing convicts criminals like pictures, and in most urban centers of large worlds these are now easy to obtain. Tri-dee surveillance of most public areas in more sophisticated urban environs is almost assured.

If no DNA or surveillance evidence can be developed, most court systems now also admit Psychic evidence from certified Psychic members of law enforcement agencies.

G

Ghosts

Are the product of the destructive downloading (digitalizing) of a sentient's mind. Essentially a brain is peeled layer by layer and the memories digitalized. The process is destructive of the mind copied so it is usually only used in the case of death when the brain has been preserved. It is very accurate and Ghosts have reported being able to remember their own deaths and all the attendant pain.

Like Dups this is a form of life insurance but even more important and reliant on the ability to preserve the brain at or near the time of death. There have been some sentients who have undergone the process before natural death claims them. These individuals are usually seeking the immortality that

electronic downloading can offer them. The process is even more expensive than Duplication, though, like Dups an appropriately sized computer memory must be available, which means an expensive computer platform and the process itself is delicate, time consuming and expensive.

GravPlate Technology

Based on technology discovered on the alien ship found on Europa in 2132, gravplate technology is based on "plates" which are actually complex artificial gravity production machines. These machines are naturally extraordinarily energy consuming. Much of the modern world is based upon this technology. Interstellar travel is not possible without gravplate tech, much of terraforming technology uses this technology, and inter-system travel at practical speeds is based on it as well. The uses for gravplate technology are numerous and engineers continually find new uses like the invisible fence used at the Marianas Trench Park on Ratan.

Gravity Radio

Radio waves are able to traverse Tachyon space, aka T-Space or the gravitic plane, the same as physical objects like starships. Radio waves move at the same speed as starships, the speed being based on the volume of tachyon particles released when a commsat (communications satellite) is dropped into T- space. Most government and corporation commsats are large and configured to broadcast radio waves at a rate of 8 parsecs per week (thus suitable for release by Dreadnoughts), but smaller units can be built. It will continue on until it reaches its aim point which can be as far away as the commsat has coordinates for.

So it is possible to communicate from one end of known space to the other (900 light years) in approximately 35 weeks. Not exactly instant communications but communications nonetheless.

H

The Helix System

The Helix system contains no habitable worlds, although it does possess a mineral laden asteroid belt. To exploit this system its original owners, the APR created huge space colonies. At its height this series of linked space Colonies contained a population of over 28 million, with room for millions more. Helix quickly became APR's manufacturing and shipbuilding center in the Twilight Sector. As such it was here that the Archenars created their secret fleet charged with taking Terra/Sol. Early in the war (2884) the Orion fleet destroyed the manufacturing and ship building capacity of the system. They avoided as much loss of life as possible and, although many of Helix's citizens fled back to the APR, the system still contained 16 million inhabitants at the end of the Mutant War. Most of these were expendable, 1st to 9th level employees, so obviously the APR felt they were not giving up much when they abandoned the system at the end of the war. Before the war was over the Orion Confederation began providing large amounts of assistance in the rebuilding of the colony.

L

Legal

Law levels vary from planet to planet, and even country to country on a single world. This article primarily considers the legal system of The Republic of the Plains.

The ROP is at heart a libertarian state. The typical Plainsman believes that the fewer laws there are, the better. A Plainsman also believes in swift and effective punishment when one of those few laws is broken. Guns are an accepted part of The ROP, as long as they're not concealed. While social morays usually preclude carrying around a gun in a major metropolis like Kansas City, it is not illegal. The concealed carrying of weapons is legal with a proper permit. The applicant will need to show cause why they need a license for this activity, but reasonable requests are usually honored. Of course convicted felons and certain other classes (mentally impaired, etc.) are excluded from the right to keep and bear arms.

M

Medicine

Medicine has advanced to the point that the average human's life expectancy is approximately two centuries. Most disease processes can now be arrested. Most organs can be replaced, either with artificial ones or with specially grown animal organs. For example, some baboons have been genetically programmed to grow human compatible livers that are used for transplant into humans. To answer animal rights criticism these organs are harvested from animals which are genetically altered to grow a redundant organ. This 'extra' organ is then harvested. Violent trauma and acute dysfunctional episodes now cause the majority of premature deaths. Even though most diseases can now be cured or controlled there are still some disease processes that mutate or resist treatment causing premature death. However in the 30th century this is rare. Modern medicine has allowed life spans to increase to approximately 200 years for humans, with proper medical treatment. This would include routine medical scanning (about once a week), and a trip to a "gene spa" about every decade, where an individual would receive anti-aging gene therapy.

