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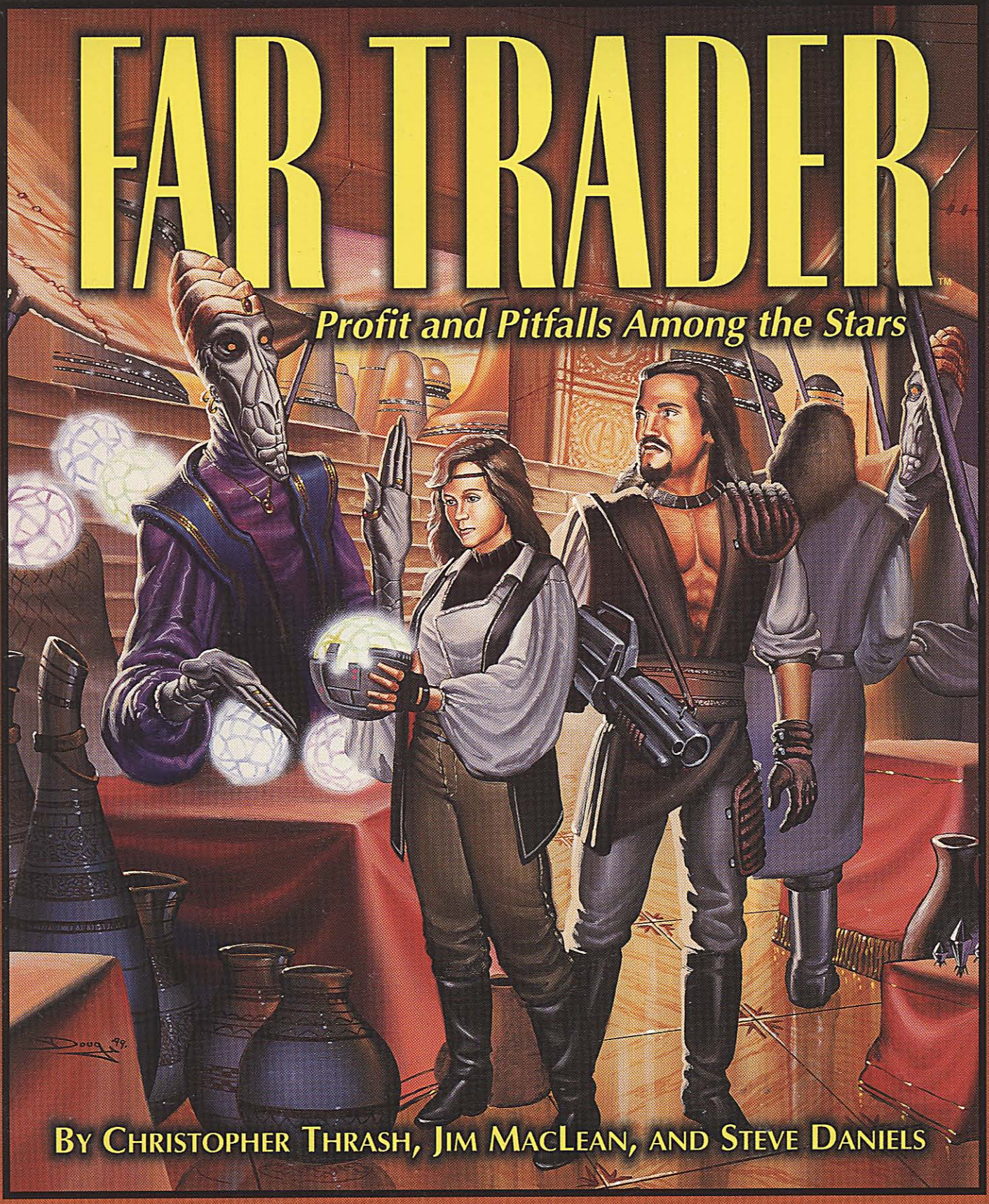
FAR TRADER™

Profit and Pitfalls Among the Stars



By Christopher Thrash, Jim MacLean, and Steve Daniels

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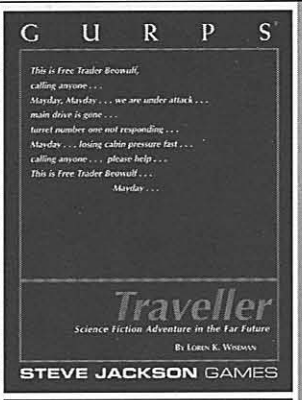

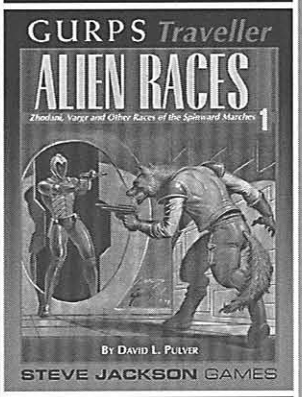

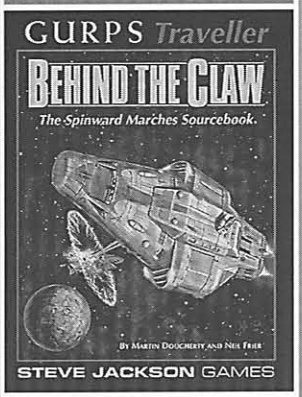

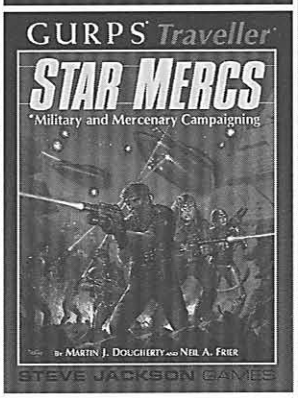

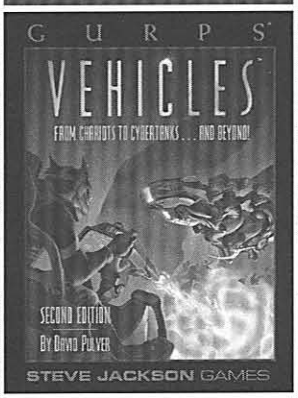

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GURPS® Traveller®

FAR TRADER

Profit and Pitfalls Among the Stars

By CHRISTOPHER THRASH, JIM MACLEAN, AND STEVE DANIELS

Based on the award-winning Traveller science fiction universe by MARC MILLER

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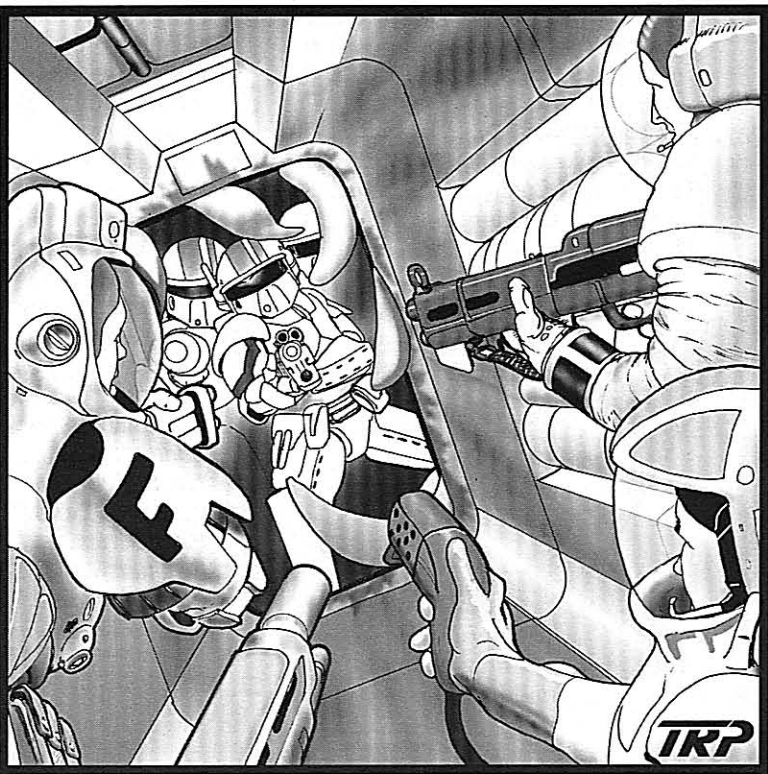

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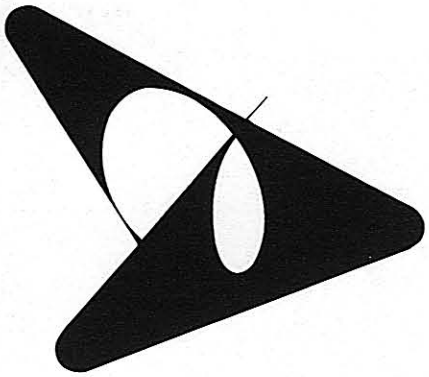
1 2 3 4 5 6 7 8 9 10

STEVE JACKSON GAMES

Contents

INTRODUCTION 4
ABOUT THE AUTHOR 4
ABOUT THE LINE EDITOR 4
TRAVELLER NEWS SERVICE 4
About GURPS 4

1. THE BIG PICTURE 5
IMPERIAL TRADE POLICY 5
Trade, Starports, and Starships 5
Imperial Economic Growth 6
Lifeblood of the Imperium 6
THE IMPERIAL FINANCIAL SYSTEM 7
Monetary Policy 7
Fall of the Second Imperium 7
The Imperial Credit 8
Commercial Banking 8
The Secret Firewall 9

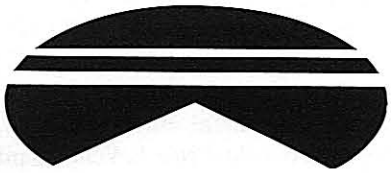


2. THE INTERSTELLAR ECONOMY 10
Example of Comparative Advantage 10
PLANETARY ECONOMICS 11
World Trade Number 11
Law of One Price 11
Trade Classifications 13
Traffic Classifications 13
Trade Barriers: Port Modifier and Tariffs 13
What is GWP, Really? 14
Gross World Product (GWP) and Per Capita Income 14
TRADE FLOWS AND TRADE ROUTES 14
Bilateral Trade 14
Standard of Living 15
Interstellar Passenger Traffic 17
Trade Balance in Traveller 17
Trade Routes 18
Technology, Productivity, and Exchange Rates 18
BASIC TRADE SYSTEM 19
ADVANCED TRADE SYSTEM 20
THE FREIGHT SHIPPING BUSINESS 20
The Gravity Trade Model 20
Freight Price and Availability for Tramp Ships 22
Technology and Patterns of Trade 22
Jump Routes 23
Competition in the Shipping Industry 24
Subcontracting Freight 29
Freight Rate Speculation 30
Special Handling Characteristics 30
PASSENGER SHIPPING 33
Unfamiliarity Penalties 33
Passenger Ticket Prices and Availability for Free Traders 34
Contacts 34
The Freight Spot Market 35
SPECULATIVE TRADE 36
Price Series 36
Frontier Worlds 37
Passage Types 38
Sample Trade Goods 38

3. HIGH FINANCE.....41
BUSINESS ORGANIZATION 41
Sole Proprietorship 41
Partnership 41
Alien Business Organizations 41
Corporation 42
ACQUIRING CAPITAL 42
Business Plan 43
Banks and Loans 44
Loan Sharks 45
Company Names 45
Bank Fraud 46
Incorporation 46
Interstellar Financial Transactions 46
Exchange Rates 48
Dividends 49
PLAYING THE MARKET 50
Stock Performance 50
The Travellers' Aid Society 51
Trading 52

4. SHIPS AND SHIPPING 53
THE SHIPPING INDUSTRY 53
Tramp vs. Trade Liner 53
Time is Money 53
The Captain 53
Terms of Shipping 54
Tons? 54
Freight Handling 55
Freight Handling in Orbit 55
Hatches and Openings 55
Standard Orbits 56
Communicators, Sensors, and Navaids 57
Other Uses for Containers 57
Loading/Discharge Time 58
STARPORT OPERATIONS 58
Transponders and Flight Recorders 58
System Entry 59
Declaring an Emergency 60
Approach and Landing – Starport Facilities and Requirements 61
Traffic Control Procedures 62
Welcome! – Entry Procedures 63
Inspections 64
Mail and Incidentals 64
LASH Operations 65
The Price of Doing Business – Port Tariffs 66
Leaving the Port – The XT Line 66
Outside the Gate – Port Support Operations 67
Departure Procedures 67

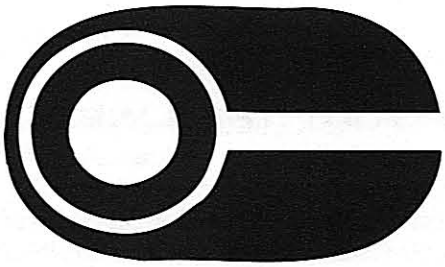
SHIP'S BUSINESS 68
Ship's Registry 68
Outfitting the Ship 68
Freight Consolidators 68
Routine Vehicle Operation (RVO) Programs 68
Odds and Ends 69
Hiring Crew 70
Ship's Articles 71
Damage to Cargo 71
Logbook 72
Manifests 72
Hey, Why is Murphy on the Cargo Manifest? 72
Keeping a Logbook 72
Flight Plans 73
Imperial Officials 73
Getting Paid 74
Advertising and Advance Notice .. 74
Maintenance and Supplies 74
Directions and Numbering Aboard Ship 75
Maintenance and HT for Existing Ship Designs 76



FREIGHT-HANDLING EQUIPMENT 77
5-ston Forklift (TL8) 77
Container Rack 77
5-ston Exoskeleton (TL8) 77
48-ston Grav Lifter (TL8) 78
5-ston Workpod (TL8) 78

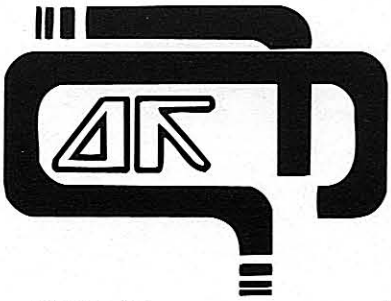
5. CHARACTERS 79

CHARACTERS FOR MERCHANT CAMPAIGNS 79
Shipboard Organization 79
Character Points and Ships 79
Free Traders 80
Shore Organizations 80
Rank, Position, Pay, and Benefits 81
Non-Merchant Characters in a Mercantile Campaign 81
Certification – Licenses and Certificates 82
Standard Licenses and Certificates 83
Sample Character: Corporate Lawyer 83
Sample Character: Skip Tracer 84
VARIANT CHARACTER TEMPLATES 85
Attorney 85
Sample Character: Free Trader 85
Bounty Hunter 86
Merchant Starship Crew 86
Sample Character: Shipper's Agent 86
Sample Character: Advertiser/PR Agent 87
Manager 88
Sample Character: Arms Dealer 88
Merchant 89
Sample Character: Black Marketeer/Fixer 89
Sample Character: Broker 90
Sample Character: Entrepreneur 91
Sample Character: Financier 92
Sample Character: Purser/Cargomaster 93
Sample Character: Shipmaster/Mate 94
Sample Character: Smuggler 95
Rogue 96
Undercover Agent 96
Sample Character: Confidence Man 96
Sample Character: Courier 97
ACQUIRING A STARSHIP 98
Buy It 98
Rent it 99
Steal It 99
ADVANTAGES, DISADVANTAGES, AND SKILLS 100
Advantages 100
New Advantage 101
Disadvantages 101
New Disadvantage 102
Skills 102
New Skills 102



6. CAMPAIGNS AND ADVENTURES.....104

MERCANTILE CAMPAIGNS 104
Pilot Talk – Chrome for the Campaign 104
Fine Tuning 106
Things to Do on Port Liberty 106
THE VAGRANT GYPSY LIFE – FREE TRADER AND TRAMP CAMPAIGNS 108
Characters 108



Adventures 108
Adventure Seeds 108
Empress Marava-class Far Trader Deck Plan 110
THE COMPANY STORE – CORPORATE CAMPAIGNS 112
Characters 112
Adventures 112
Ships 114
Akkigish-class 400-ton Subsidized Merchant Deck Plan 115
OUTSIDE THE LAW – PIRATE AND SMUGGLER CAMPAIGNS 116
Smugglers and Black Marketeers 116
Crossover Campaigns 117
Pirates, Corsairs, Thieves, and Privateers 118
Pirate Tactics and Operations 120
Science, Invention, and Gadgeteering 120
Legality Class of Other Devices 120
Bribery 121
Forgery 122
Hazards of the Business – Law-Enforcement Agencies ... 123
Pirate Havens in the Spinward Marches 123
SPECIAL CAMPAIGNS AND ADVENTURES 124
Exploratory Trade and Contact .. 124
Starports – Brokers, Shipper's Agents, and Bartenders 124

7. DISTRICT 268: TRADING ON THE EDGE OF THE IMPERIUM ..125

Designing Worlds 125
The Hardships of Travel 126
THE SPINWARD MARCHES 127

APPENDICES.....136

NEW COMPONENT MODULES 136
SAMPLE MERCHANT VESSELS 137
Small Craft 137
Non-Starships 137
Small Merchant Starships 138
Tukera Ships 139
Large Merchant Starships 139
TAS FORMS 141

INDEX.....143

About GURPS

Steve Jackson Games is committed to full support of the ***GURPS*** system. Our address is SJ Games, Box 18957, Austin, TX 78760. Please include a self-addressed, stamped envelope (SASE) any time you write us! Resources now available include:

Pyramid **(www.sjgames.com/pyramid)**. Our online magazine includes new rules and articles for ***GURPS***. It also covers all the hobby's top games – ***AD&D, Traveller, World of Darkness, Call of Cthulhu, Shadowrun*** and many more – and other SJ Games releases like ***In Nomine, INWO, Car Wars, Toon, Ogre Miniatures*** and more. And *Pyramid* subscribers also have access to playtest files online, to see (and comment on) new books before they're released.

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Much of the online discussion of ***GURPS*** happens on GURPSnet. To join, send mail to majordomo@io.com with "subscribe GURPSnet-L" in the body, or point your World Wide Web browser to: **www.io.com/GURPSnet/www**.

Page References

See ***GURPS Compendium I,*** p. 181, for a full list of abbreviations for ***GURPS*** titles. Any page reference that begins with a B refers to ***GURPS Basic Set, Third Edition Revised;*** e.g., p. B144 refers to page 144 of ***Basic Set.*** CI refers to ***Compendium I,*** CII to ***Compendium II,*** GT to ***GURPS Traveller,*** S to ***Space, Second Edition,*** UT to ***Ultra-Tech, Second Edition Revised,*** UTT to ***Ultra-Tech 2*** and VE to ***Vehicles, Second Edition.***

INTRODUCTION

When ***Traveller*** appeared in the summer of 1977, it became the first *science fiction* roleplaying game. It was the first game to take what was known about the real world, make a few carefully selected changes (FTL travel, gravity manipulation, fusion power) and extrapolate the consequences into the future. This led to some fairly conservative projections (like backpack lasers!). In particular, ***Traveller*** took the stance that technological development would *not* invalidate the processes that have dominated human history to date. It assumed that the future would be different, but still recognizable.

Far Trader is based on a similar premise: that the forces of economics at work on Earth today will still operate even when trade is carried out among the stars. Most of what you will find here is real-world economic theory and shipping practice, applied to the ***Traveller*** universe. This book includes a lot of detail and is designed as a tool kit for the GM, who should take what he needs when he needs it.

No work of this sort stands alone. ***Far Trader*** draws on the trade and commerce rules of all previous versions of ***Traveller,*** particularly *Merchant Prince, The Traveller Adventure* and the *Hard Times* and *Pocket Empires* source books; the campaign rules in *Striker* and *Trillion Credit Squadron;* and innumerable articles by Jolly Blackburn, Phil Masters, Terry McInnes, Stan Mullins, S. John Ross and others in the *Journal of the Traveller's Aid Society* and elsewhere. ***Far Trader*** also incorporates economics rules from across the ***GURPS*** system, particularly ***GURPS Swashbucklers*** and ***Vehicles***. The authors gratefully acknowledge their debt to those who have broken the trail for them.

About the Authors

Christopher Thrash is a serving military officer and a qualified helicopter pilot. He has spent far too much time away from his family, in places like Germany, Korea, Somalia, and Haiti; he has learned a fair amount about ports (air and sea) and shipping operations in the process. He has been playing roleplaying games since March 1976, *Traveller* since December 1977, and ***GURPS*** since 1991.

Jim MacLean is the pen name of a doctoral student in economics at an Ivy League university. He is new to ***GURPS*** but has been playing ***Traveller*** since the early days. Jim has also been a member of the *Traveller Mailing List* since 1991 and is more than happy to answer questions there.

Steve Daniels has been playing and testing roleplaying games for over 20 years and will soon be a practicing lawyer. He has contributed to other ***Traveller*** products and plans to continue to write game products. In his casual time, he plays blues guitar and rugby football.

About the Line Editor

Loren Wiseman was one of the founding partners of GDW, Inc., original publisher of ***Traveller,*** and spent over 20 years there as a game designer, developer, typesetter and editor. After GDW closed, Loren freelanced for a time, and then came to SJ Games, where he is the ***Traveller*** line editor and expert-in-residence.

The *Traveller* News Service

For many years a feature of the *Journal of the Travellers' Aid Society*, *TNS* chronicled the ongoing life and times of the Imperium. Loren Wiseman is once again writing *TNS* as the alternate history of the Third Imperium develops. It is updated regularly; read it online at **www.sjgames.com/gurps/traveller/news.html**. "Back issues" of *TNS* are also online.

The SJ Games ***Traveller*** page has links to the ***Traveller*** Web Ring, and thus links to most of the major ***Traveller***-oriented web sites that exist. For information on subscribing to the ***Traveller*** Mailing List, contact rwm@mpgn.com.

Chapter One

The Big Picture

The Long Night demonstrated with tragic finality that modern human civilization cannot survive without interstellar trade and the institutions that support it. With the end of the Rule of Man, interstellar contact ground to a halt and the light of interstellar civilization flickered and failed, plunging 11,000 worlds into more than a millennium of Night.

At the dawn of the Third Imperium, Cleon I claimed legitimacy through ties to the Rule of Man, but his popular mandate came from a dream that he shared with most of his subjects: to see the flame of interstellar civilization rekindled. Ultimately, this was accomplished by nurturing trade among the Imperium's member worlds.

Imperial Trade Policy

Protecting trade continues to be of utmost importance to the Imperial government. The Imperium endeavors not only to keep merchant vessels safe from harm, but also to provide institutions that will allow trade to flourish. Foremost among these institutions is the Ministry of Commerce (MoC).

The MoC is responsible for all matters pertaining to trade between worlds. Its first responsibility is to see that Imperial free-trade laws are respected. Member worlds are encouraged to allow free and unfettered off-world trade. Many do, charging tariffs of no more than 1 to 5 % to support the planetary navy. Not all member worlds are so open to outside contact, though, and Imperial law allows these worlds to erect tariff barriers to trade – with certain stipulations:

- Any tariffs must be levied equally and indiscriminately against all Imperial member worlds.
- Tariffs for nonmember worlds (except client states) must be at least twice those for members.
- Tariffs cannot be levied on goods merely passing through the system.

These laws are in place to prevent groups of worlds from creating internal trade zones that exclude other member worlds, to give nonmembers an economic incentive to join the Imperium, and to prevent interference with interstellar trade.