The Mennonite Agricultural Cooperative (MAC)

The MAC was the first Corporation in the ROP (Republic of the Plains), and is still one of the most powerful on Terra/Sol. The MAC got its start in agriculture and is still quite strong in that area. It has branched out into heavy machinery manufacturing, robotics and microtechnology. It now has offices on every continent

and it's reported assets are in excess of 3 trillion Orion credits, about 2.91 trillion Terran dollars.

Moria

Moria is a Saturn-sized gas giant in the Terra/Sol system. It has 23 moons and orbits Sol at 17.8 AU's. It is home to a thriving gas mining industry. The miners live on large La Grange colonies orbiting the planet. The mining is done by large "scoop ships" which skim the upper atmosphere of the planet, shifting through the mostly hydrogen atmosphere for the rare gases which

make this type of mining profitable. The mining operations have attracted a population of about 14 million.

The Orion Confederation has awarded Moria's largest moon Cristo to the Mennonite Agricultural Cooperative for development. To date the MAC has several large scientific facilities orbiting the moon but has not proceeded with any development projects.

N

Natural mutations

Humans who are born with spontaneous physical mutations, that is, mutations that occur as a natural physical process without outside human interference, are called Natural Mutants. Individuals can be born with an extremely wide variety of mutations, everything from mild physical mutations like an extended brow ridge to fangs and super human strength. Natural mutants especially have over the past millennia been subject to extreme prejudice throughout Known Space. Many have failed to even be born as the stigma attached to a mutant child has caused many parents to terminate the gestation of Natural Mutant fetuses.

Natural Mutants can pass on their genes but like any human mutation (blue eyes being one example) the trait is only passed on to a percentage of their offspring. Some similar Natural Mutant types have been noted especially on Terra/Sol. One group there, who call themselves Orcs, have facial mutations, generally a flattening of the features along with an extended brow ridge and forehead. They usually posses extended strength and sometimes extended endurance. These specific changes sometimes come at the cost of diminished intellectual capacity. However this mutation type is not the only one that seems to be repeating itself.

Netherell System

Netherell is an APR system. It is currently under military interdiction. Any ship jumping into the system is warned not to approach the primary under threat of attack, and to exit the system. Failure to comply has resulted in the destruction of several ships and caused several diplomatic incidents. All of which the APR appears to be more than willing to weather. The APR stations at least one dreadnought and its associated task force in system at all times to back up these threats. The reasons for this secrecy are unknown.

O

Old Earth Religions

Waves of emigration from humanity's homeworld have yet to weaken the venerable belief systems developed on its surface. Some have seen a percentage decrease in their numbers when compared to the whole of the population, but still all the major and most of the minor religions spawned on earth are still quite viable.

Christianity (in Catholic, Orthodox, and various Protestant denominations) is practiced by somewhere around 33% of the human population. Islam (Sunni and Shia sects) boasts approximately 30% of humanity as adherents. Hinduism can claim about another 15% of the population. Somewhere between 5 and 10% of the human population follow either Buddhism or Judaism.

P

Precursors

This term refers to aliens who have left behind physical evidence of themselves. Knowledge of such beings dates back to the discovery of the alien ship on Europa in 2132. At various times this knowledge has had a significant impact on humanity. Everything from the paranoia after the loss of the *Santa Maria* that helped drive humanity into The Long Night to the discovery of Terra/Sol. Most of humanity believes that extant aliens are "out there" somewhere. Some anxiously await the day when first contact is made while others dread it.

Precursor Theory

This theory has been advanced in recent years by Orlan Watson, professor of astrophysics at the University of Perth in Australia, and Vilmar Oerth, a professor in the same field at the University of Bern.

The theory proposes that the Terra/Sol system is an artificial construct, created by an as yet unknown precursor race. As evidence a catalog entry by the National Aeronautics and Space Administration of the Old Earth United States of America in 2009, is sited. This entry does not correspond in class with the star currently known as Sol. The classification indicates a much older and unstable star. They also cite Terra's lack of an extensive ecosystem. As a final piece of evidence Watson and Oerth point to a group of asteroids in the system's asteroid belt, the best known being, The Evening Star (catalog # V.38769) which were found to be hollow, undoubtedly the work of sentients. Critics argue that much of their theory is based on unreliable, 900-year-old stellar readings. They also cite the Dukett Theory as evidence against the lack of fossil evidence on Terra/Sol.

Prometheus

Prometheus is the first planet in the Terra/Sol system. It is in approximately the same orbit as Mercury is around the Sun. It is a heavily mined world with a population of approximately 28 million people, whose principal commerce is mining. The populace lives in underground habitats. A further 300,000 live in several space colonies hidden from Sol by their stationary position on the dark side of the planet. The planetary capital is Warren Prime (population 11 million) located in the perpetual twilight of Prometheus' North Polar Region. It is located next to one of the two sources of water (the other being the South Pole) on the planet.

Prometheus surprised many scientists when a layer of permafrost water was found in low spots on the poles; these areas are shielded from Sol's intense glare. These layers of permafrost provide much of the planet's supply of water and fuel. The planet itself is airless and pockmarked by extensive meteor impacts. Prometheus is proportionally the most meteor-impacted body in the solar system. The meteor activity indicates the planet has been dead geologically for approximately 3 to 4 billion years. The planet's day side is a radiation-blasted hell and its night side is a freezing wasteland. The planet does rotate slowly, a Prometheus day is 293.7 standard days long, while its year lasts 226.1 standard days.

R

Ratan System

This Twilight Sector system was the property of the APR. It currently has a population of approximately 245 million. The primary, Ratan is a pleasant world. Conditions are earthlike, with a little lighter than normal gravity (.92 G), a high hydrographic percentage (82%), and a thin atmosphere. APR is attempting to improve the atmosphere by seeding the ocean with phytoplankton, genetically engineered to produce large amounts of oxygen.

Ratan has become a popular resort and entertainment system. Many professional sports leagues are based here and a large percentage of all the tri-dee chips sold in the sector are produced on Ratan. In addition, it attracts more than 25 million tourists each year from Terra/Sol.

Republic of Chicago

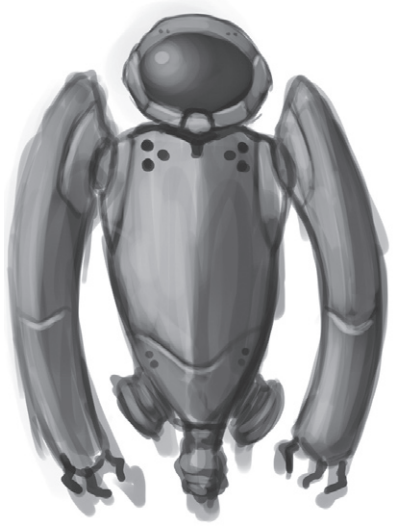
Is a nation state on Terra/Sol. It occupies most of the territory known as the north central United States and eastern Canada on Earth. Chicago is its capital, and the ROC has a population of some 405 million. It uses a republic form of government, with two legislative houses, a chief executive and an independent judiciary. The ROC makes its living from heavy industry in the urban centers of Chicago, Detroit, and Toronto specifically, as well as raw materials production, especially in the Canadian outback.

Republic of the Plains

Is a nation state on Terra/Sol. It occupies most of the central plains of the continent. The nation's economic mainstay is agriculture. It has given rise to one of the largest planetary Corporations, The Mennonite Agricultural Cooperative (see related article). The nation has a population of 325 million of which 42 million live in its capital, Kansas City. Some populations for ROP urban areas are as follows: Kansas City, 42 million; St. Louis, 28 million; Edmonton, 19 million; Omaha, 18 million; Calgary, 16 million; Tulsa, 15 million; Des Moines, 14 million; Wichita, 11 million; Oklahoma City, 10 million; Springfield ,9 million; Sioux Falls, 7 million; Fargo, 5 million; Sioux City, 3 million.

Republic of Texas

This Terra/Sol nation state occupies the Old Earth states of Texas, New Mexico, Arizona, Louisiana and parts of Oklahoma and Arkansas. It's population is 390 million, and its capital is Dallas. The nation has spawned one of the large planetary mega-corps, General Products. This corporation is headquartered in Houston and makes a wide variety of products, but got its start in shipbuilding, surface and submersible craft.



A Robot... or is it a Drone?

Robots

A robot is a machine body designed to house a controlling intelligence (like an AI, Ghost or Dup). They range from mouse size on up and come in almost any shape imaginable. A robot consists of a frame containing computer, sensor, power and communication systems. In some cases manipulators, a means of propulsion and other gadgets are also included. Robots are common in most advanced systems.

Due to their relatively low cost and expendability they perform many of the more dangerous jobs once performed by sentient beings. For example in the Terra/Sol system there are approximately 22 billion robots. The vast majority of these are operated by Level 1 AIs.