The MoC also protects the rights of off-world investors from meddlesome local governments. Investors must abide by all local laws and regulations, but local governments must spell these out clearly and enforce them impartially against local and off-world businesses alike. Any arbitrary action or seizure of property can form the basis of a complaint to the MoC. If the MoC investigates and supports the claim, it can impose a number of administrative penalties on the offending government. Serious cases are submitted to the subsector duke for possible action.

At the same time, the Ministry works to protect the locals from off-world exploitation. It enforces any trade restrictions placed on a world by the Scout Service in the interest of local culture. It also shares responsibility with both the Ministry of Justice and Naval Intelligence for preventing trade in slaves, weapons of mass destruction and certain kinds of psionic equipment.

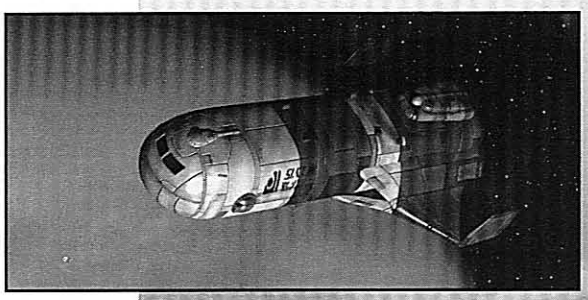
Trade, Starports, and Starships

This volume is the first in a series of three ***GURPS Traveller*** supplements that will examine trade, travel, and commerce:

Far Trader deals with making money. Starports and starships appear only as a means to that end. Merchant ships in particular are included to illustrate or introduce important concepts and functions. The perspective is that of the ship's owner, master or purser (the "view from the hold"), and the focus is on ship's business: costs, administrative and legal requirements (and pitfalls), freight and freight handling, and getting paid. The book speaks mainly to merchants, although other starport denizens are addressed.

Starports will show the "view from portside": the experience of visiting or working at a starport, as well as the surrounding city. Ship's business will be presented from the perspective of fixed-base operators selling goods and services to starship crews. Vessels that serve the port – shuttles, lighters, customs cutters – will appear, but once more from a functional point of view. The book will also touch on Scout and Navy bases.

Starships will detail the "view from the deck": the experience of being a passenger or a crewman on a starship. It will cover the work of the deck and engineering departments (see p. 79), as well as the passenger side of purser operations. The operations of nonmilitary, noncommercial ships – yachts, labs, explorers, prospectors – will also be included, but most of the book will be devoted to specific ship designs and comments on design philosophy.



Applications to become a Limited Imperial Corporation (LIC) must pass through the MoC as well. The Ministry scrutinizes each one to ensure that the applicants are reputable people who can be trusted to behave honorably even in the absence of supervision. How successful it is at this task is the subject of debate. An LIC's status is subject to periodic renewal, and this is an opportunity for the MoC to review the company's past behavior, force it to change practices that have generated complaints, and inspect its books. Unfortunately, once an LIC grows beyond a certain size, the resources it can use to skirt the law exceed those that the MoC can call upon to enforce the law.

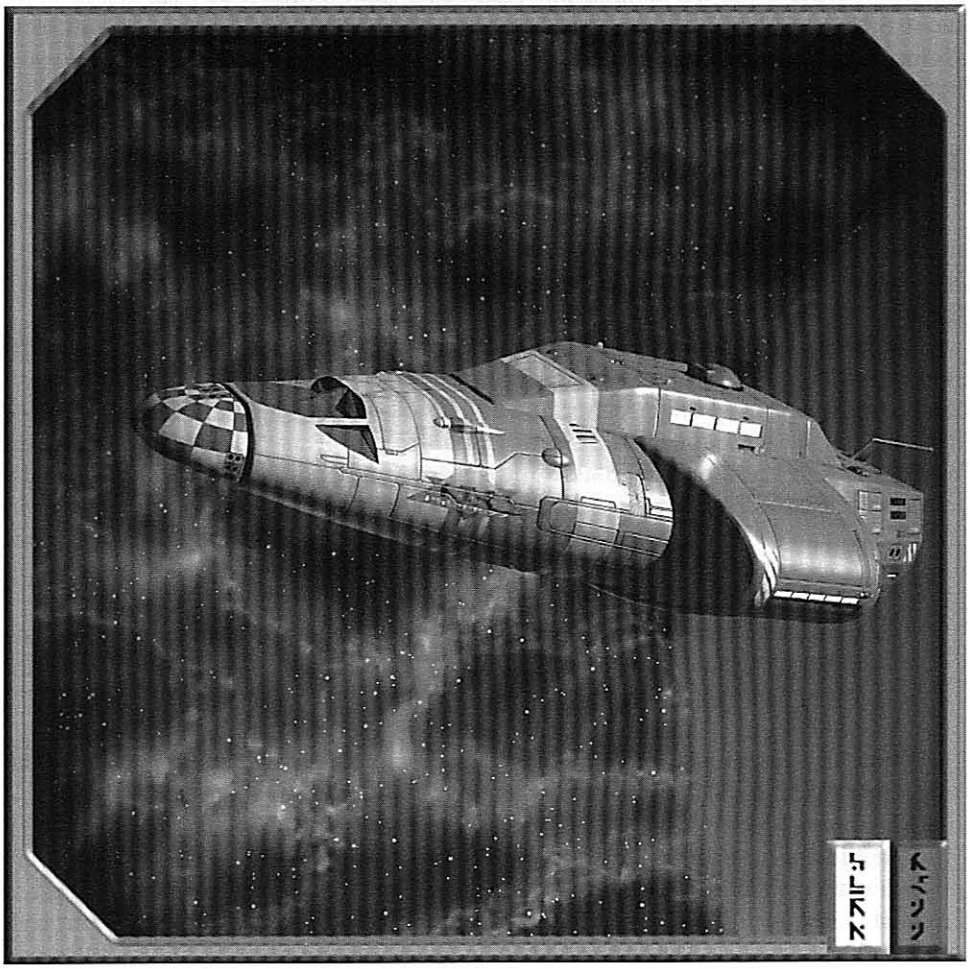
Interstellar banking is yet another area of MoC authority. The Ministry is responsible for all banks with off-world branches. These must by law be LICs, but the Ministry pays extra attention to them because of the danger posed to the economies of member worlds by the collapse of an interstellar bank. The MoC mostly coordinates information sharing between planetary banking regulators, but it does have its own minimum reserve requirements and the authority to shut down banks that do not meet them. Like all LICs, interstellar banks are subject to local laws, and many planetary governments have stricter standards than the Imperium.

Lifeblood of the Imperium

"'Trade is the lifeblood of the Imperium.' Most of us are so accustomed to hearing that phrase that we seldom stop to consider just what it means. We all know the story of Cleon I transforming the Sylean Federation into the Imperium, taming the megacorps and establishing the law of free interstellar trade. This was critically important in restoring the free flow of goods and services that was lost during the Long Night and which is necessary to support our advanced technological society. What is often overlooked is the importance of the power that Cleon did not claim. In establishing that the Imperium ruled not worlds, but the space between them, Cleon made interstellar trade one of only two possible justifications for the Imperium's existence, the other being defense.

What is it that the Imperium rules, if it rules not worlds but the space between them? It does not rule planets, which are controlled by their own governments with certain rights under Imperial law. It does not rule the citizenry, who overwhelmingly reside on planets and outside of direct Imperial control. It may be said to rule the asteroids, comet tails and dusty debris of space, but of what import are these? And of what use are the Imperium's mighty fleets if these are the only treasures they guard? But there is something else that lies within the Imperium's domain – trade. Interstellar trade is the bond that links otherwise separate and independent worlds into a unified society and a unified Imperium. Thus, trade is truly the lifeblood of the Imperium, as it is the only thing of value that exists within the Imperium's only territory – space."

– Prof. Cesar Dargiimkam,
Lunion School of Economics



Imperial Economic Growth

Tech level is a fair measure of economic potential (see Chapter 2). By this standard, the Third Imperium is growing economically at an almost imperceptible rate. It has advanced only two TLs in the 1,100 years since its founding, compared to the *five* TLs in *250* years achieved by the Terrans before their contact with the Vilani. The Terrans maintained a steady annual economic growth rate of nearly 3% through this period, partly due to their astonishing technological advances and partly due to equally astonishing population growth. The Imperium is not growing much on either scale, and maintains an average annual growth rate of less than 1%.

This low growth rate is both the cause and effect of the lack of promising new investment opportunities in the Imperium. Few opportunities means a low demand for capital and a correspondingly low interest rate. The return on Imperial bonds (considered risk-free) is so low that people only invest in them to avoid keeping cash around.

That is not to say that there are *no* profitable opportunities for investment within the Imperium. Entrepreneurs (both companies and individuals) who link problems on one world with solutions on another can be very successful. The primary barrier to rapid economic growth is the achingly slow pace of communication. When it takes more than a year for a message to travel from one end of the Imperium to the other, commercial and scientific intercourse is virtually impossible. The cost of seeking out customers or suppliers over such vast distances can be so great as to force companies to either make do with local solutions or make do without. Everyone who contributes to bridging this chasm of distance – from megacorp to far trader – contributes to the economic vitality of the Imperium.

The Imperial Financial System

In keeping with the Imperium's laissez-faire philosophy, the Imperial government has little day-to-day involvement in economic affairs. For historical reasons, though, its financial system receives more attention than most other economic matters. It is generally accepted that the beginning of Twilight and the slide into the Long Night can be marked at -1776, when the central treasury at Hub/Ershur refused to honor a monetary issue by the branch treasury at Antares, triggering a general financial collapse. This precedent makes the Imperium's financial policy decisions of symbolic as well as practical importance.

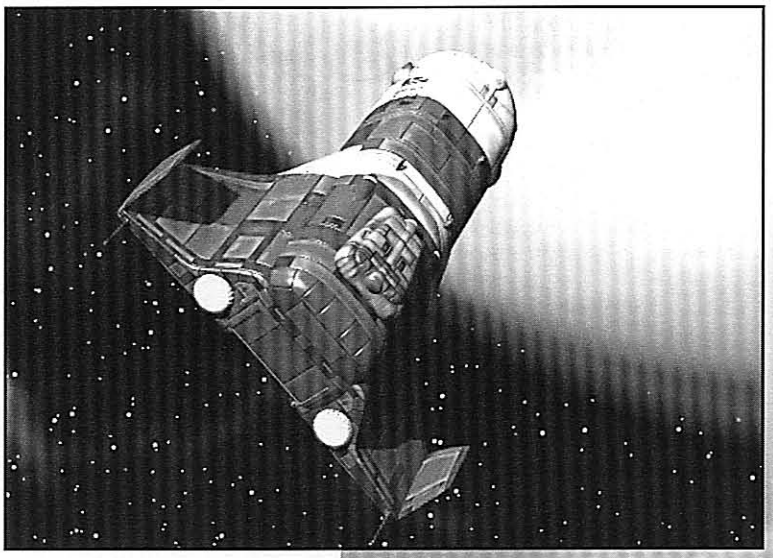
Monetary Policy

Unlike the first two Imperiums and most planetary economies, the Third Imperium has no central bank. No one in the Imperial bureaucracy sets interest rates, acts as lender of last resort to failing banks, supervises check clearing or tries to reduce the impact of recessions. The Third Imperium feels that it has traded the promise of a smoother ride in the short term for a lower risk of financial catastrophe in the long term.

The Third Imperium has replaced the central bank structure with a monetary board. The members of the board are all retired bankers and economists, many of noble birth, but all chosen primarily for their hatred of anything that smacks of using monetary policy to meddle with the economy. Their task is to carefully control the long-term growth of the money supply so as to mirror the long-term growth of the economy. Too much growth in the money supply creates inflation; too little creates deflation.

Part of the task of the survey branch of the Scout Service is to provide up-to-date economic data for the monetary board to use in its long-range growth forecasts. Forecasts are made for each sector in the Imperium every ten years and a suitable level of monetary expansion for that sector authorized. Each sector branch of the Imperial Treasury must then issue the appropriate amount of additional currency per year until the next review is completed.

This "new money" is generally handed over to the sector duke for official use, on the logic that the sector authorities are most likely to use the windfall in the public interest. Given the Imperium's very low economic growth rate, the amount is small compared to the sector-wide budget of the Imperial government. This system provides for a simple and transparent monetary policy that is largely immune to political pressures.



Fall of the Second Imperium

The architects of the Third Imperium's financial system believed that the failure of the Second Imperium's system stemmed from its attempts to regulate and stabilize an economy as large as all human space. In practice, the Second Imperium's bankers quickly confronted this problem, and responded to it by setting up regional branch banks with the autonomy to act within policy guidelines set by the central bank. This solved the immediate management problem, but created a new one: How to generate central guidelines that were consistent with both the central system's need for coordination and the needs of the regional economies?

The solution during the Rule of Man was simply to strengthen the centralized powers of the First Imperium. As it became increasingly difficult to meet the needs of all regions simultaneously, a succession of central bank governors addressed the issue by tightening central control. This failed to halt the decay in most regions and greatly accelerated it in the rest.

Whether out of narrow self-interest or local patriotism, some regional banks responded with policies that maximized the welfare of their local economies – whatever the impact on their neighbors. Antares was one such bank. It tried to halt the terrifying downward spiral of its economy by dropping interest rates through the floor, but only succeeded in providing easy money for people trying to flee the ruin, effectively exporting inflation to its neighbors.

Continued on next page . . .

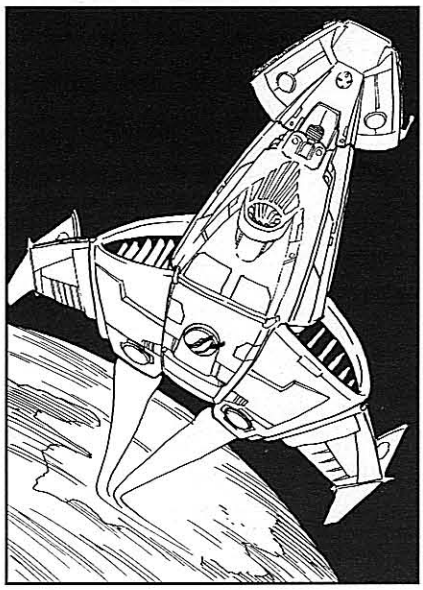
Fall of the Second Imperium

[Continued]

When the central bank at Hub/Ershur decided it must put a stop to this ruinous policy, it did so in the hope that sacrificing Antares might yet save the rest of the Imperium. Tragically, by sacking the branch's governor and refusing to honor further monetary issues from Antares, the central bank set off a final financial flight that led to hyperinflation in Antares' neighbors and a spreading conflagration of economic collapse.

The sobering lesson of the Second Imperium made the rulers and merchants of the nascent Third Imperium leery of a powerful central banking system. They believed that the critical economic role of the central bank combined with its pan-Imperial breadth meant that if it failed, it would fail totally and its impact would be felt everywhere. Crises with local roots and otherwise local impact could be carried abroad by the overarching structure of the central bank.

The Solomani bank governors of the Rule of Man likened the regional economies of the Imperium and their ties with the central bank to a group of mountain climbers roped together so that if any of them slipped, his fellows could keep him from falling. Modern critics suggest that this analogy was apt, but that it would have been more accurate to say that the bank's ties made a stumble by one climber capable of dragging them all down into oblivion.



The Imperial Credit

The Imperial credit is backed by neither gold, nor lanthanum, nor any other precious metal. Officially, it requires no more backing than the word of the Emperor. In practice, the credit – like all currencies – is backed by the productive assets of its economy. The credit is not directly backed by the economies of the Imperial member worlds, though, since the Imperium rules not worlds but the space between them. Neither is it backed by the virtually nonexistent assets located in space directly controlled by the Imperium. In fact, what backs the credit is all the interstellar trade that must by its nature pass through the Imperium's domain: the space between worlds.

What links the value of a currency to the value of the assets in its economy is the fact that if someone wants to do business in that economy, he has to use the associated currency. The more economic output that must be accessed through the currency, the more valuable the currency is. This is enforced partly by law, but mostly by the powerful economic logic of currency itself. Even if there were no government to create and enforce the use of a currency, it would have to be invented because it is simply too useful to do without. Primitive cultures used shells, beads or gold as money before there were governments. The physical form of money is irrelevant; what matters is that people know they can trade it for things they want. In modern economies, governments issue money in a convenient form, like bills or coins, and everyone uses it simply because it is more convenient than inventing an alternative.

In the Imperium, people use the credit because it is by far the most convenient way to conduct interstellar trade. The alternative would be for each world to have its own currency and to trade currencies whenever it wanted to conduct business with other worlds. Currency trading would be accomplished through the use of foreign exchange markets, where supply and demand would determine the price of each currency against every other currency. This might be practical for a few neighboring worlds, but in an economy like the Imperium's – which spans 1,100 worlds – the profusion of currencies would make trading difficult. The Imperial credit solves this problem by providing one currency for all interstellar transactions.

In short, the credit's value depends entirely on the desire of Imperial member worlds to engage in trade with one another. When peace and prosperity reign, the value of the credit rises relative to planetary currencies as more and more people try to buy a fixed number of credits to finance their interstellar transactions. Conversely, when war, strife or economic crisis strikes, the value of the credit falls as the risks of trade increase and people keep their money at home. This phenomenon has given rise to the expression "As the credit goes, so goes the Imperium."

Commercial Banking

The lack of a central bank forces private commercial banks to monitor their own relationships with one another. In a central banking system, the central bank guarantees the drafts of private banks by requiring them to maintain specified levels of reserves with it, then paying valid claimants from those reserves. In the absence of a central bank, banks must maintain reserves with one another to guarantee their drafts and other financial instruments.

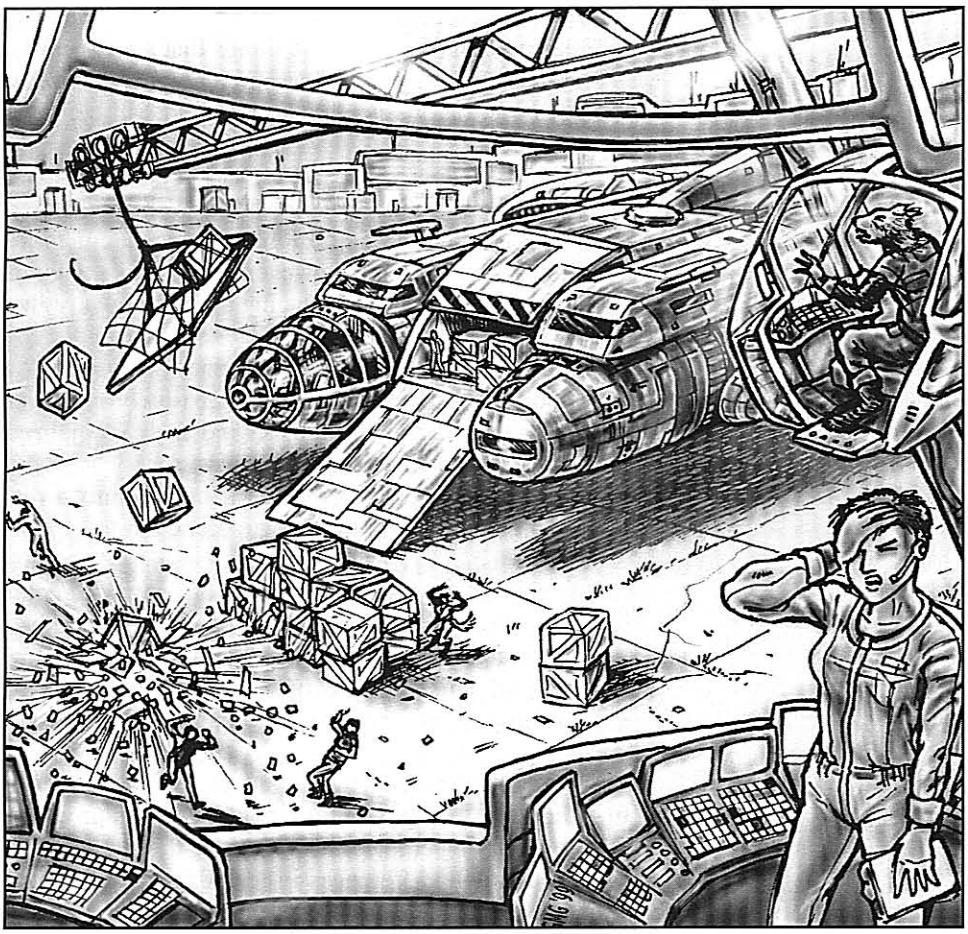
For instance, if a bank on Mertactor wishes to offer its customers the service of extending letters of credit for business on Glisten, it must first negotiate with a bank on Glisten to become its correspondent. A correspondent relationship means that the banks agree to honor each other's letters of credit at face value, subject to certain conditions. Foremost among these is the maintenance of reserve funds equal to an agreed-upon percentage of the volume of business they anticipate conducting. A

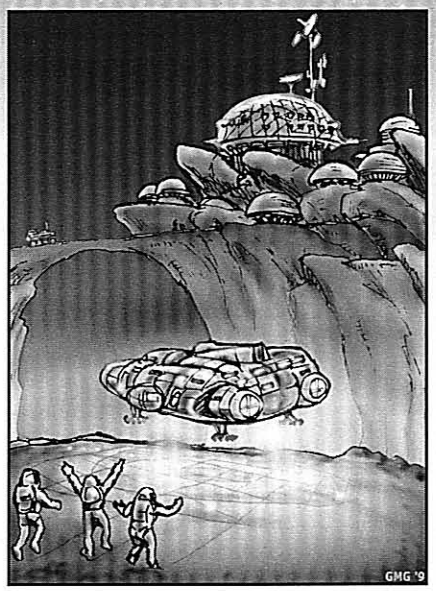
typical number might be 10% of the average amount of trade conducted in the time necessary for communication to complete a round trip between the two banks. Reserves act as a guarantee and as a cushion against any sudden imbalance in financial flows.

Reserves can take any form agreed on by the two banks. This could be a precious metal or a planetary currency, but it is almost always Imperial credits. Reserves *cannot* take the form of electronic transfers or other "imaginary" money, though; they have to be real, physical currency or precious metals. These valuables must be physically transported, usually using heavily armed couriers or appropriately escorted freighters. After the initial exchange of reserves, the physical transfer of wealth is called for only rarely. When financial flows are balanced, they simply cancel out and no net transfer is necessary. Only when a sustained outflow occurs from one bank to another are further transfers needed.

When no correspondent relationship exists between banks, clearing financial transactions is more difficult. Banks are still willing to honor letters of credit or drafts drawn on other banks, but they will do so at only a fraction of face value and for a considerable processing fee. The bank honoring the financial instrument must find the shortest link between itself and the issuing bank. This fairly easy when the two banks are in the same or neighboring subsectors, because there is usually at least one large industrial world with which everyone trades. This is likely the financial center for the region, and home to the local interstellar stock exchange (p. 47). Since most banks will have accounts with banks on this world, noncorrespondents can clear financial instruments through their mutual business correspondents there.

Transactions between parties further away than one or two subsectors will only be possible on large worlds connected through the Xboat routes. Otherwise, they will have to be conducted either through companies with the financial power and astrographic reach to accomplish them (like Hortalez et Cie), or by actually sending cash by mail or courier.





The Secret Firewall

"Why does the Imperial credit bear the name of the Sector Treasury that minted it? The official answer is that it is part of the serial-number system that guards against counterfeiting. Outside experts maintain that if this is true, it is an anachronism and no longer necessary.

"Conspiracy buffs have their own theory. They insist that it is a kind of monetary 'firewall,' intended to prevent the sort of financial contagion that brought down the Rule of Man. According to them, any sector that threatens the economic health of the Imperium can be financially "amputated" by removing Imperial backing from credit notes minted in that sector after a certain date. The sector's credits would in effect become a foreign currency whose value against the Imperial credit would be determined by market forces. Supporters of this theory maintain that if such a system had been in place, the Antares financial crisis would not have caused a general Imperium-wide collapse.

"Most historians agree that the Antares crisis was merely the proximate cause of the Second Imperium's fall, and that the Rule of Man was doomed regardless of the crisis' outcome. Still, the possibility that the founders of the Treasury made these kinds of preparations is intriguing. What other secret plans might be in place, lying dormant until the darkness of a new Long Night threatens?"

– Jorges Linkirgir,
The Hidden Imperium
(Pierce & Sons Press, Persephone, Spinward Marches: 1117)

Chapter Two

The Interstellar Economy

Example of Comparative Advantage

In the Glisten subsector of the Spinward Marches, there is a tremendous amount of trade in manufactured goods between Glisten (TL12) and Aki (TL9). Thanks to its TL advantage, Glisten can produce everything that Aki can produce, and can do so more efficiently. How, then, can there be gains from trade between the two worlds?

Imagine that Glisten and Aki can each produce and trade two manufactured goods: gravitic modules and drill presses. It takes a team of workers on Glisten one hour to produce a gravitic module and two hours to produce a drill press. A team of workers on Aki can produce a drill press in three hours, but gravitic modules take six hours to produce, because they are at the cutting edge of Aki's technological capabilities. If there are 40 hours in a work week and the workers split their time evenly between both products, Glisten's workers can produce 20 gravitic modules and 10 drill presses, while Aki's workers can produce 3.3 gravitic modules and 6.7 drill presses. Together, they have 23.3 gravitic modules and 16.7 drill presses.

Obviously, the workers on Aki are not as productive as their counterparts on Glisten, but the two worlds can still benefit from trading with one other. If each world concentrates on the product in which it has the greatest *comparative advantage* over its neighbor and then trades for the other product, both worlds will be better off.

If Aki specializes in drill presses, it can produce an extra 6.7 units. By importing 6.7 drill presses from Aki, Glisten can free up 13.4 hours and use that time to produce 13.4 gravitic modules. If Aki swaps its extra drills for Glisten's extra gravitic modules, they can both gain. Together, they would have 33.4 gravitic modules and 16.7 drill presses, a gain of about 10 gravitic modules per week. These 10 additional gravitic modules are the tangible gains from trade.

Commerce plays a crucial role in uniting the 11,000 worlds of the Imperium. The call of interstellar trade is also heard by the Imperium's most distant neighbors, and brings intrepid merchants from far beyond its borders. There are as many reasons for trading as there are inhabitants of known space, but three factors form the basis all trade: *variety, comparative advantage* and *economies of scale.*

Variety is the simplest and most visible reason for trade. Merchants bring goods from far and wide, providing the most tangible connection that most Imperial citizens have with the interstellar community. Consumers enjoy having more options to choose from, and may even value something solely because it has come from far away. The former Duke of Lunion was known for importing wines all the way from Terra, across the breadth of the Imperium, merely to impress his guests. Businesses also benefit from variety, since an off-world piece of equipment or software may solve their particular problems better than one that is available at home.

Comparative advantage is defined by the statement "each world should specialize in doing what it does best." For instance, an asteroid belt is an ideal place to mine and conduct industrial processes, but a poor place to grow food. A terrestrial world with a vibrant ecosystem is an excellent place to produce food and other organics, but has comparatively few easily accessible minerals. Interstellar trade lets each world specialize in what it does best and import those things that are expensive to make at home. The increase in efficiency and wealth this generates is so great that even if a world were better at *everything* than its neighbors, it would still be better off trading.

Economies of scale are everything that makes it cheaper to produce things in bulk than to manufacture them a few items at a time. Investments in specialized machinery, trained technicians, dedicated suppliers and long experience all make production more efficient. These things are expensive, however, and must be paid off by making the best possible use of them. This means producing and selling as high a volume of goods as possible.

Technology has a way of amplifying the importance of economies of scale. As human knowledge advances, so, too, do opportunities for progressively narrower specialization in increasingly obscure sub-fields. Specialists (and their specialized equipment) are only cost-effective if they can share their talents as widely as possible. Since only a small fraction of the economy uses their specific output, only a vast economy – an *interstellar* economy – can provide a market large enough to support them all.

No single world could possibly support the web of experts and specialized companies required by the Imperium's technological infrastructure. This is why the halt of interstellar trade at the end of the Second Imperium caused a rapid technological decline and ushered in the Long Night. This is also why merchants in the Third Imperium carry technology, in the form of people and goods, hundreds of parsecs to their destinations.

Despite the importance of interstellar trade to the economies of the Imperial member worlds, the Imperium is far from being a single, integrated economy. The expense of transportation, the months (or years) of travel time, the natural and human hazards of star travel, and the simple differences in technical specifications and human tastes combine to make regular trade from one end of the Imperium to

the other nearly impossible. Most worlds do not conduct significant amounts of trade beyond neighboring subsectors, and even the largest worlds rarely trade beyond neighboring sectors.

Interstellar trade played a crucial role in creating the Third Imperium and rolling back the Long Night, but it is history, politics and human will that continue to unite the Imperium.

Planetary Economies

The world statistics in ***GURPS Space, Traveller*** and ***Behind the Claw*** do an excellent job of describing many of the physical, social and political characteristics of a world. To describe a world's economy, we shall add three new statistics: *world trade number* (below), *trade classifications* (p. 13) and *traffic classification* (p. 13). Instructions for computing average per-capita income and gross world product (GWP) are also included (p. 14).

World Trade Number (WTN)

The *world trade number* rates both size of a world's economy and its tendency to engage in interstellar trade. It is determined in three steps.

1: Determine Unmodified World Trade Number (UWTN)

UWTN measures the size of a world's economy. It is dictated by the size of the world's workforce (depends on the world's population) and the productivity of that workforce (depends on the world's TL), as follows:

UWTN = TL Modifier + Population Modifier.

TL	TL Modifier
0-2	-0.5
3-5	0
6-8	0.5
9-11	1
12-13	1.5

Population	Population Modifier
0-9	0
10-99	0.5
100-999	1
1,000-9,999	1.5
10,000-99,999	2
100,000-999,999	2.5
1 million-9,999,999	3
10 million-99,999,999	3.5
100 million-999,999,999	4

. . . and so on, with each factor-of-ten increase in population adding 0.5 to Population Modifier. Note that Population Modifier is just Population Rating/2 (see p. S117).

2: Determine Port Modifier

Port modifier measures a world's propensity to trade, and is determined in part by the world's starport class. A good starport increases trade by making the world a more attractive stopover for merchant ships. More important, it reflects the world's desire for off-world contact.

Law of One Price

Buy low, sell high – the mantra of every merchant, import-export house, and trading company. As a result of the collective activities of such individuals, prices on one world are about the same as those around it. Transportation between worlds, distribution to points of sale, and so on, will cause the prices to diverge somewhat, but if they diverge too much, someone will notice the difference and "correct" it by shipping goods from worlds where the price is low to those where the price is high. This is called "arbitrage." There are so many people seeking arbitrage opportunities that an aspiring trader must be sharp to strike it rich.

Previous versions of ***Traveller*** ignored the market's power to eliminate arbitrage opportunities, which led to the economic equivalent of perpetual motion machines. For instance, if a trader looked for long enough, he could find an industrial, nonagricultural world next to an agricultural, nonindustrial one. Differences in the prices of goods on those worlds were large enough that a trip between them would give enormous profits – forever!

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Law of One Price

[Continued]

Why wasn't *every* trader in the sector doing the same thing? In fact, they should have been. At least enough traders would have joined this route for the inexorable law of supply and demand to force their profits down to a level no greater than those on any other route. Given that interstellar transport should cost about the same anywhere in a given area, just like goods, the price differences between the two worlds should ultimately have been driven down to no more than the cost of interstellar transport.

Everything that can be moved between star systems is subject to the Law of One Price, including products, labor and capital. When wages on one world are significantly higher than those on another, people emigrate from the low-wage world to the high-wage one. When investment opportunities are more profitable than those on another, people move their money from the low-profit world to the high-profit one.

A hidden assumption here is that the only difference between the two worlds is the price of labor or capital. Price differences will persist if there are other differences that can justify them. For instance, wages may be higher on one world than on another because workers have to live crammed into a hollowed-out asteroid, breathe recycled air and receive frequent, painful treatments for radiation exposure. Wages *must* be higher to get anyone to work under those conditions! Likewise, shipping freight to an area with a known pirate infestation, or to an Amber Zone, or to a world with poor port facilities and burdensome trade restrictions would cost more than shipping it to a more typical world. Thus, the Law of One Price should not to be taken absolutely literally. The GM should keep it in the back of his mind when detailing the economic background to avoid creating "perpetual motion machines" of his own.

Port modifier also depends on the size of the planetary economy. Planets with large and prosperous economies can better afford to invest in starport facilities, which makes it all the more unusual when they do not. For example, Forine – at 1.6 billion people and TL9 – has the second-largest economy in District 268, but only a Class II starport. The fact that Forine's starport cannot even perform minor repairs on starships, despite the world's size and affluence, indicates its indifference or even hostility to off-world trade.

Port Modifier Table

UWTN	Starport Class					
	V	IV	III	II	I	0
7+	0	-1	-1.5	-2	-2.5	-5
6-6.5	0	-0.5	-1	-1.5	-2	-4.5
5-5.5	0	0	-0.5	-1	-1.5	-4
4-4.5	+0.5	0	0	-0.5	-1	-3.5
3-3.5	+0.5	+0.5	0	0	-0.5	-3
2-2.5	+1	+0.5	+0.5	0	0	-2.5
1-1.5	+1	+1	+0.5	+0.5	0	0
<1	+1.5	+1	+1	+0.5	+0.5	0

3: Determine World Trade Number

World trade number (WTN) is given by:

WTN = UWTN + Port Modifier.

Trade Classifications

Trade classifications note clusters of economically meaningful world characteristics – important natural features that can influence a world's comparative advantage and pattern of trade.

Agricultural (Ag): Producer of foodstuffs. Earthlike terrestrial world with Thin to Very Dense atmosphere (0.43-2.49 atm), surface water 35-84% and population 100,000-99,999,999 (PR 5-7).

Asteroid Belt (As): Many small "worldlets" in place of a single world; rockball planetoids with diameters under 124 miles.

Barren World (Ba): No population (PR 0), government or law (CR 0).

Desert World (De): No water. A desert world has Very Thin or greater atmosphere (>0.09 atm) and surface water 4% or less.

Extreme (Ex): Inhospitable planet, requiring the use of domed habitats. Vacc suits or other protection required to venture outside. *Any* of: diameter is <500 miles; atmosphere is Trace or less (<0.10 atm), Superdense or greater (>2.50 atm), corrosive or exotic; surface water is <5%. If a world is As, De, Fl, Ic or Va, then it is also considered Ex.

Exotic Ocean (Eo): Oceans composed of fluids other than water. A greenhouse or hostile world with an exotic or corrosive atmosphere and surface "water" >5%.

High Population (Hi): Population of one billion or more (PR 9+).

Ice-Capped (Ic): Hydrographics contained in polar ice caps. An icy rockball world with a Trace atmosphere or less (<0.10 atm) and surface "water" >5%.

Industrial (In): Heavy industry forms a major part of local production. Trace or less (<0.10 atm) or polluted atmosphere, and a population of one billion or more (PR 9+).

Low Population (Lo): Population less than 10,000 (PR 3 or less).

Nonagricultural (Na): Dependent on synthetic food production and imports. Very Thin atmosphere or less (<0.43 atm), surface water <35%, population of one million or more (PR 6+).

Nonindustrial (Ni): Population less than 10,000,000 (PR 6 or less).

Poor (Po): Low-grade living conditions. Very Thin or Thin atmosphere (0.10-0.80 atm) and surface water from 5-35%.

Rich (Ri): High-grade living conditions. Earthlike terrestrial world with Standard to Very Dense unpolluted atmosphere (0.81-2.49 atm), population of 1,000,000-999,999,999 (PR 6-8), and a moderate to high level of government organization (CR 2-5).

Vacuum World (Va): No atmosphere (<0.001 atm).

Water World (Wa): Entire world surface (>94%) covered by water.

Traffic Classification

Traffic classifications were first introduced in ***Behind the Claw*** for use in random ship encounter tables. They have been adapted and redefined here to describe the level of commercial starship traffic passing through a star system. They indicate how connected planetary companies and merchants are to other worlds in the region; see p. 18 for more detail.

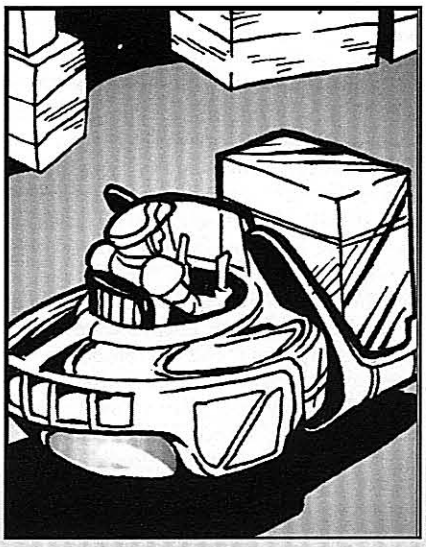
Main Route worlds are on Main Routes.
Feeder Route worlds are on Feeder Routes.
Backwater worlds are on Minor Routes.
Frontier worlds are not on any routes.

The presence or absence of a route passing through a system is determined in *Trade Flows and Trade Routes* (p. 14).

Trade Barriers: Port Modifier and Tariffs

Some worlds are more open to off-world trade than others. This is reflected in the level of starport they choose to build, as expressed by the Port Modifier (p. 11). A negative modifier could indicate a government or culture that discourages off-world trade, which can mean a high tariff barrier that makes it expensive to trade there. Smugglers and those who wish to sell speculative goods will want to know what the tariff rate actually is. The table below lists the upper bound on tariffs for a given negative Port Modifier. The range reflects the fact that tariffs could account for none, some or all of the modifier (GM's choice).

Port	Tariff Modifier
0	0% to 10%
-0.5	10% to 50%
-1	50% to 100%
-1.5	100% to 200%
-2 or worse	200% or more



What is GWP, Really?

Most people have heard the term "gross domestic product" or "GDP." GDP is a measure of economic activity within a country. Similarly, "gross world product" – or GWP – is a measure of economic activity within a world and its in-system colonies and outposts. It really is that simple, but many people have misconceptions about what "gross product"-type statistics actually measure, so it seems prudent to clear them up here.

Gross products are *not* direct measures of economic output. What they measure is the value of the *transactions* that occur between members of an economy. A society could be made up of enormously productive individuals, but if they didn't trade with one another, their gross product would be zero. This has important implications for interstellar trade statistics. Many small worlds have total trade levels higher than their GWP. If GWP were a measure of economic output, this would be impossible. Since it is not, there is a simple explanation.

Imagine a world populated principally by independent miners. These miners work alone or in small groups to extract mineral wealth. There are no local merchants or industries, and groups of miners have little contact with one another. All minerals are sold to – and supplies purchased directly from – free traders who visit the crude starport. As a result, this world has a tiny GWP and conducts trade worth several times this amount.

Total trade being higher than GWP tells you only one thing: The locals do more business with off-worlders than with each other. Since many worlds in ***Traveller*** have only the population of mid-sized 20th-century Terran cities, it should not be surprising that this is often the case.

There are many 20th-century Terran examples of the same phenomenon. Hong Kong, Singapore and Luxembourg all have trade totals two to three times their GDP. This may stun those whose point of reference is the United States, Canada or Australia, where trade is around 10% of GDP; however, of all the countries on Earth, these three have almost the lowest amount of trade expressed as a percentage of GDP. The median nation has a trade total of roughly 50% of GDP.

The trade and GWP figures in ***Far Trader*** are consistent with observations of both 20th-century Terra and the ***Traveller*** background.

Gross World Product (GWP) and Per-Capita Income

The *gross world product* of a planet is a measure of the size and activity of its economy. For our purposes, it can be calculated by multiplying the world's population by its average *per-capita income.* Base per-capita income depends on the world's TL, but may be modified for certain trade classifications. Use the tables below to find a world's per-capita income.

TL	Base Per-Capita Income (Cr)	TL	Base Per-Capita Income (Cr)
13	24,400	6	895
12	15,000	5	560
11	9,375	4	350
10	5,860	3	220
9	3,660	2	135
8	2,290	1	85
7	1,430	0	55

Trade Class	Modifier to Base Per-Capita Income
Rich	×1.6
Industrial	×1.4
Agricultural	×1.2
Poor	×0.8
Extreme	×0.8
Nonindustrial	×0.8

GWP is just per-capita income multiplied by the planetary population.

Trade Flows & Trade Routes

Two main factors determine where trades spring up: the flow of goods between buyer and seller, and the flow of passengers from world to world. These must be roughed in before a realistic map of trade routes can be created.

Bilateral Trade

Trade between worlds can be determined using this four-step procedure:

1: Determine World Trade Classification Modifier (WTCM)

The worlds' trade classifications (p. 13) and political allegiances (pp. 127-135) determine their World Trade Classification Modifier. WTCM starts at 0 and is modified as follows:

One world is Ag and the other is Ex or Na: +0.5.*
One world is In and the other is Ni: +0.5.*
Worlds do not share the same political allegiance: -0.5.**

* The logic of comparative advantage dictates that these worlds have more to gain from trade than an average pair of worlds of their size and TL.

** Worlds of different allegiances tend to trade less because they are more likely to have legal restrictions, tariffs, differing technological systems or simply different tastes.

2: Determine Distance Modifier

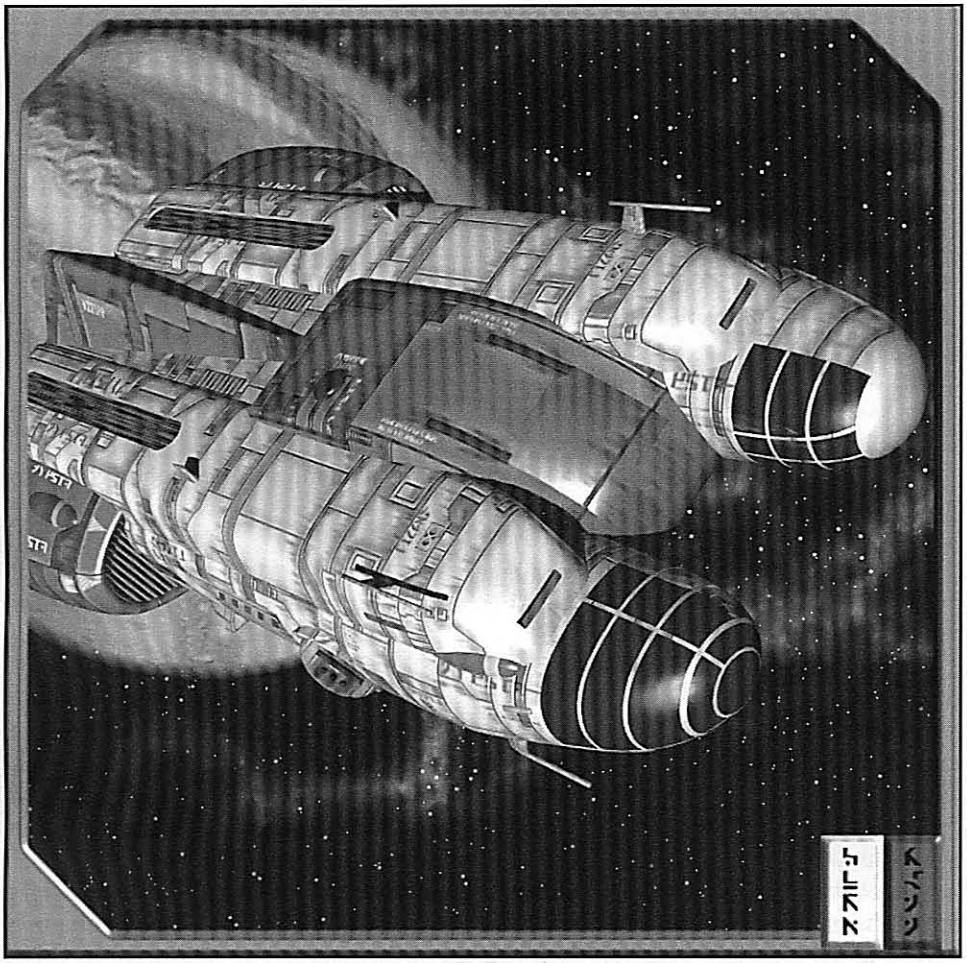
Determine the distance between the worlds in parsecs. Use the shortest navigable route: the route that seems most reasonable for a commercial vessel of the period and setting being considered. In the Imperium of 1120, navigable routes for commercial purposes will generally be jump-4 along Xboat routes and jump-2 elsewhere; see *Mapping Trade Routes* (p. 18) for more details. Look up the Distance Modifier on the table following:

Distance Modifier	Distance (pc)	Distance Modifier	Distance (pc)
0-1	0	60-99	3.5
2	0.5	100-199	4
3-5	1	200-299	4.5
6-9	1.5	300-599	5
10-19	2	600-999	5.5
20-29	2.5	1,000+	6
30-59	3		

3: Calculate Bilateral Trade Number (BTN)

Bilateral trade number measures trade between the two worlds. It depends on the world trade numbers (p. 11) of the worlds (WTN1, WTN2), the WTCM (p. 14) and the Distance Modifier (above):

BTN = WTN1 + WTN2 + WTCM - Distance Modifier.



Any model tends to break down at extreme values; this one is no exception. For example, Efate and Pixie in the Regina subsector are three parsecs apart. Efate is an industrial world of over 8 billion people, while Pixie is a tiny outpost of 90 people that gets a +1 bonus to WTN because of its Class V starport. Computing BTN using the standard procedure would produce weird results in a case like this. Comparing the economies of 8 billion people and 90 people is like comparing apples to oranges, so some adjustment is necessary to compensate for this:

BTN can never exceed the smaller WTN plus 5. This prevents extreme results when computing trade between extreme worlds.

Standard of Living:

Labor Productivity, Natural Capital, and Tech Level

The prevailing standard of living on a planet is to a great extent determined by its *labor productivity:* the amount that each worker in the economy produces in a given length of time. The more productive a society is per laborer, the higher its standard of living. More productive societies have more goods and services per person, more leisure time per person, or both; in other words, people do not have to work as hard to maintain a given lifestyle.

Labor productivity is, in turn, a product of technology (e.g., the wheel and the computer), human capital (e.g., education and training), physical capital (e.g., machines and roads) and natural capital (e.g., good farmland and available minerals). These factors are themselves related in important ways. Technology requires specialized people and equipment; i.e., human and physical capital. Likewise, human capital is not efficient without physical capital and technology to aid it. For instance, a ditch digger who can drive a bulldozer can't dig any faster than one who cannot drive a 'dozer if they both have only shovels, while a 'dozer is useless without someone who knows how to drive and maintain it.

Natural capital is the only factor that lacks obvious strong ties to the others. It depends mainly on the natural environment, not on human action – although there are exceptions. Humans can make deserts bloom and lay waste to forests, for example, and technology can expand the types of environments that humans can survive in and exploit.

In ***Far Trader,*** it is necessary to attach numbers to the concepts described above. Standard of living is an important element in international trade, since more affluent societies have more to trade and thus trade more often. Previously published ***Traveller*** material tells us nothing about the education level or the amount of equipment available per worker on the worlds of the Imperium and its neighbors. We do know local TL, though, and we know that it is strongly related to both human and physical capital, so we can use it as a stand-in for these two factors.