The Russian Empire

This is one of the largest and most authoritarian of Terra/Sol's, nation states. It spans parts of three continents Europe, Asia, and North America. Even with a population of 645 million, this huge area is under populated by Terra/Sol standards. Fortunately for the nation states of North American, its population on that continent is only 95 million, although this seems enough for it to be perpetually up to mischief. The Russian Empire has been repeatedly censured by the Orion Governor for violations of the Orion Constitution. The Empire's government is totalitarian and oppressive. They have lost control of several institutions (state police and department of the army) to the Orion government, over the years as a result of their actions. The Orions have controlled the institutions for a period of time, declared them rehabilitated and turned them back over to the Empire, only to see some of the same actions begin again in a short period of time.

S

Scientifically Induced Mutations (SIMs)

Are humans whose genes have been altered medically to create specific biological endpoints. For example, if you wished your child to be born with gills and webbed hands and feet, you would buy an Aqua Mod gene blueprint and have it applied to an egg at conception.

Adults can achieve the same results through surgery and some gene therapy. The process can be arduous and painful and to have the ability to pass on the traits to any offspring would require further and more extensive gene therapy.

Sub-Atomic Corp

This is another mega-corp spawned in The ROP. Its headquarters are in Kansas City. This Corp specializes in gravitics, micro circuitry, zero-g products, spaceship engines, power plants and Stardrives. It had gross sales of 2.01 trillion Orion credits in the year 2990.

T

Tachyon Particles

Tachyon are sub-atomic particles that travel faster than the speed of light. Theoretically containment of such particles should be impossible, but reverse engineering technology found on the alien ship discovered on Europa in 2132 showed humanity how it could be accomplished.

The controlled release of tachyon particles is what propels a starship into the gravity plane, or Tachyon Space/T-space as its commonly called, thus allowing a starship to technically travel faster than light.

Terra/Sol System

This star system discovered in 2836, is Orion League Sovereign territory. The primary of the system, Terra, is remarkably Earthlike. In fact, it is an almost identical copy of Earth down to the shape of the landmasses. The rest of the system however bears no resemblance to the Earth/ Sun system. The planet Prometheus occupies much the same orbit as Mercury does around the Sun, and like Mercury, the planet is face locked with Sol and an inferno on one side and an icebox on the other. The next planet in the system is the primary, Terra. It is exactly 1 AU from Sol. Achilles is a smallish, cold planet, capable of supporting some life. It is currently undergoing terra-forming. Between Achilles and the next planet in the system, Moria, is a rather large asteroid belt. Moira is a gas-giant with 23 moons, many of them quite small. Apollo, the last planet in the system, orbits Sol at an extreme range (35 AU), only the system's cometary belt has bodies which achieve orbits further out from Sol than this. Little research has been done into the origins of the Terra/Sol system, and how an Earth duplicate planet could have evolved. With the end of the Mutant War this scientific question will no doubt receive considerable attention.

Transformation

Is the phenomenon that occurred on Terra/Sol approximately 20 years (2856) after the planet was first settled. Children born during this period began to suffer extremely high mutation rates. Both physical mutations (Natural Mutants) and mental mutations (Psions). The numbers settled at between 8 and 10% for each group.

The cause was traced to a virus which was named *E. Ex Goblinus*. This virus went extinct at approximately the same time as the mutations appeared, but scientists believe that exposure by parents over the preceding 20 years altered the DNA they passed onto their offspring. And succeeding generations on Terra/Sol have produced approximately the same percentage of mutations.

Travel

Travel on Terra/Sol takes a variety of forms. For local travel in a city, there are slidewalks. Intercity travel is usually accomplished by means of a speedy subway system. An express train can take a person from one end of a city like Kansas City in the ROP, to the other in as little as 15 minutes.

Even resorting to local trains, the trip would probably take no more than 45 minutes if you didn't have to wait too long for your connecting trains. Short distance travel (less than 1,500 miles) usually takes advantage of the planet's system of Bullet Trains. These trains connect most major population centers and prime destinations. They travel at approximately 600 mph, making cities like Des Moines (20 minutes), Springfield (17 minutes), St. Louis (26 minutes), Wichita (19 minutes), or Omaha (14 minutes) within commuting distance of Kansas City.