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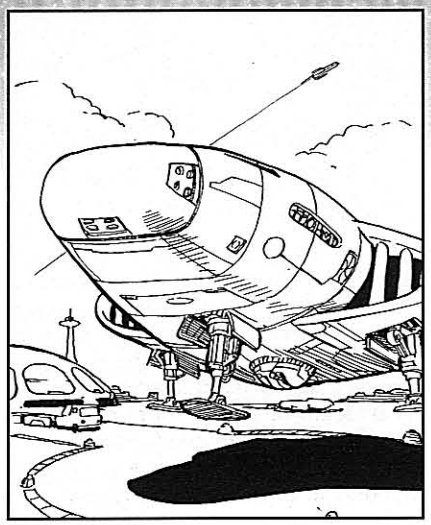

Standard of Living

[Continued]

This leaves only natural capital unaccounted for. We have a number of planetological parameters – temperature, atmosphere, hydrosphere, gravity, etc. – but looking at the worlds of the Imperium, it becomes obvious that there has to be more to it than that. There are many worlds with unredeeming natural features – high gravity, insidious atmosphere, blazing heat, etc. – that are teeming with people. We can make up political or social reasons for this, but we must ultimately concede that there needs to be some *positive* reason for people to settle all these inhospitable worlds. Planetological statistics may give us a good idea of the *average* natural capital of a world, but they often don't tell us a thing about the specific resources that attracted people to it.

Far Trader resolves this issue by leaving natural resources largely unspecified and assuming that if people can maintain an adequate TL and standard of living on a seemingly inhospitable world, then the world must have redeeming features enough to make up for its obvious shortcomings. We also assume that Imperial citizens are smart enough to make the best use of each planetary environment. For instance, all worlds with the *Industrial* trade classification (p. 13) have tainted or polluted atmospheres, but this does not mean that all such worlds had pristine atmospheres that were sullied by industry. It is just as likely that polluting industries were located on worlds that lacked breathable atmospheres to begin with.

Since the world descriptions of scores of planets predate this book by a decade or more, our purpose is to make our economic assumptions fit the existing ***Traveller*** background rather than vice versa.

4: Interpret the Results

BTN can be translated into credits and dtons of cargo using the following table:

BTN	Credits/Year	Dtons/Year	Dtons/Week	Dtons/Day*
0	0-5	0	0	0
0.5	5-10	0	0	0
1	10-50	0	0	0
1.5	50-100	0	0	0
2	100-500	0	0	0
2.5	500-1k	0	0	0
3	1k-5k	0	0	0
3.5	5k-10k	0	0	0
4	10k-50k	0-5	0	0
4.5	50k-100k	5-10	0	0
5	100k-500k	10-50	0	0
5.5	500k-1M	50-100	0-5	0
6	1M-5M	100-500	5-10	0
6.5	5M-10M	500-1k	10-50	0-5
7	10M-50M	1k-5k	50-100	5-10
7.5	50M-100M	5k-10k	100-500	10-50
8	100M-500M	10k-50k	500-1k	10-50
8.5	500M-1G	50k-100k	1k-5k	50-100
9	1G-5G	100k-500k	5k-10k	100-500
9.5	5G-10G	500k-1M	10k-50k	500-1k
10	10G-50G	1M-5M	50k-100k	1k-5k
10.5	50G-100G	5M-10M	100k-500k	1k-5k
11	100G-500G	10M-50M	500k-1M	1k-5k
11.5	500G-1T	50M-100M	1M-5M	1k-5k
12	1T+	100M-500M	5M-10M	1k-5k

Abbreviations: k = thousand (kCr or kilotons); M = million (MCr or Megatons); G = billion (Gigacredits [GCr]); T = trillion (Teracredits [TCr]).

* Available for free traders to ship; the *total* amount will be higher. See also *Average Volume of Tramp Freight* (p. 23).

To find the actual value for a world pair:

Ranges beginning with 1: Roll 1d-1 (rerolling 1s) for the first digit and 2d-2 for the others.

Ranges beginning with 5: Roll 1d+4 for the first digit and 2d-2 for the others.

The credit value of bilateral trade is constrained to be the same on both ends of the route (balanced trade), but the physical dton volume can vary on either end, since worlds may export things with different value densities. For instance, an industrial world might export a tiny volume of valuable agricultural machinery to an agricultural world and receive a huge volume of grain in return.

In converting from credits to dtons of trade, the table above assumes that freight is worth, on average, between Cr10,000/dton and Cr50,000/dton. This assumption breaks down for trade over very long distances, because the freight ends up being worth less than the cost of transporting it! For long-distance trade, apply the following modifier to BTN before reading the volume (but *not* the credit value) of trade from the table:

Distance	BTN Modifier
<50	0
50-99	-0.5
100-499	-1
500-999	-1.5
1,000+	-2

If the volume of trade is 0 – either initially or as a result of this modifier – trade with the listed credit value still takes place, but in the form of information (scientific data, electronic blueprints, etc.) instead of goods. This takes up negligible volume.

Interstellar Passenger Traffic

The movement of people is nearly as important to the interstellar economy as the movement of goods. Business travelers pave the way for the goods that follow by closing deals and opening new markets. Scientists and technicians carry with them a great deal of specialized knowledge. Laborers on "guest worker" visas relieve local labor shortages and earn precious foreign exchange that can be used to import goods into their home world. Even tourists contribute to the interstellar economy by earning money one place and spending it another.

The Bilateral Trade Number (p. 15) is also used to determine the volume of passenger traffic between worlds. Since passenger traffic is influenced by different factors than freight traffic, we use an *Effective BTN* for passenger volume. Effective BTN equals regular BTN with these modifiers:

Each world that is a Rich (Ri) world: +0.5.*

Each world that is a Subsector Capital: +0.5.**

Each world that is a Sector Capital: +1.**

* Rich worlds are attractive tourist destinations due to their Earthlike environments.

** Capital worlds attract tourists and, more importantly, a steady flow of industry and government travelers doing the Imperium's business.

To determine the number of passengers traveling between a pair of worlds for a given time period, refer to the table below:

Effective Passengers/BTN	Passengers/ Year	Passengers/ Week	Day*
<5.0	0	0	0
5.0	0	0	0
5.5	0-5	0	0
6.0	5-10	0	0
6.5	10-50	0	0
7.0	50-100	0-5	0-5/week
7.5	100-500	5-10	5-10/week
8.0	500-1k	10-50	0-5
8.5	1k-5k	50-100	5-10
9.0	5k-10k	100-500	5-10
9.5	10k-50k	500-1k	10-50
10.0	50k-100k	1k-5k	50-100
10.5	100k-500k	5k-10k	50-100
11.0	500k-1M	10k-50k	50-100
11.5	1M-5M	50k-100k	50-100
12.0	5M-10M	100k-500k	50-100

Abbreviations: k = thousand; M = million.

* Available for free traders to transport; the *total* number will be higher.

To find the actual value for a world pair:

Ranges beginning with 1: Roll 1d-1 (rerolling 1s) for the first digit and 2d-2 for the others.

Ranges beginning with 5: Roll 1d+4 for the first digit and 2d-2 for the others.

Average passenger traffic volumes *are* constrained to be the same for both worlds in the pair. The passenger traffic figures are for travel, not emigration, so all trips are assumed to be round trips. The GM is free to introduce mass migration into his game, but this is best done on a case-by-case basis.

Trade Balance in Traveller

Careful reading of the interstellar economics rules will show that trade between any pair of worlds always balances. In the real world, though, trade hardly ever balances between nations for two reasons: *multilateral trade* and *capital flows.*

If there were only two planets, trade would have to balance for the same reasons that supply and demand have to balance. The universe is made up of far more than two worlds, though, so trade between *pairs* of worlds does not have to balance as long as interstellar trade balances *overall.* For instance, a planet could have a trade deficit with one world offset by a trade surplus with another. This flexibility is appealing, but quickly gets messy in a game. It would be nearly impossible to figure out the pattern of trade between worlds without including every world they trade with in the model. This would be onerous under even the best of circumstances, so multilateral trade considerations have been eliminated from the game in the name of playability.

Capital flows raise another problem: Even in bilateral trade, they make a prolonged trade imbalance possible. Consider the 20th-century Terran example of Japan and the United States. Both had highly productive industrial economies, but Japan had a high savings rate while the U.S. had a low savings rate. Supply and demand being what they are, this meant that interest rates (the price of borrowing someone's savings) were low in Japan and high in the United States. Japanese savers thus wanted to lend money to American borrowers to take advantage of the high U.S. interest rates, which meant that they wanted to buy a lot of U.S. dollars. This demand for the dollar drove up its price, with the result that American exports to Japan became expensive for Japanese consumers, while Japanese products became cheap for American consumers. This led to a long-term trade imbalance, with the Japanese buying fewer American goods and the Americans buying more Japanese goods.

Trade imbalances caused by capital flows could be interesting for far traders trying to keep their holds full of goods in both directions, but they would require Game Masters and players to keep track of a whole other set of financial variables. Of course, the GM is free to introduce trade imbalances where he thinks they might be fun – always a better reason for doing something than any complicated game mechanic!

Technology, Productivity, and Exchange Rates

A world's exchange rates are, in the long run, purely a function of its productivity. Productivity determines how much things cost in an economy: as productivity rises, costs fall; as the value of an average worker's output rises, his real income also rises because his wages can buy more. In ***Far Trader,*** productivity is determined entirely by TL (see *Standard of Living,* p. 14).

To understand how productivity and TL affect exchange rates, imagine that each planet has its own currency and that we have fixed the income of the average worker on all planets to be 10,000 credits/year – be they "high-TL credits" or "low-TL credits." Each high-TL credit can buy more on a high-TL world than each low-TL credit can buy on a low-TL world, because a high-TL economy is more productive than a low-TL one and has more output per worker available to buy. Since each high-TL credit can be exchanged for more goods and services, it is more valuable. If someone from a low-TL world wants to buy something from a high-TL world, he must exchange more than one of his low-TL credits for each high-TL credit to make up for the fact that a low-TL credit can buy less. Thus, the exchange rate is determined by the TL difference.

The *magnitude* of this effect depends on how much more productive workers become with advances in TL. ***GURPS*** has a specific rule that spells out part of this: one TL after an item's introduction, the price drops to 50%; two TLs after, the price drops to 25%. This implies that productivity in the manufacturing sector doubles every TL. Overall productivity for a society does *not* double every TL, because not everything is a recently introduced manufactured product.

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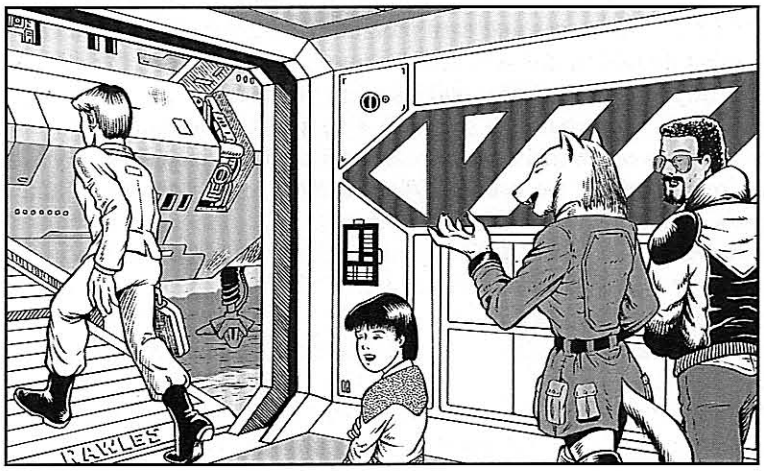
Trade Routes

Knowing the amount of trade between pairs of worlds does not give a complete picture of interstellar shipping. Trade flows along *routes:* from Xboat routes traveled by many huge express freighters a day to out-of-the-way mains that see only a few small merchants a week. The degree of activity along a route determines things like what sorts of ships can be found there, how much traffic can be expected at the starports, and the odds of finding certain kinds of cargoes or passengers. Perhaps most importantly for free traders and other tramp ships, it shows where competition with established companies can be avoided.



Trade routes are classified according to BTN along those routes:

Main Routes (BTN 10+) have dtons of cargo/week in the high tens of thousands to millions range, or more. Many 1,000+ dton freighters and somewhat fewer 10,000+ dton super-freighters will typically work these routes.

Feeder Routes (BTN 9+) have dtons of cargo/week in the high thousands to low tens of thousands range. About eight 1,000+ dton freighters plus a dozen or more free traders will typically work these routes.

Minor Routes (BTN 8+) have dtons of cargo/week in the high hundreds to low thousands range. On the order of a half-dozen liners and another half-dozen tramp ships will typically work these routes, all well under 1,000 dtons. Larger commercial vessels are only rarely seen.

Mapping Trade Routes

Creating trade-route maps is both an art and a science. These guidelines are intended to make an otherwise confusing task more systematic and to make maps of the same place look as similar as possible when drawn by different people.

Before drawing a map, you will need the *complete* economic statistics for your subsector. With these in hand, begin with the highest WTN world and draw all of the Main Routes for it. Then draw the Main Routes for the world with the next-highest WTN and so on, until all Main Routes have been drawn in. Repeat this process for Feeder Routes, once again starting with the highest WTN world and working down. Repeat this again for Minor Routes.

Remember to follow jump-2 routes. Jumps longer than two parsecs are only permitted along Xboat routes or when a route of at least Feeder magnitude can save a jump or more by using a jump-3 route. The likelihood of a jump-3 route existing increases when such a route can be used to avoid poor starports, Amber Zones or worlds of different allegiance. Having other jump-3 routes in the vicinity helps as well, since ships can switch between them and manage capacity better.

If three or more routes of a particular size pass between two worlds, replace them with *one* route of the next size up. For instance, if three Feeder Routes pass between Collace and Mertactor, they should be replaced by one Main Route. This would likely be the result of traffic from several sets of trading partners on either side of Collace and Mertactor passing through those two worlds.

If a world has *no* routes, but has enough trade going through a particular neighbor to add up to a Minor Route, go ahead and give it one.

If the background seems to suggest that a route is necessary where none exists, go ahead and add one. Conversely, if a route exists where the background suggests that a lesser route or no route should exist, it can be down-graded or eliminated. Use this freedom carefully, since it can quickly lead to arbitrary maps.

Where there's a choice between two paths for a route, always take the one with the most traffic already on it.

Basic Trade System

This is a highly simplified version of the *Advanced Trade System* (p. 20). It is easier to make money under these rules because they are intended for use in campaigns that feature trade only as a backdrop for other adventures. They assume that the GM does not wish to make the players work too hard navigating the trade rules just to break even. There are tips in Chapter 6 for GMs who wish to make their players' lives more difficult.

Freight

Availability: 2d × BTN dtons are available for the traders' destination that day. If it matters, assume this is breakbulk (see *Freight Handling,* p. 55). The characters only have to pay for freight handling if they are shipping speculative cargo (see *Terms of Shipping,* p. 54).

Price:

Main and Feeder Routes: Cr600/dton/parsec.

Minor Routes and Frontier Worlds: Cr650/dton/parsec.

Passengers

Availability: (1d-1) × BTN passengers are available for the traders' destination that day. To find the number of low, middle and high passengers, roll 1d for each category, starting with low, and subtract the result of each roll from the total passengers for the day. Repeat until all passengers are assigned or until there are enough to chose from. A ship can accept as many passengers as are available, to the limit of its staterooms or low berths (as appropriate).

Ticket Price:

High Passage: Cr3,500.

Middle Passage: Cr1,750.

Low Passage: Cr175.

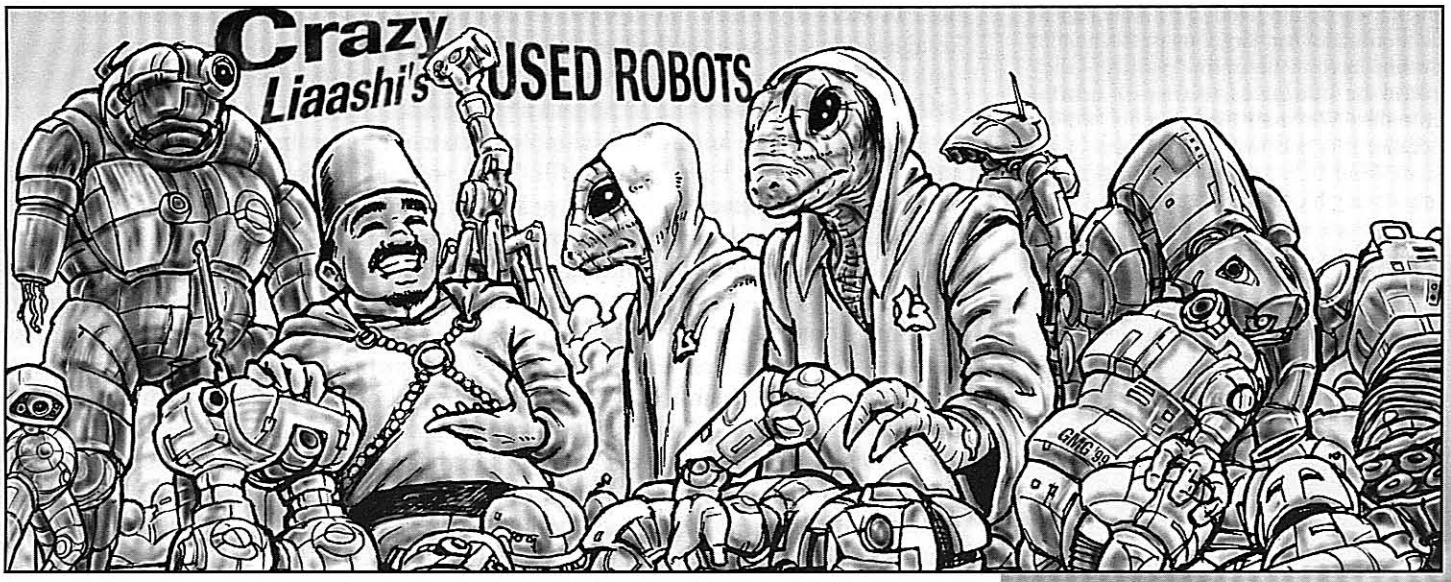
Technology, Productivity, and Exchange Rates

[Continued]

Services, for example, don't get much more efficient with TL; it takes just as long to get a haircut today as it did 100 years ago. Things that are in limited supply are another example. For instance, real estate just gets more and more expensive as incomes increase and people can afford to pay more. Not all manufactured goods get cheaper every TL, either. Only recently introduced manufactured goods get a price cut, and many things that are manufactured at a TL were invented more than two TLs earlier. Taken together, this means that a society's economic output only increases by about 50% – not 100% – per TL. The tables for exchange rates (p. 48) and per-capita income (p. 14) reflect this.

The exception to this rule for exchange rates is TL12 worlds. These are the most advanced worlds in the Third Imperium (which otherwise averages TL10), so there is an extraordinary demand for their products. If their exchange rates followed the default rule, TL12 worlds would not only be the only source of TL12 goods, but also the cheapest source of TL10-11 goods. Since everyone would be trying to buy their products, prices would rise.

The principle of comparative advantage (p. 10) says that prices would rise to the level where it would make the most sense for TL12 worlds to focus on doing what they are uniquely capable of: producing TL12 goods. This is reflected by the spike in exchange rates for TL12 worlds. It is not reflected in the per-capita income table because while wages increase by more than the usual 50%, it is only enough to compensate for the extra increase in local prices. Real income and purchasing power stay the same.



Advanced Trade System

This is a more advanced trade and commerce system, intended for campaigns which will concentrate heavily (if not completely) on the mercantile aspects of the ***Traveller*** universe.

The Freight Shipping Business

The shipping business is concerned with getting the goods that make up the interstellar economy to their destinations. Some of the most important players in the business are *shipping lines, cargo brokers* and *tramp ships.*

Shipping Lines

The most visible players in the interstellar shipping business are the shipping lines. Whether they are Imperium-wide megacorporations or merely local subsector concerns, the companies that maintain scheduled freight and passenger service among the worlds of the Imperium are known as "shipping lines" or simply "liners."

Liners carry the vast majority of interstellar freight and passengers. These companies commit enormous resources, in the form of ships and port-side personnel, to maintain an interlocking web of routes with scheduled arrivals and departures. The reliability of shipping lines is crucial to the stability of any interstellar economy. Companies need to be able to count on steady access to off-world suppliers and markets to integrate them into their production decisions. Without this integration, the Imperium's high-technology society would not be sustainable (see *Economies of Scale,* p. 10).

To make these huge investments in ships and personnel pay off, the shipping lines must manage both their ships and their freight contracts very carefully. The various shipboard departments (pp. 79-80) and the administrative department (p. 80) ashore are responsible for seeing that their company's ships spend only as much time in port as is absolutely necessary and then get back into jumpspace where they earn their money. The sales department (p. 80) – made up of dedicated cargo brokers – keeps the ships' holds full of paying cargo.

The importance of a line's internal brokers varies from company to company. Some organizations rely on independent brokers as much as their own to find freight for them. Other companies (mostly Solomani in origin) even go so far as to have their brokers organized into a separate company that has to compete with other brokerages to lease space on their own lines' ships.

Cargo Brokers

Brokers play a key role in shipping: matching customers who have goods to ship with ships that have holds to fill. They are the "market-makers," and rely on a wide variety of contacts and skills to do their job. A broker must be part speculator, part salesman, part loan shark and part merchant. He may work for a shipping line or a frequent exporter, or he may be an independent agent.

Shipping cargo is a risky business, and cargo brokers make part of their money by taking some of that risk off of other people's hands. Ship owners have taken a big risk by investing in an expensive piece of equipment on the assumption that exporters will pay them to carry cargo in it. They often have 40-year mortgages to pay off (p. 98), and if they had their way, they would have their ships booked solid 40 years in advance. Exporters, on the other hand, want shipping capacity standing by to handle their goods and want to be able to contract for it at the last possible moment. If they have to sign up for hold space ahead of time, they run the risk of being stuck with too much or too little. Enter the cargo broker.

The Gravity Trade Model

To understand the logic behind the trade model in ***Far Trader,*** it helps to look at its origins in real-world economics. Economists have developed many theories concerning international trade, but none of them is as useful for predicting trade flows among nations as the *gravity model.* The gravity model is so named because it is based on a decreasing function of the distance between two "masses," just like gravity. In this case, "mass" indicates the size of an economy. The variables used in real-world gravity models are economic size, average wealth, distance and measures of the economies' comparative advantage.

An economy's size is usually indicated by its GWP (p. 14), and is the most important predictor of how much it will trade with other economies. Trade volume increases more slowly than size because smaller economies tend to be more dependent on trade than larger ones. Economies do not have to be entire worlds – they could be countries, cities or orbital colonies. We shall discuss only worlds because it is best to use economies of the same kind in a gravity model to avoid introducing hidden differences.

Average wealth is measured by per-capita GWP. As the average wealth of people in an economy increases, so does their propensity to trade. This means that a small, wealthy world will trade more than a large, poor one – even if their economies are the same size. While increases in average wealth always lead to increases in trade, the effect grows rapidly at first and then diminishes.