Another option is personal skycars. This method however can be considerably slower as the average skycar only travels around 350 mph, although they range from 300 to 500 mph capability. Skycars within a city's limits must relinquish control to that city's traffic control AI. Human control of airborne vehicles within city limits is prohibited. When distances are merely continental (over 1,500 miles) Supersonic aircraft are used. These average 1,400 mph making even a New York to LA run about an hour and 45 minutes. For truly global travel, Sub-Orbital Aircraft are available. These vehicles travel roughly twice as fast as supersonic aircraft (2,800 mph), making any destination on the globe roughly only a 3-hour plane ride away.

Costs for these services range from: Slidewalks, Free; Subway, 3cr local, 5cr express; Bullet Train, 25 to 80cr; Supersonic Aircraft, 250 to 600cr; Sub-Orbital Aircraft, 500 to 1200cr.

V

VanKila Kiertotahti System

This system is Orion Confederation Sovereign territory. The primary of this system, VanKila Kiertotahti, serves as one of the major prisons of the Orion Confederation. Consignment to this planet is considered one of the toughest sentences that can be received. Prisoners sent here receive only minimal assistance, in the form of food and clothing. They are dropped off to serve their sentences. Getting out can be even harder. All prisoners are subject to brain scans and extensive psychological testing to determine if rehabilitation has been achieved. Needless to say, many shorter sentences have turned into life sentences, because of the tough exit requirements.

The planet itself is semi-arid, and not exactly loaded with resources, although marginally habitable. Even given the hostile nature of the place, several prisoners have carved out fortunes for themselves here, providing goods and services, or producing raw materials and products to ship to other systems. The Orion wardens in fact encourage this activity, believing it is a good way to rehabilitate prisoners.

*Remember to look for future installments of the Encyclopedia Galactica in all **Twilight Sector** products!*

INDEX

A Chimp, a Musician and a Pilgrim Walk into a Bar (fiction) 104
Achilles (Terra/Sol system) 88
Aggrieved
See: Alliance of the Aggrieved
AI
See: Artificial Intelligence
Aliens , lack of (sidebar) 45
Allergy (Negative Mutation) 55
Alliance of the Aggrieved 8-9
Apollo (Terra/Sol system) 89
APR
See: Archenar People's Republic
Aqua Mods Package 57
Aquatic (Positive mutation) 53
Archenar People's Republic 23-25
Argos 62-67
Arisutokurashi Corp (Terra/Sol Corporation) 90
Armored (Positive mutation) 53
Artificial Intelligence 40
Asteroid Belt (Terra/Sol system) 88
Athena (Terra/Sol system) 88
Atmosphere Mods Package 57
Atmospheric Requirements (Negative Mutation) 55
Avalon Station (Station) 103
Aztec Empire (Terra/Sol) 90

Belt Mods Package 57
Belt SIM 5, 43, 57, 77
BioCon 49
Biological Constructs 49
Boer Confederation 12, 29-30

Centennial 42
Centennials, Playing of 58
Columbia
(Terra/Sol government) 90
Commsat 46
Communications 46
Confederation
See: Orion Confederation
Consciousness Transfer 21, 41-42
Council of Masters 26
Cred Sticks 47
Cyber War 8-9
Cybernetics 42

Daedalus Pod 67
Decerebrate Clones 47
Deramus Enclave 20-22
Digital Council 21
Diminished Sense (Negative Mutation) 55
District of United Colonies See: Union of United Planets
Divine Land, the
See: Shenzhou Hegemony
Dolphins 66
Dorlass 69-75
Dreadnought 5, 7, 8, 10, 46, 50, 59
Drone 49
Dukett Theory 95
Dukett, Thomas 95
Dup 42

Earth 4-12, 17, 24, 26, 33-37, 58, 69
Eastern Federal Republic (Terra/Sol government) 90
Echoes of War (Adventure seed) 67
Economics 47
Employment 47
Encyclopedia Galactica 105-112
Enhanced Sense (Positive mutation) 53
Environmental Tolerance (Positive mutation) 54
Environmental Weakness (Negative Mutation) 55
Epsilon Ess 21, 58
Equality Party
See: Free People's Republic
Europa 4-5
Expansionist States 12, 31, 37

Family Business (fiction) 103
Fast Metabolism (Positive mutation) 54
Faster-than-Light
See: Superluminal
First Wave 6
Forensic Science 48
Fourth Wave 11
Free People's Alliance 12
Free People's Republic 29-31

Gaean Colony 99
Galactic History 4
Ghosts 42
Grav Mods Package 57
Gravitic 4, 8, 46, 77, 83
Gravity Radio 46
Gravplate technology 48
Guru 26-27
Guru Haj 26
Guru Leng 26
Guru Mati 27