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Brokers lease or contract for large chunks of cargo space from shipping lines or individual ships, far in advance and at discount wholesale rates, then sell this to exporters in smaller lots on short notice. To ensure that they have buyers, brokers seek long-term contracts with exporters, which usually involve a monthly fee plus a per-dton charge for any freight that they ship. Brokers must buy just enough capacity to meet the needs of all their regular customers, and at the lowest possible price. This is trickier than it sounds, because the brokers' regular customers do not know how much capacity they will need in advance – if they did, they wouldn't need a broker. Brokers get rich or go broke on the basis of their ability to manage this risk better than exporters or ship owners.

Tramp Ships

Sometimes, even the best broker gets it wrong and winds up with too much or too little freight at the last minute. As well, the undersupply of liners guarantees that there will be brokers with freight looking for transport at almost every port. Finally, brokers often need to find a ship for a client who wants to ship something on short notice.

When a broker needs to find freight to carry, or must contract someone to carry freight, he goes to the *freight spot market,* also called the *tramp freight market.* Since there is almost always a shortage of inexpensive freight liner capacity, it is the tramp ship – the free trader – that fills the gap and provides much of the cargo capacity available on the spot market.

Tramp ships are ships that do not follow a set and scheduled route, but instead go wherever the most profitable opportunities appear to be. "Free trader" is the more romantic term used to describe small tramp ships of roughly 400 dtons or less. Tramp ships exist to fill the gaps in shipping supply left by the shipping lines. These gaps are left partly due to the nature of the liner business and partly due to unexpected shifts in demand that the lines, with their sprawling interlocked routes, cannot easily respond to.

The Gravity Trade Model

[Continued]

The effects of distance on trade vary greatly, depending on the cost and time involved in transportation and communication. On a single, high-tech planet, distance becomes almost meaningless as instantaneous communication and rapid transportation create a kind of "global village." By contrast, distance is of enormous importance to trade within the Imperium, where communication is limited to the speed of the fastest ships, which can travel a few parsecs a week at best. Not only does this make it more difficult for distant worlds to trade, but it means that the farther apart two worlds are, the more likely it is that a closer trading partner will exist that can satisfy their needs. The cost of transporting goods between systems may only go up linearly, but the difficulties noted above make trade drop off much more quickly.

Comparative advantage is described in the real world by such measures as capital-to-labor ratio, worker education and arable land-to-population ratio. The trade classification system (p. 13) describes these kinds of things in our model.

The standard gravity model has been modified here to be more usable and to conform to the ***Traveller*** background. The trade model for ***Far Trader*** uses five variables: distance, population, starport class, TL and trade classification. TL and population jointly capture the effects of GWP and GWP per capita. Distance and trade classification are used for reasons described above. Starport class shows any underlying trade propensity not captured by the other variables; see *Trade Barriers* (p. 13).

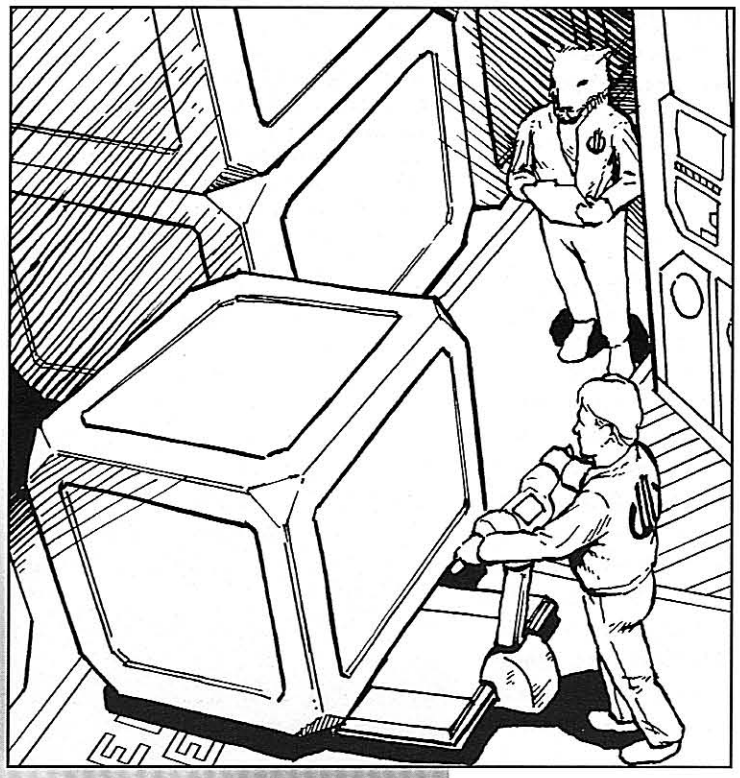
Technology and Patterns of Trade

GURPS' rules for productivity lead to somewhat unexpected patterns of trade in an economy where worlds of many TLs coexist side-by-side. In Imperial space, the most advanced worlds are TL12 (with a few exceptions). These worlds export TL12 goods because they are the only source of such items. Tech level 11 worlds export TL11 goods, but are also the cheapest source of TL9-10 goods. Likewise, TL10 worlds export mostly TL8-9 goods, and TL8-9 worlds export mostly TL6-8 goods. Worlds below TL8 are sources of raw materials – if anyone trades with them at all.

A curiosity of the ***Traveller*** universe is that low-TL worlds do not seem to catch up technologically over the centuries. The price discount rules for TL (see p. GT112) offer a potential explanation:

Engaging in interstellar trade with worlds of higher TL reduces the economic incentive for a world to stretch its technological capabilities, or even produce everything that it is currently capable of, because higher-TL worlds will always be able to do it more cheaply. The only area where high-TL worlds cannot compete with low-TL ones is in the production of low-TL goods. This retards the technological advancement of low-TL worlds.

GMs are free to interpret this however they like. Those who prefer an "illuminated" background may see this is as part of the Conspiracy; others may see it as merely an unfortunate economic truth.



Freight Price and Availability for Tramp Ships

The actual going rate on a world can differ substantially from the average rate. Business cycles, seasonal shifts in demand, disruptions further up a route and many other unforseen factors can cause weekly shifts in supply and demand. These conditions normally persist for some time, but the movements of tramp ships that seek out worlds with high freight prices and avoid those with low ones serve to push freight rates back toward their average values.

Average Freight Rates

The lines, brokers and tramps that constitute the shipping system work effectively to get freight to its destination at a competitive price. This price depends on a host of factors that vary from route to route and week to week. The following table lists the average price, inasmuch as an average price can be said to exist at all:

Advance Purchase	Average Freight Rates (Cr/dton/pc)		
	1 Parsec	2+ Parsec	Express
16 weeks	Cr450	Cr400	Cr800
12 weeks	Cr505	Cr450	Cr885
8 weeks	Cr570	Cr505	Cr975
4 weeks	Cr640	Cr570	Cr1,075
2 weeks	Cr670	Cr605	Cr1,130
<1 week or Tramp	Cr700	Cr650	Cr1,200

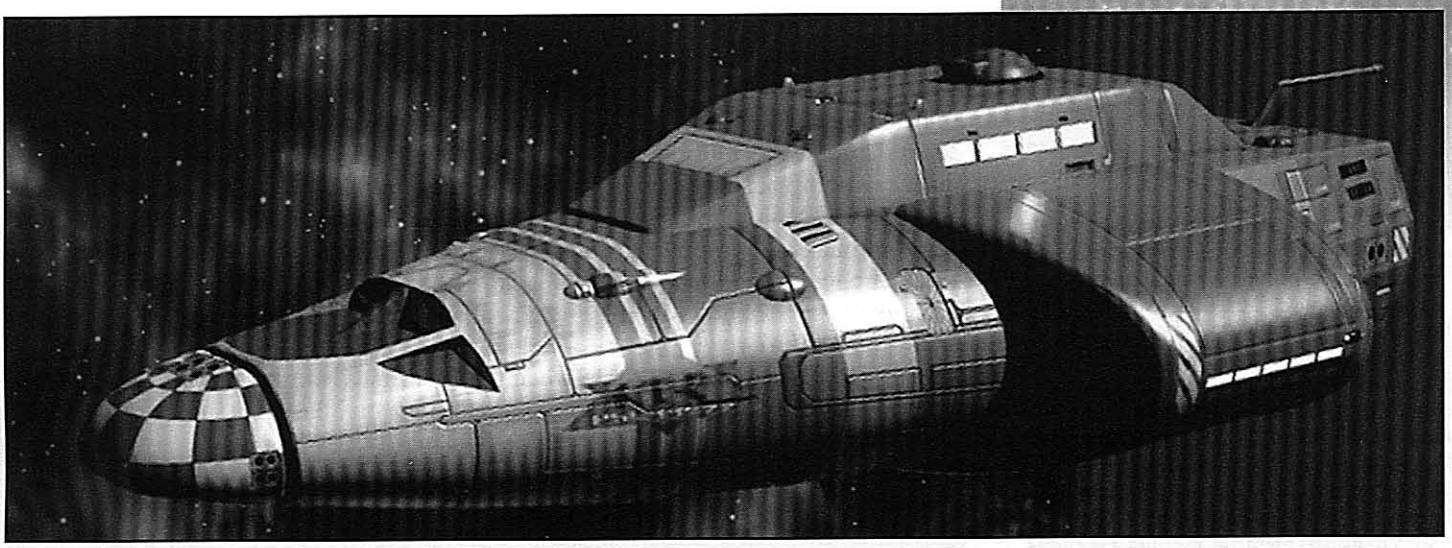
The first column shows how far in advance the cargo space is booked. Lines try to encourage early booking because it makes planning easier and lowers their risk. The 16-week row shows the lines' bare-bones cost of doing business, but preferred customers and those who buy space *far* in advance of 16 weeks can expect a further discount of up to 10%. The one-week row shows what tramp ships must charge to barely get by; use these rates for free traders who show up in port looking for freight. As the departure date approaches, lines and brokers raise their rates toward those charged by tramps to reflect the additional cost and risk of short-notice shipments.

The second column shows the rates for voyages of only one parsec. These rates are higher than those for longer voyages simply because jump-1 vessels cover fewer parsecs a month and hence must charge more per parsec to cover their mortgage.

The third column gives rates for voyages longer than one parsec. It is assumed that the shipment will be carried by a jump-2 vessel along a jump-2 route; however, many lines maintain fleets of jump-3 ships. Jump-3 ships have per-parsec costs only slightly higher than jump-2 vessels when they are using their full jump capabilities. Like all ships, though, their costs are higher than a ship of lower maximum jump when astrography forces them to jump at less than their full capability.

The final column, "Express," is used for freight carried aboard a jump-4 ship along an Xboat route. Express service is only available off Xboat routes by charter. The 16-week advance rate is nearly twice the 16-week rate for jump-2 travel, but since jump-4 ships can often take a more direct route in addition to covering more parsecs per jump, they are frequently able to make a journey in considerably less than half the time needed by a jump-2 ship. This makes express shipments an excellent value for the customer.

The following table gives a general cost comparison by jump capability:



Jump Capability	Cost/dton for Liner Cargo Per Jump	Per Parsec
J-1	Cr435	Cr435
J-2	Cr725	Cr365
J-3	Cr1,125	Cr375

Jump-2 ships have the lowest per-parsec costs, with jump-3 ships a close second. Jump-3 ships lose their ability to compete with jump-2 ships on a per-parsec cost basis when they have to operate below jump-3, however. Since astrography frequently forces jump-3 ships on longer routes to make several jumps shorter than three parsecs, their costs are raised somewhat. The fact that they can sometimes take shortcuts makes up for this. The time savings can be used to justify the modest price increase to the customer.

For example, imagine that a jump-2 ship and a jump-3 ship are both going to a destination 10 parsecs away along a straight line. The jump-2 ship takes five jumps at Cr725/dton/jump for a total cost of Cr3,625/dton. The jump-3 ship takes three 3-parsec jumps and a 1-parsec jump for a total of four jumps at Cr1,125/dton/jump and a total cost of Cr4,500/dton. The jump-3 ship saves a little over a week of transit time but costs 25% more. Fortunately for the jump-3 ship, some customers value the time savings enough that the jump-3 ship can raise its prices to cover this additional cost.

When jump-3 ships compete with jump-2 or slower ships to carry cargo between two worlds, use the following equation to determine the price that jump-3 ships can charge for their faster service:

J-3 Price = (J-2 Voyage Time/J-3 Voyage Time) × J-2 Price.

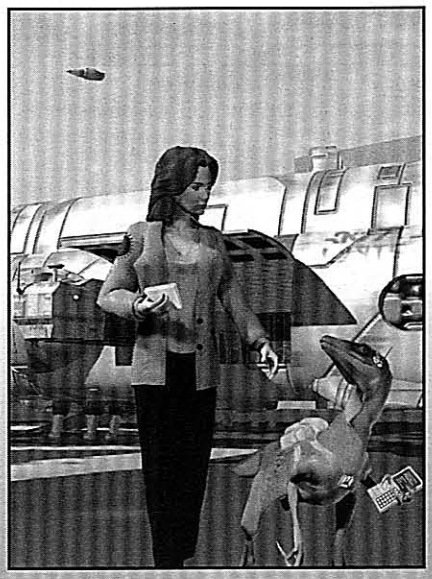
Do *not* use this equation when a dedicated jump-3 route exists (see *Mapping Trade Routes,* p. 18). On dedicated jump-3 routes, the competition among jump-3 ships lowers the price to the standard cost listed on the table under *Average Freight Rates* (p. 22).

Average Volume of Tramp Freight

The amount of trade that exists between a pair of worlds is calculated in *Trade Flows and Trade Routes* (pp. 14-19), in both value and volume terms. The average volume of trade that is *not* already committed to shipping lines, and which is thus available to tramp ships, can be determined by consulting the last column of the table under *Interpret the Results* (p. 16) and following the instructions for interpolating within the ranges. Record the average volume for each world in the pair for future reference. Remember that while the value of trade must be the same for both worlds, the volume can vary.

Jump Routes

Chains of worlds no more than one parsec apart are called "mains." These were central to the development of the First Imperium. Ships of that era could not jump more than one parsec at a time, so mains were the conduits for all exploration, travel and trade. In the modern Third Imperium, they are somewhat overshadowed by Xboat and other high-jump routes, but still remain important. The mains also provide convenient avenues for high-jump ships, because they guarantee a system to refuel in at their maximum jump range. Some mains carry a great deal of trade, while others are bypassed; some Xboat routes connect economically important worlds and carry goods as well as communications, while others do not. Trade routes often follow mains and Xboat routes, but they don't *have* to – they can exist any place with favorable markets and astrography.



Competition in the Shipping Industry

The ships and facilities needed to run a shipping line are enormously expensive up-front investments. Once this equipment has been purchased, the bank payments will keep coming due whether it is being used or not. Even if the line is a megacorp and can expand using retained earnings rather than loans, the managers in charge must show a return on the investment or answer to their boss. This puts an enormous pressure on line managers to fill their ships' holds at any cost. If the market is in a downturn, any freight that pays more than the cost to handle it represents a few more credits towards the next bank payment. If nothing else, this strategy postpones bankruptcy. Intense price competition in low demand/high supply markets is characteristic of any industry which shares the shipping industry's high fixed costs.

The shipping industry tends to be cyclic in its profitability. When demand is high and times are good, the high cost of entering the business ensures that new companies or ships are slow to enter and compete away profits. If demand and profits remain high for long enough, incumbents and new entrants alike may come to believe that this is more than a temporary blip and that demand has permanently expanded. A larger market means that investment in more ships and port facilities is profitable, and shipping lines in the market may expand, while new lines may enter the route. Since each competitor wants to grab the new business for itself and since expansion must often be done in big chunks or not at all (e.g., all feeder routes and port facilities must be expanded to balance), it is easy to create overcapacity.

Continued on next page . . .

Unlike the other columns on the table, the "Dtons/Day" column does not reflect a straight relationship between BTN and the volume of freight available to free traders. For BTN < 8, there is no scheduled liner service and no large ships directly serve the route, so all freight is available to free traders. For BTN > 10, large vessels enter the tramp business and limit the amount of freight available to free traders. For values of BTN in between, free traders account for nearly all of the tramp service, so all of the freight available to tramps (roughly 10 to 20% of the total) is available to free traders.

Current Freight Rate

To determine the freight rate when the PCs first visit a world, or when the GM has not been tracking the world's freight rate since their last visit, use

Current Price = Average Price + [Price Volatility × (4d-14)].

When the Game Master wants to track a world's freight rate after the initial encounter, use

Current Price = Last Price + [Price Volatility × (4d-14)]
+ [Price Regress × (Average Price - Last Price)].

Current Price: The price this week.
Average Price: The price's long-run average.
Price Volatility: A positive number that influences how much prices change from week to week.
Last Price: The price last week.
Price Regress: Short for "regression factor." A number from 0 to 1 that measures the degree to which market forces are pushing the price back toward its long-run average.

Average Price is found from the table under *Average Freight Rates* (p. 22). Most GMs will want to use the value for tramp freight, since this will be the price of interest to their players. Volatility and Regress can be determined to suit the type of price behavior the GM desires (see *Price Series,* p. 36). The following values are appropriate in most cases:

Price Volatility = 0.025 × Average Price
Price Regress = 0.2

Current Price is the rate that shippers are willing to pay for their goods to be shipped. It is the same for all destinations from a single world, subject to the difference in Average Price for the different types of routes described under *Average Freight Rates* (p. 22). Once Current Price is known, it is necessary to determine how much freight is available. This is referred to as the *Current Volume.*

Current Freight Volume

There are two ways of finding Current Volume; they give identical results. It is up to the GM to choose which to use:

Current Volume = Last Volume + [Volume Volatility × Price Roll] +
[Volume Regress × (Average Volume - Last Volume)]
or
Current Volume = Average Volume +
[(Current Price - Average Price)/Price Volatility] × Volume Volatility.

Current Volume: The daily volume this week.
Last Volume: The daily volume last week.
Volume Volatility: The volatility number for the world's freight volume.

Price Roll: The result of the price roll made under *Current Freight Rate.*

Volume Regress: The regression factor for the world's freight volume.

Average Volume: The average volume for the origin world's trade with the destination world.

Average Volume is determined as described under *Average Volume of Tramp Freight* (p. 23). Volume Volatility and Regress can be customized, just like the corresponding values for price. The following values are appropriate for most worlds:

Volume Volatility = 0.25 × Average Volume

Volume Regress = 0.2

Tracking Current Price and Volume

If the traders stay on a world for longer than a week, it will be necessary to roll for a new freight rate and volume. The GM can avoid making this seem artificial by rolling 1d each day and changing the freight stats only on a roll of 1. This will change things approximately once a week and keep the players guessing. To use this system, the GM will need to track the freight rate over time for the worlds in the PCs' trading area. This will not be wasted effort, because if they are good free traders, they will be asking about all of them on a regular basis.

Cargo Types and Lot Size

Roll 4d-4 to determine the size in dtons of each lot of cargo. Subtract the size of each lot from the total amount of freight available until all freight accounted for. Roll on the tables below for each lot:

Competition in the Shipping Industry

[Continued]

The Problem of Overcapacity

When overcapacity is created through excessive expansion or a market downturn, it results in competing lines reducing prices to the point where they may make enough to keep the ships running, but not enough to cover the costs of paying off their long-term investments in equipment. This does not happen by choice, but is the natural result of too many ships chasing too little freight.

There are two ways out of this money-losing trap: demand can rise or supply can fall. Demand is beyond the control of the lines, but they *do* control supply. Cutting supply is more difficult than it sounds, though. Nobody wants to be the one to cut supply, since doing so will raise prices for everybody, with the greatest gains going to those with the largest market share. Waiting for the competition to go bankrupt is not terribly effective either, since their creditors will only sell off their ships and facilities to new owners. Transferring the excess capacity to other routes or regions may work – but it could simply serve to make the problem more widespread.

Free Trade vs. Collusion

The transportation industries of pre-stellar Terra practiced various forms of open or secretive collusion to prevent overexpansion and to support above-market-rate prices in downturns, with mixed success. Oceangoing transportation in particular was organized into "conferences" that dictated market share and prices to member shipping companies for centuries.

Since Cleon I outlawed such practices as restraints on free interstellar trade, this avenue has not been open to the shipping industry of the Third Imperium. Secret deals to set prices or divvy up territories have been reached in various regions many times in the Imperium's 1,100-year history. Whenever they have succeeded in significantly distorting the market, though, local subsector and sector dukes have used their not inconsiderable influence to overtly or covertly break them up in the name of economic and military security.

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Competition in the Shipping Industry

[Continued]

Trade Wars in Shipping

The Imperium recognizes the need to cope with the competitive tensions created by interstellar competition – in the shipping industry or elsewhere. The solution it has arrived at is called "trade war" (see p. 112), which extends the Imperial doctrine of allowing limited planetary warfare as a "pressure release" to intercorporate conflict. In the shipping industry, trade war caused by overcapacity has a brutally appealing logic: If the problem is too much capacity, destroy the excess.

Once trade war has broken out in an area suffering from overcapacity, the lines in the region will compete to render their competitors' ships and facilities unsalvageable while protecting their own from harm. The war usually ends when capacity falls to profitable levels. Occasionally, rivalry in a region may become so intense and bitter that the lines continue to fight after the excess capacity has been eliminated. This is not only bad in the short term, but can also start a new cycle of competitive expansion that leads to another bout of overcapacity and renewed trade war. Whenever this has happened in the past, local dukes have intervened with their reserve fleets to put an end to the conflict.

Preventing Conflict in Shipping

Over the centuries, a few rules of thumb have emerged for avoiding the pain of overcapacity and trade war. These ideas have been propagated throughout the Imperium by merchant academies, megacorps and the business press, making them part of every shipping executive's repertoire.

The most important rule is that shipping lines should limit their capacity so that random fluctuations in the market will, on average, keep their ships 95% full. Most routes are within 10 to 20% of average total demand 95% of the time. This means that shipping lines will have the capacity to serve roughly 80 to 90% of the average total demand. This rule of thumb keeps their holds full almost all the time and prevents the need for frequent price discounts.

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Cargo Type Table (Roll 3d)

3-8	Wet Bulk
9-10	Dry Bulk
11-13	Breakbulk
14	RO/RO
15-18	Container

Cargo types are described on p. 25.

Special Handling Table (Roll 3d)

3	Psionic
4	Biohazard
5	Valuable
6	Living
7	Perishable
8-12	None
13	Fragile
14	Flammable
15	Corrosive
16	Explosive
17	Radioactive
18	Roll Twice

Special handling characteristics are described on p. 30.

Terms of Shipping Table (3d)

3-5	EXW
6	FAS
7	FOB
8-12	CIF
13	DES
14	DEQ
15-18	DFD

Terms of shipping are discussed on p. 54.

Ships that lack holding tanks for transporting bulk cargo can still carry it using suitable containers (see *Containers,* p. 56). The trader is responsible for buying or renting the containers and for loading them onto and unloading them from his ship. The buyer or seller (per the terms of shipping) still pays the costs of filling the containers and emptying them at the destination.

Renting a container costs 0.1% of its purchase price per day, and requires a deposit of 5% of its purchase price. Rental containers are available if the captain can roll under the world's WTN on 1d; whether the *right size* is available is up to the GM. Containers can be bought with the hope of selling them at the destination. If so, treat them as Low Risk speculative trade goods (pp. 36-37).

Placing the Bid

After the merchant has evaluated the freight available to be shipped and determined the opportunities that he believes to be most favorable, it is time to actually bid on the job of carrying each lot of freight. The merchant will be competing against other tramp ships that wish to carry a given lot, and must enter a lower bid to win that lot for his ship.

The degree of competition for and costs associated with a particular lot will influence the final price that must be bid to win that lot. Heavily trafficked routes will have lower prices due to the greater competition, the ease of finding more freight at the destination and the presence of larger, more efficient ships that drive

the price down. Special handling will increase the costs and risks associated with transporting the lot, and hence drive up the price. The terms of shipping specified in the contract negotiated by the freight owner will also affect the price.

To resolve the bidding on the freight spot market, roll against Merchant skill with the following modifiers:

Route:

Smallest route connecting the two worlds is Main Route: -4.

Smallest route connecting the two worlds is a Feeder Route: -2.

There is *no* direct route connecting the two worlds: +4.

Special handling: +1 to +4, depending on how hazardous or delicate the cargo is.

Terms of shipping: -1 for FOB, -2 for FAS, -3 for EXW; +1 for DES, +2 for DEQ, +3 for DFD.

Consult the table below for the final freight price.

Final Price Table

Failure by 10+	50% of Current Price
Failure by 7 to 9	80% of Current Price
Failure by 5 or 6	85% of Current Price
Failure by 3 or 4	90% of Current Price
Failure by 1 or 2	95% of Current Price
Success by 0 or 1	100% of Current Price
Success by 2 or 3	105% of Current Price
Success by 4 or 5	110% of Current Price
Success by 6 or 7	115% of Current Price
Success by 8 or 9	120% of Current Price
Success by 10+	150% of Current Price

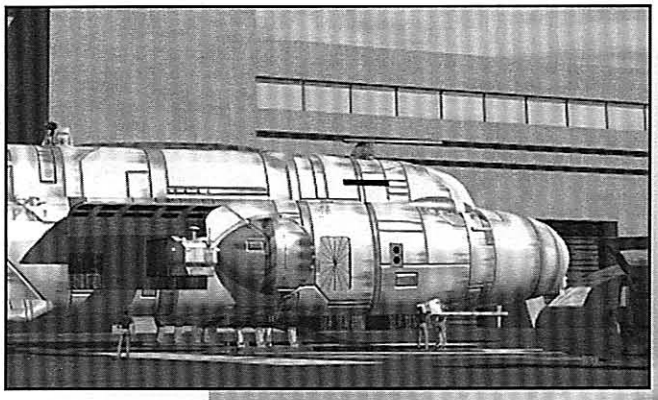
Hazard Pay: If the destination world is in an Amber or Red Zone (see pp. GT19, 56 and 70), the ship must also receive *hazard pay.* Amber Zones *double* the final price for the last parsec. Red Zones *quintuple* the final price for the last parsec (if freight can be carried to them legally). The ship's captain is generally required by the ship's articles (pp. 71-72) to give the crew double or quintuple pay, as appropriate, for entering an Amber or Red Zone. GMs should make characters earn their hazard pay by exposing them to additional hardships, expenses and outright disasters. Worlds in Amber and Red zones can be excellent locations for adventure!

Loading and Unloading

Successful free traders know that to make money shipping freight, they need to take it on at worlds where an unusually high demand for shipping capacity has driven the price up. This is great for their margins, but it means that the starport will have an unusually large amount of freight moving through it. If the demands on the port's freight-handling facilities get too large, long waits can develop that threaten to throw all affected ships off schedule.

The cost of departing from schedule is greatest for liners, with their predetermined and interdependent route schedules, so they will almost always be serviced first. This leaves tramp ships at the back of the line, and free traders will likely be behind any larger tramps in port. Since one of the first rules of the shipping business is "time is money," this has the potential to put free traders in a very costly position. A high freight-handling rate does not always reflect a long wait for freight handling, though – it can also result from a shortage of ships.

If a port is congested (GM's decision), use the table below to resolve the situation. Otherwise, freight can usually be loaded or unloaded with only a brief wait.



Competition in the Shipping Industry

[Continued]

Another rule is not to compete on price, if at all possible. Price competition naturally lowers the price that a company can charge for a product or service. Rather than competing on price, lines try to compete on service and quality, and by nurturing long-term relationships. By emphasizing these elements, lines hope to offer something special to their customers and thereby make them less price-sensitive. Of course, this only works because lines have a huge cost advantage over tramps and can afford "extras" without pricing themselves out of the market. Price discounts may be offered to loyal customers through annual rebates, discount coupons for future shipping, or other means that are contingent on a continued relationship. This strategy reduces the volatility of a line's prices and volume, and engenders greater customer loyalty that can help sustain a company through brief market downturns.

The Market Leader

When an increase or reduction in capacity becomes necessary, it can be accomplished without a price or trade war through a form of implicit collusion handily coordinated through the business press. The rule of thumb is that the line with the largest market share – the *market leader* – decides when an adjustment to capacity is necessary along a route or in a region. The leader then makes a public announcement of its own adjustments, and other companies are expected to follow suit. For instance, if the leader announced a 10% expansion on a route, other lines could expand by 10% without alarming their competitors. Likewise, if the leader decided that a prolonged downturn warranted a capacity reduction and announced a 10% cutback, all other lines would be expected to comply.

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Competition in the Shipping Industry

[Continued]

Companies that buck the dictates of the market leader risk retaliation by price or trade war. Coordination around the leader through public announcements is beneficial for all competitors in an area because it allows them to take collective action that is in their mutual best interest. The leader has the privilege of making the decisions and enjoys the greatest benefits from cooperation (since it has the greatest market share), but it also shoulders many of the costs. The burden of conducting a price or trade war falls mainly on the market leader, as others are understandably reluctant to join in unless absolutely necessary.

Of course, few routes or regions are so clearly coordinated. There may be more than one company that believes it has the right to make certain decisions. For instance, a company that has the largest share of a subsector's freight might try to control what goes on along a key feeder route where it does *not* have a majority. If the company that dominates the feeder route objects, a price or trade war could break out.

Continued on next page . . .

Freight-Handling Time Table (Roll 3d)

0 or less	Try again in 3d×5 hours.
1-3	Try again in 3d×4 hours; add +2 to subsequent rolls.
4-6	Try again in 3d×3 hours; add +2 to subsequent rolls.
7-9	Try again in 3d×2 hours; add +2 to subsequent rolls.
10-12	Try again in 3d hours; add +2 to subsequent rolls.
13-15	Try again in 2d hours; add +2 to subsequent rolls.
16-18	Try again in 1d hours; add +2 to subsequent rolls.
19+	Your freight will be unloaded immediately.

There are several ways to improve one's place in the queue:

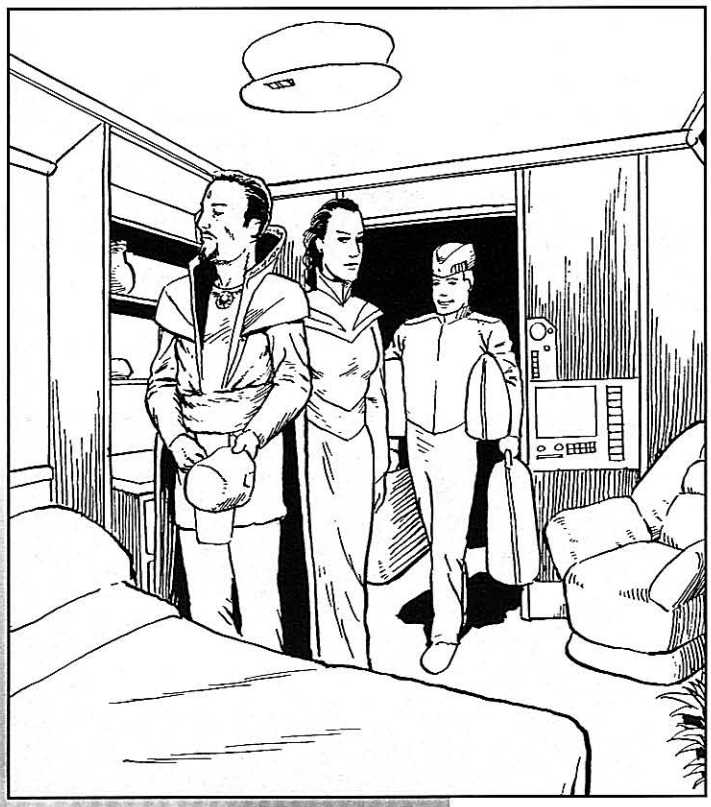
Work the system. A successful Administration roll gives +2 to rolls for freight-handling time, +4 on a critical success. A failed roll has no effect, but a critical failure gives -2.

Bribery. If the merchant agrees to pay a crew of freight handlers "overtime" of Cr25/hour each (a crew consists of 2 to 6 handlers), he may be able to secure their cooperation earlier than usual. Roll vs. Fast-Talk or Streetwise, at +2 for every doubling of the bribe. Knowing *who* to bribe helps; a successful Area Knowledge (Port) roll will also give +2. Success on the influence roll gives +4 on the next freight-handling time roll; critical success gives +6. Failure means the bribe is accepted but has no effect. Critical failure means the bribe is rejected: the merchant has -6 on his next freight-handling time roll *and* is reported to Starport Authority law enforcement.

Forgery. Even more devious is to forge a work order. Roll against Forgery skill. Success means a believable forgery; the next freight-handling time roll is at +6. Any failure indicates that the deception fails, giving -6 instead; critical failure also results in Starport Authority law enforcement being notified.

Act chummy. Convincing the freight handlers or their supervisors that you deserve a break can help smooth things over. A successful Carousing or Sex Appeal roll gives +2 on the freight-handling time roll, +4 on a critical success. Failure has no effect, but critical failure gives -4. Since it is difficult to hoist a drink or seduce someone in a busy office or dock, this tactic will only work if the merchant can find the right people outside of their work environment (GM's decision).

Do it yourself. Merchants are always free to load or unload the ship themselves if they have the requisite skills and equipment.



Getting Paid

A trader must show that he has fulfilled the terms of his contract in order to get paid.

First, all shipments must arrive at their destination on time. Shipments contracted on the freight spot market are due one week after the day they were auctioned, plus 10 days for every two parsecs of distance. Late shipments suffer a 10% decline in payment per day late, with decreases being applied successively.

Example: A one-delay would pay 90%; a two-day delay would pay 90% of 90%, or 81%; a three-day delay would pay 90% of *that,* or 73%, etc.

Second, the merchant must satisfy the terms of shipping, as determined under *Cargo Types and Lot Size* (p. 25) and defined in Chapter 4. It pays to read the fine print: If he has agreed to act as the seller's agent in a DFD contract on a TL4 world, he may find himself having to haul freight overland by mule train to the buyer to fulfil his contract!

Once all of the contract conditions have been met, the trader takes the appropriate paperwork (bill of lading, customs

documents, warehouse receipts, etc.) to the bank. As the seller's agent, he will first have to submit documentation on behalf of the seller and clear his payment. Once this is done, the contract accompanying the letter of credit will instruct the bank to issue payment if all of its terms have been met and the paperwork is in order. This is a routine use of Administration, Law or Merchant skill (or default). Failure simply indicates that the merchant has neglected to bring a document or have it properly completed and will have to try again later. Once the paperwork is taken care of, the bank will pay the merchant what he is owed, either in cash or via a funds transfer (pp. 46-47) to a bank elsewhere.

Subcontracting Freight

A merchant will sometimes end up with a contract that he wants to get rid of, particularly one for a distance of several jumps. Perhaps he has spotted a better opportunity elsewhere, wants to go chasing off on an adventure, or cannily believes that he can make more money getting someone else to do the job. Subcontracting freight is perfectly legal; the big lines do it all the time when a customer wants to ship something to a destination that they do not service. Rather than risk losing the customer, they ship the lot as far as they can, then hire someone else – perhaps a far trader – to take it the rest of the way. The only restriction is that the lot has to be kept together as a unit. Splitting it up and sending it with several different ships is not allowed.

Auctioning the Lot

When a shipper wishes to subcontract a lot, he is acting as a cargo broker and will go about subcontracting the lot using the same procedure that was used by the broker who contracted it to him in the first place. This means that he will have to go to the freight spot market and open bidding on his lot. He will only need a broker's license if he is auctioning freight for somebody else. Before the bidding starts, the merchant will have the opportunity to review the papers of all ships that wish to bid on the lot. The GM can introduce an entire cast of scruffy ships and captains at this point if he wishes.

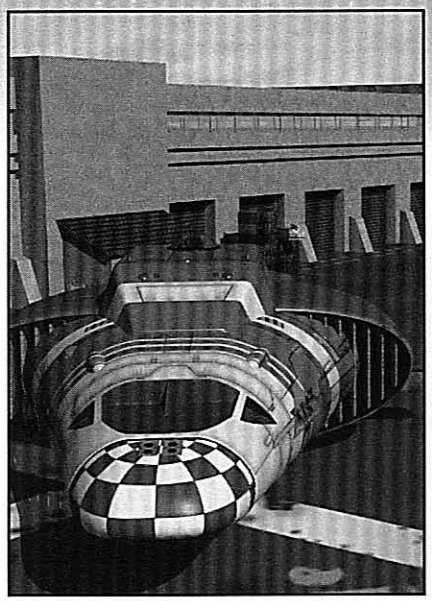
To find the winning (i.e., lowest) bid, determine Current Price using the *Current Freight Rate* rules (p. 24), then go directly to *Placing the Bid* (pp. 26-27), roll vs. Merchant skill and consult the *Final Price Table.* Read all "Failure by" results as "Success by" and vice versa; the result shows the price the merchant must pay to have another ship carry his lot of freight. Once bidding is opened, the merchant *must* accept the final price determined on the table; he cannot withdraw the lot. He *can* start the bidding at a maximum price, but if the table gives a result greater than this, it means that no one was willing to bid on the lot at that starting price. Another attempt can be made the following day.

Arranging the Subcontract

Writing a freight subcontract can be done with standard forms available at any starport. Roll vs. Law skill. Only a critical failure will result in a contract that the subcontractor can take advantage of. If this happens, the GM should make a loyalty roll (see p. B204). If the result is "Bad" or worse, the subcontractor will try to take the original contractor's payment for himself when he reaches the freight's destination. The victim's only recourse is to go to the port where the freight was ultimately delivered and try to convince the Imperial Shipping Commissioner (or equivalent) that a lien should be placed against the offending ship. Even if this is successful, it could take weeks or months to see payment – *if* payment is made at all. If he wishes, the victim may hire lawyers or bounty hunters to pursue the offender.

Getting Paid

Once the contract is completed and the freight successfully delivered, the merchant will have a payment on one world while he is on another. Getting that money to himself or his bank can be tricky; see *Interstellar Financial Transactions* (pp. 46-47).



Competition in the Shipping Industry

[Continued]

Government Intervention

The Imperium's dukes are keenly aware of the importance of shipping to their local interstellar economies – and of the importance of these economies to their own power and influence. Most subsectors are dominated by a few major shipping lines that carry the majority of all freight and passenger traffic. These lines are watched carefully by the local dukes to ensure that they are not enriching themselves too greatly at the economy's expense. As the ultimate conduit of nearly all interstellar trade, the shipping lines are subject to a great deal of scrutiny.

The Imperium's antitrust laws are as vague and discretionary as its rules of war. Almost anything that the local authorities believe to be a threat to free trade can be acted on. By the same token, the shipping lines can get away with all sorts of things – including market-leader coordination and trade war against new entrants – if they do not push things too far. In practice, the subsector duke and the local Ministry of Commerce officials are likely to overlook minor collusion or understandings as long as they do not limit the flow of trade. If the authorities decide that the operations of certain lines *are* restricting free trade, though, they have any number of official and unofficial means at their disposal to gain compliance . . .

Special Handling Characteristics

Biohazard: This cargo is a threat to living things. It may be poisonous, infectious or mutagenic. Deviation from the cargo's narrow environmental parameters can have effects ranging from loss of the cargo to outright disaster. If the seal on any of the containers is broken, personnel in the area may need immediate medical attention and may be subject to quarantine. Mishaps en route must be reported immediately to the port authority upon arrival in the system. The ship and personnel will then be required to undergo decontamination procedures, and may be subject to quarantine or even refused permission to dock!

Corrosive: This cargo is hazardous, and needs special containers to prevent it from doing corrosive damage to cargo handlers, their equipment, the ship, etc. If the seal on any of the containers is broken, damage will result: structural or system damage to the ship, respiratory damage to crew and passengers who inhale caustic gases, or both. Typical of strong acids and bases, and powerful solvents.

Explosive: This cargo is hazardous; extreme heat or heavy shock may cause it to explode. Heat from a burning flammable cargo and damage to the cargo hold during a starship battle are examples of the kinds of conditions that can detonate an explosive cargo. Even a heavy jolt (e.g., from a rough landing) may be enough to cause an explosive cargo to detonate. Inertial compensators can mitigate this problem, but you never know when some Cr0.5 fuse will blow and wipe out a MCr50 starship.

Flammable: This cargo is easily set afire. If anything that could ignite it enters the cargo hold (e.g., sparks from an electrical short, laser-weapon fire), the cargo will burst into flames. An obvious way to save the cargo is to immediately flush the cargo hold's atmosphere and place it in a vacuum, which would effectively snuff out the fire. Many captains wisely refuse to carry such cargo, especially if they are also carrying cargo that is not impervious to vacuum.

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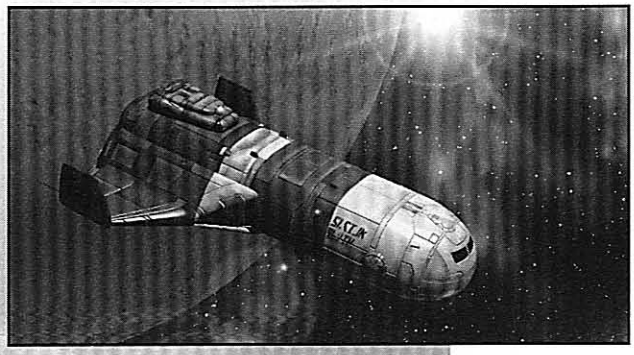


Freight Rate Speculation

The future movements of freight rates are of considerable importance to free traders and brokers alike, who are constantly trying to outguess the markets on the various worlds in their region. To help them manage this risk, various means have been developed to predict future rates and lock in prices in advance.

Predicting the Future

Every free trader would like to know what the freight rate will be at a possible destination world before he arrives there. A string of up markets could earn him quite an easy profit, while a string of down markets could mean coming up against bankruptcy.

Part of the job of predicting the future has already been done for him by brokers' efforts to line up ships ahead of time. As brokers compete to sign up tramp ships to return a few weeks hence, when they think that the freight rate will be high or they will need extra capacity, the collective prediction of the brokers and ship captains about what the price will be that week is revealed through the prices they offer and accept. This prediction is called the *consensus forecast* (see p. 31), because it is made collectively by all of the players in the marketplace. How easy it is to get this information depends a lot on the port and the trader's current proximity to it.

If a merchant is trying to get information about the future price at a port that he is in, then his task is rather simple. At ports on a Main Route, he need merely consult the price on the freight futures market (p. 32). At ports without enough trade to have an organized freight futures market, all he needs to do is call a few brokers and tell them that he might be interested in selling a freight futures contract; the prices they offer will tell him what he needs to know.

If a trader would like to learn about the future price at a port he is considering visiting, then his task is somewhat more difficult. For a port on a Main Route, the news packet from that world will have the necessary information. Smaller ports will require a bit of legwork. The merchant will have to find someone who has just come from that port and who would have reason to know what brokers were offering for freight futures. This usually means a fellow free trader.

To get a rough estimate of the number of free traders that have arrived from a given destination world in the past week, divide the average volume of freight available to free traders for that destination by 10. The identities and origins of ships in port are freely available from the port authority. Hunting down the captains or pursers of these vessels at their ships or at a port-side hangout is the best way to get the desired information. Calling them on the phone or leaving a message is easier, but a response is much less likely.

Finding such a person in a big port can sometimes be a problem. To find a free trader from a particular destination world, the merchant must roll against Area Knowledge (Port City) with the following modifiers: -2 × WTN of the world he is on, +BTN (round down) of the trade route he is interested in learning about, -1 for each free trader from that destination already found. Success means that he has found someone; failure means that he must continue his search. Each attempt takes 30 minutes.

Once the merchant locates someone who can help him, he must try to get the information he needs. Treat this as a request for information (p. B204). Roll at +2 if the NPC in question has Code of Honor (Merchant), -2 if he is Selfish, and -4 if the merchant doing the asking is being tight-lipped with information about the last few ports *he* has visited. A phone call or other message gives an extra -3; a result of "Poor" or worse means the message is ignored. On a "Neutral" or better reaction, the NPC will volunteer information about the last port he visited and any other ports that he might have learned about.

Of course, a local Contact in the shipping business can be used to get this information instead.

Consensus Forecast Freight Rate

The GM can find the consensus forecast on any freight rate up to four weeks in advance by using the *Current Freight Rate* rules (p. 24) with a few modifications. First, determine the *actual* price for the weeks of interest, keeping track of all four dice of the Price Roll (the form on p. 40 is helpful here). Once the actual price is known, find the consensus forecast by making a second Price Roll that uses the first two dice rolled for the actual price but which replaces the second two dice with a new 2d roll. Use this second Price Roll to calculate the price for the forecast. The use of two *true* dice and two *false* dice represents the mixture of insight and error in the forecast.

Example: If the GM rolls 2, 4, 3 and 6 to determine the actual price for next week, the actual Price Roll is (2 + 4 + 3 + 6) - 14 = 1. The forecast Price Roll uses 2, 4 and 2d rolled to find the other two numbers.

When calculating the *first* price in a forecast price series (i.e., one week in the future), use the actual Current Price as the Last Price. Subsequent calculations use the consensus forecast price for the previous week as the Last Price. In this way, more distant forecasts are based on less distant ones.

If the merchant wants to check on a consensus forecast that is still in the future after a week or more has passed, the forecast should be updated to reflect what the *actual* price was for the weeks that have passed. To do this, recalculate forecasts for weeks still in the future, using the actual price for the Last Price in the equation. Thus, the consensus forecast is constantly updated as new information becomes available.

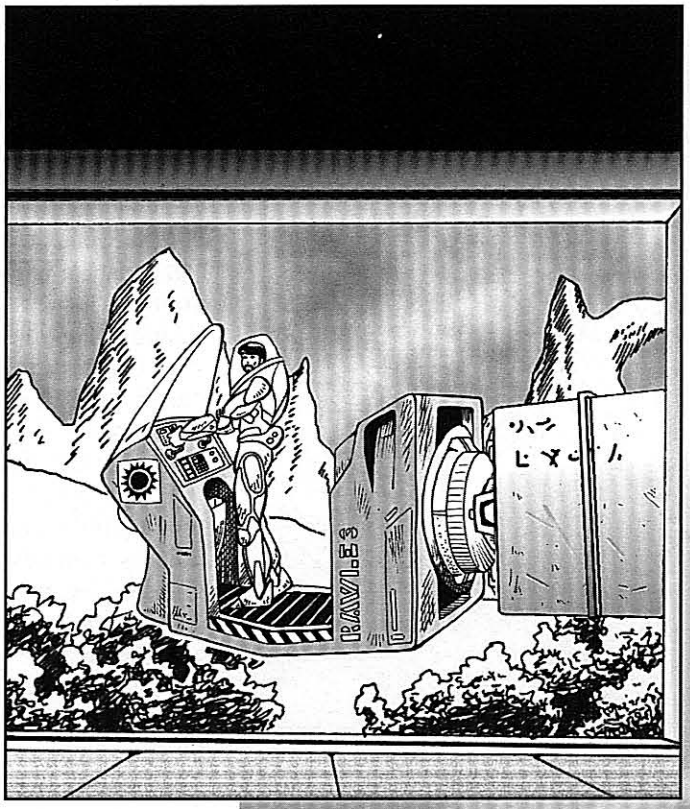
Since communications are limited to the speed of jump, estimates about prices at other ports will *already* be one week out of date for every two parsecs, or fraction thereof, between the two ports. The only exception is when both worlds are Main Route worlds. If the worlds lie along an Xboat route, estimates are a week out of date for every *four* parsecs, or fraction thereof, between them. This means that consensus forecasts are only really useful for ports four or fewer parsecs away for most free traders, who have jump-1 or jump-2 capable vessels.