Headhunter and Prey (fiction) 38
Helix 76-78
Here We Make Our Stand (Supplement)
Independence (Dreadnought) 7
Internet 48

Jens Svenson 24

Krill 62, 64-65

Labor Party 24, 25
Large (Positive mutation) 54
Life Extension 42
Light Sensitivity (Negative Mutation) 56
Long Night, the 7-8
Long Pause, the 4

MAC
See: Mennonite Agricultural Cooperative
Make Room! Make Room! (Sidebar on population) 60
Manchurian Union 12, 29, 30
Marissa's Ride (Fiction) 72
Medicine 42
Mennonite Agricultural Cooperative (Terra/Sol Corporation) 90
Mistress of the Belt (Dreadnought) 15, 60, 69, 94
Mistress of the Belt (Supplement) 4
Monument Attractions (of Ratan) 81-82
Moria (Terra/Sol system) 89
Mutant Immigration Acts 12, 30, 33
Mutant Uprising 12 (History), 16, 19, 22, 25, 27, 30, 37
Mutant War
Mutants 43-44
Mutation Packages 57
Mutations 4, 10, 43, 52

Natural Mutant 44, 52
Natural Weapon (Positive mutation) 54
Negative Mutations 55-56

Neosho Tubes 64-65
Netherell 85
Notable Characteristic
(Positive mutation) 54
NutraTek 62-66

Olive Branch War 6
Orion Confederation 14-17
Orion Warden Service 98
Oster Colonies 17
Oster Republic 17-19
Oster SIMs 18
Oster, Helmut 17
Outworlds 10, 11
Outworlds, Coalition of 10-11, 15, 26
Oxyre 100-101

PAX Combine 62
Pearls of Wisdom (fiction) 28
Phoibe 6
Phoibe Uprising 6-7
Physical Deformity
(Negative Mutation) 56
Positive Mutations 53-55
Population discussion 60
Precursor Theory
Precursors 45
President Alexander Moore
(quote) 32
Prisoner 34728 100
Professor Isao Sugiyama 10
Prometheus
(Terra/Sol System) 87-88
Psionic (Positive mutation) 54

Quick Healer (Positive mutation) 54

Rad Mods Package 57
Ratan 79-54
Religion 49
Republic of Chicago
(Terra/Sol government) 90
Republic of Texas
(Terra/Sol government) 91
Republic of the Plains
(Terra/Sol government) 91
Resistant (Positive mutation) 55
Robots 49
Rolph Quinn 70, 71
Russian Empire
(Terra/Sol government) 91

Sam Rollins 73
Santa Maria (Dreadnought) 7, 8, 10, 45
Sapient Rights (sidebar) 41
Scientifically Induced Mutations
43-44, 52, 57, 77
Second Wave 8
Seti-Tallos 15, 59, 69-71, 74, 91
Shenzhou Hegemony 26-28
Slow Metabolism
(Positive mutation) 55
Small (Positive mutation) 55
Sons of the West 69
Starnholm Republic 12, 29-30
Stations 103
Stellar Nations (Map) 13
Sub-Atomic Corp
(Terra/Sol Corporation) 90
Superluminal Drive (sidebar) 4-5
Susceptible (Negative Mutation) 56

TASA
See: Trans-Asia Socialist Alliance
Terra/Sol 86-97
Terran Union 35-37
The Sea of Stars (Supplement)
The Archenarian Candidate
(fiction) 85
"The Rise of Mutants" (Article) 10
Third Wave 9
Through the Open Door
(Supplement)
Trans-Asia Socialist Alliance 8-9, 21
Transformation (sidebar) 44
Transportation 50
Travel 20
Trinity Research Station
(Station) 103
T-Space 4, 46
TU See: Terran Union
Twilight Sector 59
Twilight Sector Setting, Tech Levels
(sidebar) 46
Twilight Sector Systems (Map) 61

UN See: United Nations
Union of United Planets 32-34
United Nations 6, 7, 8, 9, 10, 11
United States of America 32-34
Uplifted Animals 44-45
USA
See: United States of America
UUP
See: Union of United Planets

Valistroos, Hari 63
VanKila Kiertotahti 98-102

War for Independence 11, 36
Weak Characteristic
(Negative Mutation) 56



FINIS


ALSO AVAILABLE
BEYOND THE OPEN DOOR
Matthew Hope & John Lees