Market Analysis Forecasts

Market Analysis skill (p. 103) can be used to refine the consensus forecast. This involves gathering as much information as possible about all the players in the market – tramps, brokers, lines and exporters – not only for the world of interest, but for the worlds around it. This requires access to business news and some archival material. The TNS (p. 52) or similar news agency can provide this information.

To refine the consensus forecast, the GM rolls against the analyst's Market Analysis skill in secret. This roll is at -4 per week the prediction extends into the future. An analyst with Area Knowledge of the destination world gets +1 at level 12 or better, +2 at level 20 or better. Refining the forecast requires at least one full day; each additional day spent in research gives +1, to a maximum of +4.

Success means that the analyst generates a forecast according to the rules for *Consensus Forecast Freight Rate* (above), but using *three* true dice and only *one* false die; critical success means that his forecast is totally accurate and is the actual price. Failure means that he does not feel confident enough to improve on the consensus forecast, while critical failure means that he comes up with a terrible forecast that includes *no* true dice: all four dice are false! The GM should not tell the player whether his forecast is the result of a success, critical success or critical failure.



Special Handling Characteristics

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Fragile: This cargo is delicate, and cannot stand rough handling or severe jolts. If a fragile cargo is damaged, its worth may be only slightly diminished or it may be reduced to worthless junk.

Living: This cargo consists of living things – perhaps lab animals, livestock, pets or someone's private zoo. It is an extreme case of both perishable and fragile. Life support, cages and even special caretakers may need to be provided. *Somebody* has to go in there and feed the things . . .

Perishable: This cargo requires a special environment to ensure that it is properly preserved during its journey to market. If environmental conditions vary significantly from their optimum, the cargo's value may be seriously degraded or destroyed.

Psionic: This cargo is psionically active. It may pose a threat to psionic individuals only, all sentient beings or all living things. It may itself be a living thing, a psionically active substance or a machine. It must be shipped appropriately shielded; if the shielding is breached, the effects will depend on the nature of the cargo and are left entirely up to the discretion of the GM.

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Special Handling Characteristics

[Continued]

Radioactive: This cargo is hazardous, and must be stored in special sealed and shielded containers. If the seal on any of the containers is broken, radiation damage to nearby life forms is sure to result.

Valuable: The cargo is unusually valuable, and requires additional security measures both in port and en route. Its owner may demand that the ship be armed to his satisfaction, and may place restrictions on the route that the ship can follow to avoid dangerous systems. He may also insist that the ship post no advance notice of its route, forbidding any advertising ahead of the ship's arrival for the purposes of attracting freight, passengers or buyers for speculative trade goods. The actual credit amount that makes a cargo qualify as "valuable" ultimately depends on how cautious the owner is, but a useful rule of thumb is MCr1/dton.

Refinements to the consensus forecast are subject to the same time and distance limits as the estimates themselves. This means that refining an estimate for next week for a world one jump away is making a prediction *two* weeks into the future (one week from the present, using week-old data). Each estimate the analyst attempts to refine requires a separate skill roll. Thus, refining the forecasts for a given world for the next four weeks requires four rolls. Those who obtain their own forecasts (regardless of how good they are) should update the consensus forecast for weeks following their forecast using the procedure under *Consensus Forecast Freight Rate* (p. 31).

Economics Forecasts

Economics skill is used to make predictions further than four weeks into the future. Such forecasts are called *distant forecasts.* Making distant forecasts requires information that is generally publicly available, or available for a small fee (GM's option).

The GM should secretly roll versus the character's Economics skill, at -1 per week the prediction extends into the future. An economist with Area Knowledge of the target world gets +1 at level 12 or better, +2 at level 20 or better. A prediction requires at least one full day; each additional day spent in research gives +1, to a maximum of +4.

Success means that the forecast uses two true dice and two false dice. This means that a successful Economics forecast is no better than a consensus forecast, but remember that there *is* no consensus forecast more than four weeks into the future! Critical success means three true dice and one false die. Failure means one true die and three false dice. Otherwise, Economics forecasts are handled the same way as consensus and Market Analysis forecasts.

Freight Futures Market

Buying and selling contracts for tramp freight occurs on the *freight futures market.* This is identical to the freight spot market, except that trading is in contracts to haul freight at a future date. Like the spot market, the futures market can be as much a concept as a place. It could exist electronically, in a designated room, or merely as the collective outcome of many phone calls.

The futures market only springs into action when the liners are filled to capacity. Shipping lines do not regularly participate in the freight futures or spot markets, because these markets treat shipping capacity as a commodity to be traded solely on the basis of price – something that the lines very much want to avoid (see *Competition in the Shipping Industry,* sidebar, p. 24).

Once the liners have filled their holds, the brokers scramble to sign up tramp ships to haul freight on weeks when they have insufficient space reserved aboard liners. Some brokers wait until they need capacity, then put everything on the freight spot market and take their chances. A somewhat less risky tactic is to try to get tramp ships that are in port to commit to returning some number of weeks in the future to haul the broker's freight at a fixed price.

Tramps agree to such contracts to guarantee themselves a price and cargo for that week. In particular, traders who have made their own price forecasts may believe that rates in the future will be lower than the consensus estimate, and that they would be better off locking in the higher rate.

A tramp ship that agrees to carry a certain amount of freight from a certain origin world in a particular future week and for a specified price is said to be *selling* a futures contract. The broker on the other end of the deal is said to be *buying* a futures contract. Buying and selling futures contracts is handled in the same way as buying and selling spot market contracts; see *Placing the Bid* (pp. 26-27) and *Auctioning the Lot* (p. 29).

The liners' holds are full and the futures market is open on any week in which the consensus forecast price would lead to a free trader freight volume greater than zero, using the procedure for determining volume outlined in *Current Freight Volume* (pp. 24-25).

Passenger Shipping

Most features of the freight business are present in the passenger business as well, and in a fairly similar form. Many of the lines that maintain extensive freight-shipping networks also maintain facilities for handling passengers. Passengers who have purchased passage on discount liners sometimes even claim that they were treated like freight, although most passenger liners are quite comfortable.

Passenger Lines

The competitive dynamics of the passenger business are much the same as those of the freight business (see *Competition in the Shipping Industry,* sidebar, p. 24), but the intense price competition is muted because lines are better able to differentiate themselves through the level of service and comfort they provide. To a businessman shipping freight, any two ships that can get his lot to its destination on time are functionally identical. If the same man were "shipping" himself, though, there would be a world of difference between a modern Tukera liner with a dining hall and exercise facilities, and an old converted tramp ship that smells like a sweat sock.

Since the passengers will have to live aboard ship for weeks, the environment must be one that they find agreeable. Some lines compete by offering luxurious staterooms and endless amounts of rich food, while others woo passengers with an efficient work environment and minimal distractions. The effect is to reduce the price sensitivity of travelers and the degree of direct competition between lines. This is important to free traders because the higher margins enjoyed by the passenger lines translate into higher margins for free traders as well.

Passenger Brokers

There *are* people who call themselves "passenger brokers," but most of them are known as "travel agents." They may work for the same firm as cargo brokers, and may even be the same people. Many brokerages act as "one-stop shipping" agents for their customers, who likely have both freight and passenger shipping needs. On large worlds, more specialization is possible, and travel agents may exist that serve only particular kinds of passengers.

Regardless of how they are organized, travel agents play a crucial role in the passenger business, mediating between customers and free traders – just like cargo brokers in the freight business. Most passengers, like most freight, travel on a shipping line. Those who travel by tramp ship do so because they are looking for a bargain or because they cannot wait for a space to open up on a liner.

Travel agents don't just help passengers find a good deal, they also inspect the quality of the accommodations on tramp ships. All seasoned travelers have at least one horror story about passage aboard a tramp with a surly crew, filthy quarters, bad food, ominous mechanical sounds, etc. Such experiences tend to reflect poorly on travel agents, so most agents try to weed out the tramps that are likely to victimize passengers this way. Agents often insist on an inspection tour of a ship before they will suggest it to their customers. Passengers who prefer not to use an agent should ask to take a look at the accommodations before paying. Those who don't are often people who have a powerful motivation to get off-world in a hurry . . .

Tramps

Freight is the mainstay of most tramp ships, including free traders. As a result, tramps do not readily respond to the price signals in the passenger market and act to smooth gaps in supply like they do in the freight market. Some tramps specialize in passenger service, but the low volume of passenger traffic relative to freight traffic makes these uncommon. The role of tramp ships in passenger travel is also limited by the fact that the lines can compete on grounds other than price, which makes it easier for them to grab a greater overall market share without increasing the risk of price or trade war.

Unfamiliarity Penalties

Merchants who are unfamiliar with the world on which they are doing business are at a disadvantage until they figure out the quirks of that world and its inhabitants. Being unfamiliar with a world limits the merchant's ability to judge market conditions, a fair price or even who is trustworthy. Commercial practices on worlds in the mainstream of Imperial society are very much alike, but as one travels further out of the way, local practices diverge further from the Imperial norm. Use these unfamiliarity penalties when the unfamiliar world is:

On a Main Route	-2
On a Feeder Route	-3
A Backwater	-4
A Frontier	-5
A Zhodani world	-4
A non-Imperial human world	-1
An alien world	-6, or -3 on a successful Xenology roll

Use the *largest* applicable modifier. Area Knowledge skill for the planet at level 12 or better (even if a default) will eliminate these modifiers. See p. B43 for more on familiarity; see Chapter 5 for more on skills and their unfamiliarity penalties.

That said, passengers represent a potentially lucrative sideline for free traders. Since the volume of passenger traffic is largely unrelated to the volume of freight traffic, full staterooms and low berths can sometimes help compensate for an empty hold. The ability to transport technicians as well as their gear, or animals as well as their handlers, can also be a selling point with some customers.

Passenger Ticket Prices and Availability for Free Traders

Average Passenger Ticket Prices

The lines, brokers and tramps of the passenger business work effectively to get passengers to their destinations at competitive prices. These prices depend on a host of factors that vary from route to route and week to week. The following table lists average prices, inasmuch as average prices can be said to exist at all:

Passage	Average Price/Parsec/Passenger		
	Free Trader	Liner	Express (J-4)
High	Cr3,500	Cr4,000	Cr6,500
Middle	Cr1,750	Cr2,000	Cr5,500
Low	Cr175	Cr200	Cr550

Prices are broken down by high, middle and low passage. On the lines, preferred customers or those who buy far in advance of the 16-week mark can expect a discount of up to 10%. Most liners are jump-3, but are often constrained by astrography to follow jump-2 routes. Liners can afford luxurious facilities aboard ship even for middle passengers, because their advanced booking keeps their staterooms full and their short port stays keep their ships in jumpspace where they earn money. Free traders often spend a full week in port gathering cargo and passengers, but passenger liners spend an average of only two days in port before departing.

Average Passenger Volume

The volume of passenger traffic between a given pair of worlds can be determined using the rules under *Interstellar Passenger Traffic* (p. 17). The average number of passengers *not* already committed to the lines, and thus available to free traders, can be found by consulting the "Passengers/Day" column of the table on p. 17 and following the instructions for interpolating within the ranges. Record the average passenger volume for each world in the pair for future reference.

Unlike the other columns on the table, the "Passengers/Day" column does not reflect a straight relationship between BTN and the number of passengers available to free traders. For BTN < 8, there is *no* scheduled service of any kind, and free traders and (possibly) subsidized ships are the only source of interstellar transportation. At this level, all passengers are available to free traders. For BTN 8 to 8.5, scheduled service is available aboard small freighters that aren't much bigger than the average free trader. The passenger facilities of these ships are not superior to those of free traders, so they are not strong competition. For BTN 9+, dedicated passenger liner service exists, which crowds out the free traders' market share.

Current Passenger Ticket Price

The procedure for finding the current passenger ticket price is similar to that for finding the current freight rate. Use the appropriate equation for Current Price given

Contacts

Local business Contacts can be a crucial advantage for any free trader. They can provide useful assistance when doing business on their world – if they choose to cooperate. A successful roll against the Frequency of Assistance of such a Contact can replace any Area Knowledge roll made when doing business on the Contact's planet.

It generally costs fewer points to purchase a Contact with a given skill than to buy the skill itself. The disadvantage of Contacts is that they are not always reliable or available. Free traders travel constantly, but Contacts on a world are only likely to be available on that world – or at least in the same system. If the merchant needs access to his Contact's know-how when he is in a different system, he is out of luck.

under *Current Freight Rate* (p. 24) – the first equation for an initial price, the second for tracking later prices – but take Average Price from the table under *Average Passenger Ticket Prices* (p. 34) and remember that all prices now refer to passenger ticket prices, not freight rates.

Most GMs will want to use the value for middle passage as the Average Price, since this will be the price of most interest to their players. Rather than tracking high and low passage prices separately (which is time consuming), double the middle passage price to find the high passage price and divide the middle passage price by 10 to find the low passage price.

Like the similarly named variables used for freight rates, Volatility and Regress can be customized (see *Price Series,* p. 36). For most passenger ticket prices, use:

Price Volatility = 0.02 × Average Price
Price Regress = 0.2

The Current Price for passenger tickets is the price that passengers are willing to pay per parsec for their journey. This is the same for all destinations from a single world, subject to the difference in Average Price for the different types of passenger service described under *Average Passenger Ticket Prices* (p. 34). Once Current Price is known, it is necessary to determine how many passengers are available. This is referred to as the *Current Volume.*

Current Passenger Volume

Current passenger volume can be found in much the same way as current freight volume. Use the equation you prefer for Current Volume under *Current Freight Volume* (pp. 24-25), but determine Average Volume as described under *Average Passenger Volume* (p. 34), use the Price Roll that was used to determine current passenger ticket price, and remember that all volumes and prices now refer to passenger volumes and ticket prices, not freight volumes and freight rates. As usual, Volatility and Regress can be customized. For most worlds, the values below will be appropriate:

Volume Volatility = 0.25 × Average Volume
Volume Regress = 0.2

Passenger Availability by Type

To find the number of passengers seeking passage by ticket type, roll 1d-1 for each category (low, middle, high), starting with low, and subtract the result of each roll from the number of passengers remaining. Repeat as necessary. If a large number of passengers is available, the GM can save time by rolling more than one die at a time or just letting the ship take on whatever mix of passengers its operators prefer.

Negotiating the Ticket Price

After determining the number and type of passengers, the actual ticket price must be negotiated. The price calculated under *Current Passenger Ticket Price* (pp. 34-35) is the *fair price.* To see how good (or bad) a deal the ship's purser can wrangle, roll against Merchant skill with the following modifiers:

Purser has Savoir-Faire (Servant): +1 at level 12, +2 at level 20 or better.
No trade route between worlds: +4.
Consult the *Final Price Table* (p. 27) for the final ticket price.

Getting Paid

Passengers are required to pay in cash (or equivalent) before boarding the ship. At the GM's option, some passengers may try to offer only partial payment up front and the rest upon arrival, pleading financial distress. People like this may be honest or con artists, good or bad credit risks, but taking on these kinds of passengers is one of the things that lets free traders compete with the liners.

The Freight Spot Market

The freight spot market is an idea as much as a place, and a ubiquitous feature of the tramp merchant's life. On some worlds, it is an electronic network that matches buyers and sellers; on others, it is a chalk board where notes are left. Whether the bidding is conducted quietly over the port's public computer network, or with a lot of shouting and arm-waving in a pit, or one day a week under a certain tree, the spot market is where free traders come to fill their cargo holds with freight. Whatever the market's physical manifestation, a few truths hold across the Imperium.

First, anyone who wishes to bid on a particular lot of freight must present his bona fides to the shipping agent who is placing the lot, before the start of bidding.

Next, the agent has the right to bar any ship from bidding on his lots if he deems it unsuitable for any reason; in fact, some agents will only deal with ships or merchants that they're familiar with. If the cargo is particularly valuable or sensitive, the agent can ask to inspect the ship and the backgrounds of her crew. He can ask anything he wants about the ship or her crew, but he cannot ask for any service or payment in return for allowing a ship to bid – this violates Ministry of Commerce regulations. This is not to say that bribery never happens, only that it is not officially allowed.

Finally, whether the bidding is conducted electronically or in person, it is *open* so that everyone is aware of who is bidding and for how much. Bids start out at the rate set by the shipping agent and go down as ships compete to carry the freight. Once the bidding is complete, arrangements for payment and loading are made.

Price Series

The Current Price equation (p. 24) can be used to model nearly any price series. The (4d-14) Price Roll produces a number varying from +10 to -10 in a "bell curve" distribution centered around zero. This means that values near the extremes (+10, -10) are far less likely than those near the center (0).

Volatility and Regress serve as "control variables." Volatility controls how far the series' values can move from their long-term average in a single period. It needs to be scaled to the magnitude of the series' long-term average. The freight rate series uses 2.5% of the average rate for Volatility. This keeps the series within 10% of the average most of the time. Raising or lowering Volatility will vary this accordingly.

Regress controls the tendency of the series to return to its long-run average. When Regress = 1, the series "recenters" itself after each period and consists of nothing more than random variations about the long-run average. When Regress = 0, the series has *no* tendency to return to its long-run average and can wander off toward infinity in either direction. In between, the series has high and low trends that persist over time, but still stays in the neighborhood of its long-run average. Experimentation can give the GM a good feel for what values will give the effect he is looking for.

To introduce more pronounced trends into a price series, the GM can use the system to track the per-period change, or *delta*. The price series system produces a string of positive or negative numbers that are related across periods. To have stronger trends, the output of the series can be considered the delta of the *real* price. For instance, if the series equation output is a 9, the delta would be said to be 9 and the real price would increase by 9%. The long-run average of the series would be set to the real price's long-run growth rate. This modification is useful for prices or other numbers that increase or decrease over time.

The price series system is included to model the movement of freight rates and ticket prices, but it has other applications. If the players want to speculate in groat hides or lanthanum, the GM can set up a price series and let them buy and sell. Remember that roleplaying is about adventure, though. Playing the commodities markets can be exciting in the real world, but can easily degenerate into "roll-playing" at the game table. For this reason, the GM should feel free to introduce new conditions or competition if the players begin to develop a fixation on financial speculation to the exclusion of real adventure.

Subcontracting Passengers

A trader with a contract to carry passengers may wish to head off in an unplanned direction. Passengers who have not yet arrived at their destination can be subcontracted; the procedure is similar to that for subcontracting freight (p. 29). In addition to paying another ship to take on their passengers, the trader must pay each passenger a fee of 10% of the remaining cost of his voyage, based on the per-parsec rate of his original ticket.

Passenger Ticket Price Forecasts and Futures

Merchants are free to forecast future ticket prices if they wish, but there is no futures market to sell contracts on or get a base estimate from. Economics forecasts are not affected by this, and are conducted just as for the freight market (p. 21). Market Analysis forecasts *are* affected, because they must be made without the benefit of an active futures market.

To create a ticket price forecast, roll vs. Market Analysis skill using the modifiers under *Market Analysis Forecasts* (p. 31). The difference here is that a forecast is being created, not refined. Success means that the analyst creates a forecast per the rules for generating consensus forecasts (p. 31), using one true die and three false dice; critical success means that the forecast uses two true dice and two false dice. Failure means that the analyst does not feel confident enough to make a forecast, while critical failure means that the forecast includes *no* true dice: all four dice are *false*. As for all forecasts, the GM should keep the result of the skill roll secret from the player.

Speculative Trade

Speculative trade is about much more than buying low and selling high. It is about filling unmet needs, finding new uses for old things and creating binding ties of trade where none existed before. To succeed, the speculator must know his markets intimately and have a keen eye for a deal.

The Law of One Price (sidebar, p. 11) is an obstacle that all speculative traders must overcome. Every trader must ask himself, "If this is such a guaranteed success, why hasn't anyone else done it before?" Worlds that are closely linked by existing trade ties are likely to have exhausted all the best trading opportunities. Systems with little or no contact are better places to look for unexploited avenues for trade.

The rules below follow the logic that the most obvious trading opportunities have already been exploited, and that finding new ones requires some work. Free traders will have to subsist on their revenue from freight and passengers, but clever speculative trading can bring in a handsome bonus.

Finding the Goods

The aspiring trader must first find something worth trading. Populous, high-TL worlds have more to offer, but also tend to have larger, more sophisticated businesses that can effectively engage in interstellar trade on their own. Such worlds get more attention from large, off-world trading companies as well. Thus, it is difficult for a free trader to find worthwhile speculative trade goods on cosmopolitan, high-population worlds.

For the purpose of these rules, speculative trade goods are considered "found" only if they have some profit potential. To find such goods, the trader must roll against the *lower* of his Merchant skill or Area Knowledge skill for the planet he is searching on. This task takes one day. The merchant may substitute the Area Knowledge skill of a Contact, but must roll to reach his Contact daily in order to enlist his Contact's aid for the day.

Modifiers: -2 × the world's WTN; +1 if the skill *not* being rolled against (i.e., the *higher* of Area Knowledge or Merchant) is known at level 12 or better, or +2 if it is known at level 20 or better.

Compare the result of the roll to the table below:

Locating Trade Goods Table

Failure by 10+	Swindled. Automatic critical failure on the destination price roll.
Failure by 1 to 9	No trade goods found.
Success by 0 to 5	1 lot of trade goods found.
Success by 6 or 7	1 lot of trade goods found, -1 on *Origin Price Table.*
Success by 8 or 9	1 lot of trade goods found, -2 on *Origin Price Table.*
Success by 10+	2 lots of trade goods found, -2 on *Origin Price Table.*

Type of Goods

If trade goods are found, determine the value of each lot using the *Origin Price Table.* Next, determine how specialized the goods are using the *Risk Table.* Third, find lot size on the *Lot Size Table.* Lastly, find the market(s) where the goods will sell well – or poorly – using the *Trade Class Modifier Table,* then determine the actual modifier by rolling 1d-3 and assigning it to the trade class(es) indicated (trade classes are explained on p. 13).

Origin Price Table (Roll 3d)

3	Cr1,000,000
4-5	Cr100,000
6-8	Cr50,000
9-10	Cr20,000
11-18	Cr10,000

Risk Table* (Roll 3d)

3-5	High Risk
6-10	Moderate Risk
11-18	Low Risk

* Risk encompasses more than just how volatile the price is. It often reflects how specialized the goods are: they may only be valuable to a customer who knows how to make use of them.

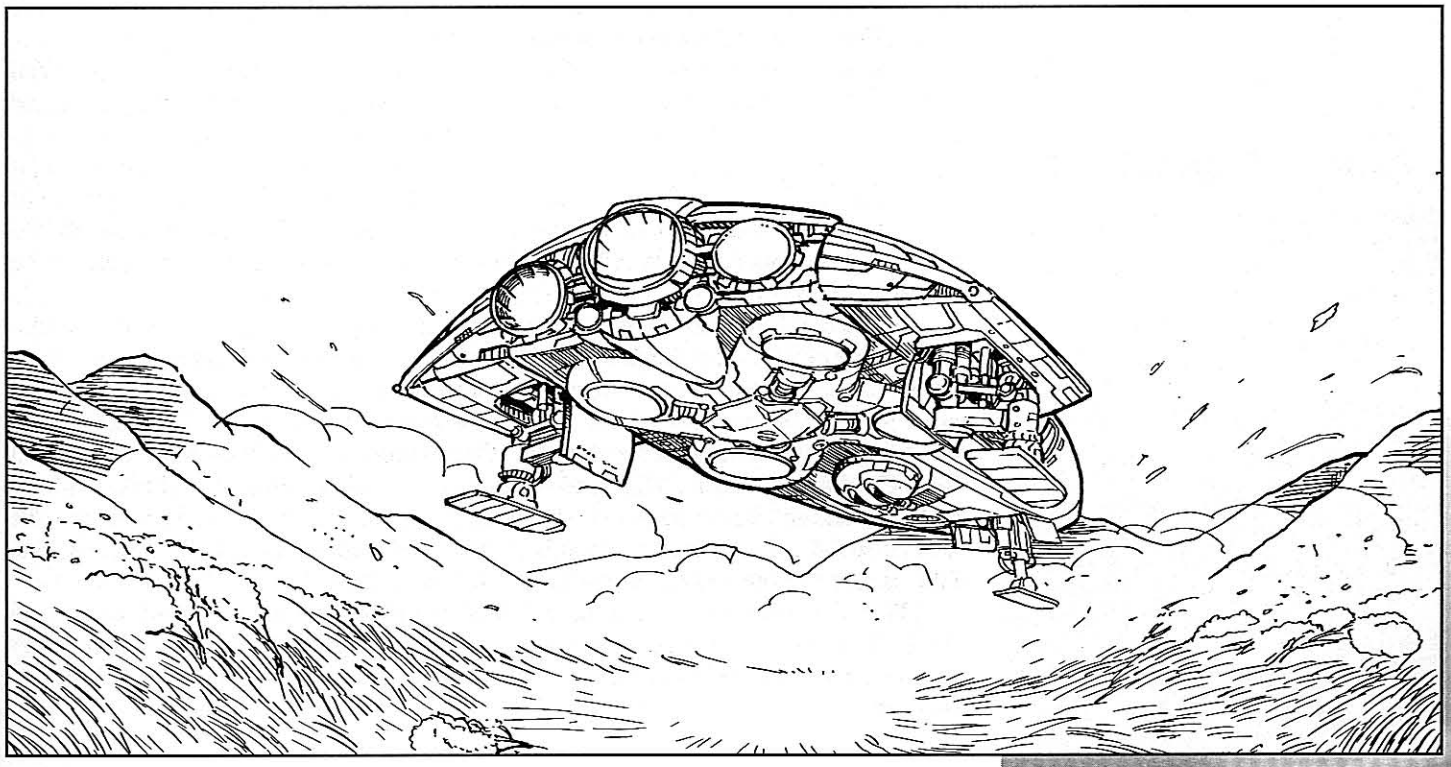
Frontier Worlds

Worlds without any scheduled freight or passenger service are called *Frontier* worlds (see p. 13). Such worlds call for some modifications to the normal trade rules to account for their unusual circumstances.

Routes with BTN > 6.5 can be handled normally, but freight for all of the world's other trade partners (i.e., all routes with BTN 6.5 or less) may be waiting for shipping. Roll under the Frontier world's WTN on 1d for a lot of freight to be available. If this roll succeeds, roll again and continue roll until a roll is failed. Determine lot size and characteristics normally for each lot. Similarly, passengers can be found by rolling under WTN on 1d and continuing to roll until a roll fails. For each success, roll 1d for the number of passengers available.

The destination for *all* freight and passengers will be the nearest non-Frontier world. Once they reach a world with scheduled traffic, they will be able to get passage to their ultimate destination. The nearest non-Frontier world may also have freight and passengers waiting for passage to the Frontier world. On the inbound trip, a ship can pick up additional freight and passengers by rolling against the frontier world's WTN, as outlined above.

Advance notice can be helpful to the inhabitants of frontier worlds by allowing them to plan around the ship's arrival. For every week of advance notice the ship gives, give a bonus of +1 to the freight and passenger rolls versus WTN, to a maximum bonus of +2.



Passage Types

A description of high, middle and low passage can be found on p. GT78. It can be considered broadly representative of the wide variety of ways in which these types of tickets can be defined. On larger liners that have the space and means to do so, middle and high passengers are distinguished by the space and luxuriousness of their respective facilities, the quality of the food and the obsequiousness of the stewards. It would be impossible for a free trader to devote separate facilities to high passengers. Even providing them with better food would be socially awkward, since all passengers will likely be eating at one table. Furthermore, the limited food preparation facilities on a free trader put a low ceiling on the level of cuisine they can produce. Someone used to what "high passage" means aboard a *Grand Princess Iphegenia*-class luxury liner would be sorely disappointed by what it means aboard a *Empress Marava*-class far trader.

High passengers get the best staterooms, entertainment facilities and food available. They also have a luggage allowance of one dton. Middle passengers get staterooms, facilities and food of lesser quality than high passengers. In addition, they share a stateroom with another passenger. If two middle passengers are traveling together, they will be given the same room; otherwise strangers of the same sex and species will be assigned to share a stateroom if possible. Middle passengers receive a ½-dton luggage allowance. Low Passengers spend the journey in suspended animation. They are given a ⅛-dton luggage allowance.

Sample Trade Goods

Some sample goods for use with the speculative trade rules (p. 36). The codes next to the description of the goods make handy reference numbers.

000 • Live Animals
010 • Meat & Meat Preparations
020 • Dairy Products
030 • Fish (e.g., fresh, frozen, shellfish)
040 • Grains
050 • Vegetables & Fruit
060 • Sugar
070 • Coffee, Tea, Cocoa & Spices
080 • Animal Feed
090 • Miscellaneous Edible Products
210 • Raw Hides & Skins
220 • Oil Seeds
230 • Rubber
240 • Wood
250 • Pulp & Waste Paper
260 • Textile Fibers

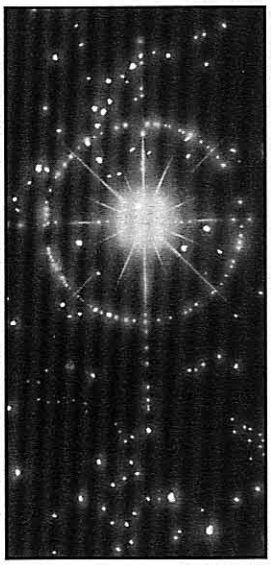
Continued on next page . . .

Lot Size Table (Roll 3d)

3-8	Large Lot, 6d-6 dtons
9-14	Medium Lot, 4d-4 dtons
15-18	Small Lot, 2d-2 dtons

Trade Class Modifier Table (Roll 3d)

3-5	De
6	As, Va
7	As, De, Eo, Ic, Na, Va
8	Ri
9	In
10-11	None
12	Ag
13	Ri
14	Ni
15	Eo
16-18	Wa



The Game Master should always give speculative trade goods a name and a description to make them more interesting. A list of examples is provided in the sidebars starting on this page, but is intended as a source of inspiration, not as a definitive catalogue.

If the GM prefers, he can specify the traits of goods by fiat rather than by rolling dice, much as he would design an important NPC rather than generating him randomly. The GM should choose values from the tables that suit the campaign direction or adventure he has in mind. The resulting goods can then be assigned to specific worlds with a view to moving the game in some desired direction. This tends to lead to more interesting goods and better opportunities for roleplaying.

Predicting Destination Price

Knowing that the goods are valuable on the origin world is not very useful. Shrewd traders will try to estimate the value of the goods on possible *destination* worlds. There are two ways of doing this, both of which involve partial predictions of the trade goods reaction roll (see *Selling the Goods,* p. 39). Save the results of these predictions for the next step. Note that the prediction mechanisms below are quite different from those used for futures markets.

The first method is a quick judgement call that relies on the trader's commercial instincts and his knowledge of the destination world. It does not take any time and can be repeated for as many destination worlds as the merchant desires, as long as he has Area Knowledge at level 12 or better for each one. Roll vs. the *lower* of Merchant skill or the appropriate Area Knowledge skill. Success reveals one die of the trade goods reaction roll; critical success reveals two dice. Failure means the trader draws a blank, while critical failure reveals a *false* die that isn't part of the actual reaction roll.

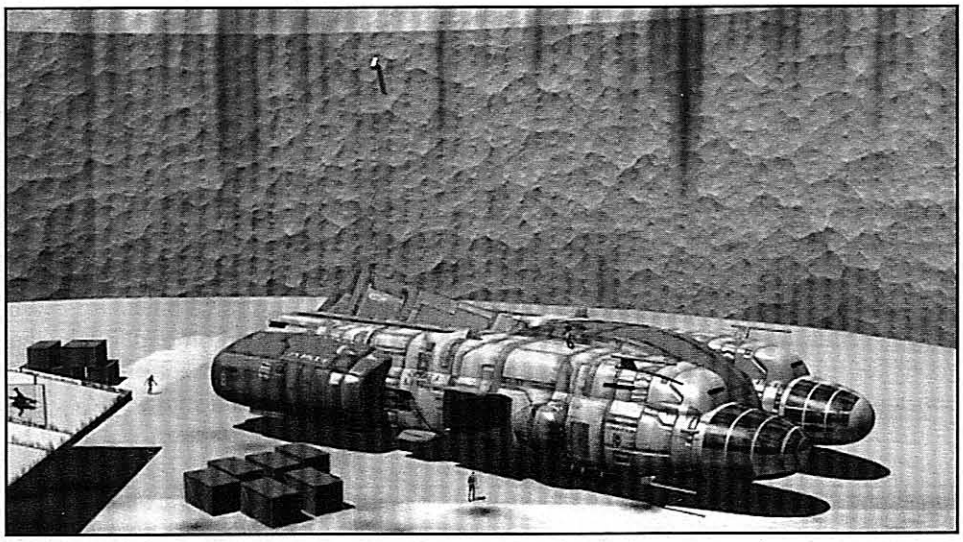
The second method involves Market Analysis skill. It is an attempt to build a market profile of the destination world via a quantitative analysis of data on how similar goods have fared on other worlds and how the destination world has responded to other goods. This requires a great deal of information, which can be acquired through the TAS or any similar organization. It is free to members; nonmembers can access it for a Cr30 fee per world. This kind of analysis is time-consuming, and takes at least one day; taking extra time gives +1 per day, to a maximum of +4. Success lets the analyst see one die of the trade goods reaction roll; critical success reveals two dice. Failure reveals nothing, but critical failure reveals a *false* die.

These two methods cannot be combined to reveal additional dice and improve the prediction. They are both trying to discover the same thing, and both consider the same factors – just in different ways. They *can*, however, be used to confirm one another.

Selling the Goods

Worlds with larger markets are better places to sell speculative goods because it is more likely that someone will appreciate their full value. On the other hand, it is difficult to get a good price if the origin and destination worlds have strong commercial ties (high BTN), because the same merchandise can then be easily obtained through other channels. The GM should determine the actual price at the destination by rolling on the *Trade Goods Reaction Table* with the modifiers below. If reaction dice were rolled as part of a prediction attempt, do *not* roll again; use the results reported to the player.

Modifiers: +1 if the trader has Merchant skill at *any* level, +2 if for *expert* level (20 or better); +1 if the destination has WTN > 4, +2 if WTN > 5; -4 if BTN is 8 or more; +Distance Modifier (p. 14), round down. If the destination world fits into one of the trade classes determined under *Type of Goods* (p. 37), apply the trade class modifier as well.



Trade Goods Reaction Table

Result	Destination Price (% of Origin Price)*		
	Low Risk	Moderate Risk	High Risk
Disastrous (0 or less)	70%	25%	0%
Very Bad (1 to 3)	86%	65%	30%
Bad (4 to 6)	94%	85%	70%
Poor (7 to 9)	98%	95%	90%
Neutral (10 to 12)	100%	100%	100%
Good (13 to 15)	102%	105%	110%
Very Good (16 to 18)	106%	115%	130%
Excellent (19 or better)	114%	135%	170%

* The fair value on the destination world expressed as a percentage of the origin price.

Finding a Buyer

The actual selling price of speculative trade goods depends on the genuine value of the goods on the destination world and the seller's ability to find a buyer who recognizes this value and has the means to capture it. The fact that the buyer knows that Joka Cola would be a big hit is useless if he lacks access to the marketing and distribution channels he needs to sell it. Those who do have access to these things may have more to lose than to gain if the product succeeds. The same goes for capital goods, like new machine tools, which often require an expensive regearing of the manufacturing process to be of use. All of this is even more difficult for highly specialized goods. Finding somebody who is willing to pay a fair price for the goods can be challenging.

Sample Trade Goods
[Continued]

270 • Mineral Fertilizers
280 • Metal Ore & Scrap Metal
290 • Crude Animal & Vegetable Material (e.g., bone, coral, ivory, hair, bamboo, bulbs, seeds, bull semen)
320 • Coal & Coke
330 • Petroleum & Petroleum Products
340 • Natural Gas
510 • Organic Chemicals
520 • Inorganic Chemicals
530 • Dyes & Coloring Materials
540 • Medicines
550 • Soap, Cleaners, Polish & Perfume
560 • Fertilizer
570 • Plastics
580 • Plastic Products (e.g., pipes, hoses, sheets)
590 • Chemicals, Other (e.g., herbicides, explosives, lubricants)
610 • Leather
620 • Rubber Mfgrs. (e.g., tires, tubes, fittings)
630 • Wood Mfgrs. (e.g., crates, barrels, plywood, shingles)
640 • Paper Mfgrs. (e.g., paper, cardboard, books, stationery)
650 • Yarns & Fabrics
660 • Stone Mfgrs. (e.g., cement, flagstones, asbestos, bricks, ceramics, glassware, beads, pottery, gemstones)
670 • Iron & Steel (e.g., pipes, sheets, bars, rods, alloys, railway track)
680 • Nonferrous metals (e.g., platinum, copper, nickel, aluminum, lead, zinc, tin, tungsten, vanadium, lanthanum)
690 • Metallic Mfgrs. (e.g., doors, containers, wire, nails, screws, hand tools, power tools, knives, locks, chains, springs, needles)
710 • Generators (e.g., fusion, fission, internal combustion, steam, wind, hydro, propellers, jet engines, electric motors, hydraulic motors)
721 • Agricultural Machinery (e.g., dairy machinery, wine-making machinery, grain milling machinery)
722 • Tractors & Harvesters
723 • Civil Engineering Machinery (e.g., bulldozers, scrapers, pile-drivers)
724 • Textile & Leather Machines (e.g., sewing machines, weaving machines, cutting machines)
725 • Paper-making Machines
726 • Bookbinding & Printing Machines
727 • Food-processing Machines
728 • Glass-working Machines
730 • Metal-working Machines (e.g., lathes, drills, grinders, millers)
741 • Heating & Cooling Equipment
742 • Liquid Pumps
743 • Air Pumps
744 • Mechanical Handling Equipment (e.g., cranes, forklifts, elevators)
745 • Fire-suppression Equipment
746 • Ball Bearings
747 • Valves
748 • Transmission Shafts, Gears & Flywheels
749 • Molds & Gaskets
751 • Office Machines
752 • Computers
761 • Televisions & Receivers
762 • Radios & Receivers
763 • Sound Recording Equipment
764 • Telecom Equipment

Continued on next page . . .

Sample Trade Goods
[Continued]

771 • Electrical Machinery (e.g., transformers, switches, fuses)
772 • Printed Circuits & Semiconductors
773 • Fiber Optics
774 • Medical Imaging Devices
775 • Household Appliances
776 • Photographic Devices
778 • Batteries
781 • Wheeled Passenger Vehicles
782 • Wheeled Cargo Vehicles
783 • Vehicle Parts
788 • Hover Vehicles
789 • Gravitic Vehicles
791 • Railway Vehicles
792 • Aircraft
793 • Aquatic Ships & Boats
811 • Prefabricated Buildings
812 • Plumbing
820 • Furniture
830 • Travel Goods
831 • Clothing & Accessories
850 • Footwear
860 • Sporting Goods
870 • Scientific Equipment
872 • Medical Devices
873 • Measuring Instruments
881 • Photographic Devices
882 • Films
883 • Multimedia Entertainment
884 • Filters
885 • Watches & Clocks
891 • Arms & Ammunition
892 • Printed Matter
895 • Toys
896 • Works of Art
897 • Jewelry
898 • Musical Instruments

To find a buyer, roll vs. the *lower* of the seller's Merchant skill or Area Knowledge skill for the destination planet, at -3 for Moderate Risk goods, -6 for High Risk goods and -1 per day after the first spent searching (the seller will search the most likely places first). Each roll represents a day of searching, and the search can go on for as long as the seller wishes. More than one person can search, but they all receive -1 per day of searching, even if only one of them actually searched. The Area Knowledge skill of a Contact can be used instead, but the trader must roll to reach his Contact daily in order to enlist his Contact's aid for the day.

The seller can also hire a broker to do the search. Brokers have the appropriate skills at level 15 to 20, and charge a commission of (skill - 14) × 5%. The broker uses exactly the same mechanics as the seller to conduct the actual search.

Advertising can be used to convince buyers to seek out the seller. This is resolved like a search, but the roll is against Advertising skill (pp. 102-103). Basic advertising costs Cr30/day; every ×10 spent gives +1 to the roll. Advertising is also subject to a cumulative -1 per day, but is not affected by the -1 per day penalty applied to a concurrent search (and vice versa). Only one advertiser can be used at a time. Hiring an advertising agency costs (Cr20 × skill) per day, plus the cost of advertising.

On a success, a buyer is found and the goods can be sold at the price given by the *Trade Goods Reaction Table.* Remember that in most cases, the seller will have to pay for handling and wharfage (for loading and unloading), clear the goods through customs, and pay any tariffs.

If the seller is absolutely unable to find a buyer, he can sell the goods to a local speculator for *half* the value found on the *Trade Goods Reaction Table.* Finding a speculator may take a day, but if the trader has been looking for a buyer for more than WTN days, at least one will have contacted him already and offered to take the goods off his hands. The speculator might even be the broker he hired to find a customer!

GM's Price Series Record

World Name: Subsector: Sector:
Population: Tech Level: WTN: Freight or Passengers?
Average Price: Average Volume: Prices or Forecasts?

Week	Die Rolls Die1	Die2	Die3	Die4	Total	Price Roll	Last Price	Price Vo.	Score	Reg.	Avg. Price	Last Price	Current Price
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___
___	___	___	___	___	___	-14=___	___ +	___ *	___ +	___ *	(___ -	___)=	___

CHAPTER THREE

High Finance

Managing money is a complex matter – especially in the far-flung interstellar environment of the Third Imperium. There are risks at every turn, and specific methods of doing business have evolved to manage those risks. Every businessman must determine how his business will be organized, how he will acquire capital, and which investments he will make. Each of these decisions can have a dramatic effect on his ultimate financial success.

Business Organization

The three basic forms of business organization are the *sole proprietorship,* the *partnership* and the *corporation.* What distinguishes one from the next are the answers to the questions "Who owns the business and shares in the profits?", "Who makes the business decisions?" and "What are the legal liabilities for debts and damages incurred by the business?"

Sole Proprietorship

A sole proprietorship is a business owned (and often operated) by only one person; e.g., a merchant who owns his own ship, a family-owned business where one person makes all the decisions. In effect, the owner *is* the business. The assets and debts of one are legally the assets and debts of the other, and the owner is *personally* liable for all of the debts of his business – which means that personal assets that have nothing to do with the business can be claimed by creditors seeking payment for debts or damages. A sole proprietor can literally be sued out of house and home.

Although sole proprietorships face more legal liability than most other kinds of organizations, they are popular because they are as flexible as the owner wants them to be, which means they can respond quickly to changing circumstances.

Partnership

A partnership is a company in which ownership is shared by two or more people; e.g., multiple characters pooling their assets to purchase a starship. There can be *any number* of partners, but the more there are, the less flexible the company. Partnerships are easily formed and require little paperwork; in fact, all that it takes is a verbal agreement and a handshake. It is wise, however, to write down the basics of the partnership agreement at the outset.

Partners share decision-making, financial, and legal responsibility. As with a sole proprietorship, the financial risks of the owners are not limited to the assets of the partnership: All of the partners' individual and personal assets are at risk as well.

The individual partners may have different areas of responsibility, but anything that affects or changes the nature of the partnership – adding or removing a member, changing the business of the partnership, and so on – must be approved by *all* of the partners. Whether this is done by a majority vote or unanimous approval is determined by the terms of the partnership agreement.

Partners divide profits equally, regardless of how much work each one actually does. In fact, some partners may contribute assets instead of working. Such partners are often called "silent partners," because they tend to be uninvolved in the day-to-day decisions of the business. Partners also share the assets of the partnership, and no partner may deprive another partner of access to those assets.

Alien Business Organizations

All the major races comprehend the standard Imperial forms of organization, but variations in psychology and culture lead to differences in detail. For instance, no K'kree would go into business as an individual; a K'kree "sole proprietorship" would be a whole family, and a "partnership" would be a collection of families.

Aslan

Aslan businesses are most often corporations, usually run by unmarried females. They normally function independently of the male-dominated clans, but small corporations may have clan ties. If so, the business will be run by both the unmarried females and the wives of the clan, with an exchange of assets when an unmarried executive marries into another clan. Females from different clans will occasionally work together in a large corporation, with the clans attempting to balance their representation within the company.

Due to their females' cultural role in business, Aslan will often treat merchants of other races as having a *perceived* gender of female, regardless of sex. Unless the distinction is forcefully pointed out to them, male Aslan will have a more relaxed – though possibly patronizing – attitude toward discourteous behavior from merchants, while female Aslan will be correspondingly more touchy.

Droyne

The Droyne have a rigid caste system, and their business organization is shaped by their social organization. The Drone class is responsible for much of the business and trade done by a Droyne group, but ultimate decision-making power rests with the Leader caste.

Continued on next page . . .

Alien Business Organizations
[Continued]

There are two common types of Droyne companies. The first is based on the community (*oytrip*), made up of extended families (*dreskayin*). Its members specialize in trade or manufacture instead of following the typical pastoral pattern. The community's Leader-of-Leaders will ultimately make all important decisions about the conduct of business, which makes this type of company a kind of "large-scale proprietorship."

The other, more adventurous (for Droyne) sort of company is the fraternity (*kroyloss*). A *kroyloss* is a voluntary association of young adults from each caste, a kind of brotherhood and semi-family group not unlike a partnership. Fraternities are less bound by the standards of Droyne society, and can pursue interests that families or communities might not, like exploration, prospecting and innovation. A fraternity may break up over time, with its members leaving to join other families, or it may transform into a "family business" as its members grow older.

Hiver

Each Hiver nest is essentially a partnership, although decision-making power may not be shared equally. Nests are separate financial entities with individual purposes. They deal with each other as equals and always attempt to balance accounts. For instance, when a Hiver moves from one nest to another, the two nests will balance the "transaction" financially. When dealing with non-Hivers, a nest will be formed to do business and responsibility will be shared equally among nest members.

K'kree

K'kree families enter into trade and commerce because their superiors among the *krurruna* direct them to do so; they strive to do well because that is their rightful place in the universe. Companies are proprietary, reflecting the rigidly patriarchal nature of K'kree society. Mercantile endeavors (except for important trade negotiations) will be headed by a patriarch from the middle ("well-born") caste. Ships and other business capital are assigned to a family to operate, and 50% of the profits are returned to the *krurruna*.

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Limited Partnership

There is a special kind of partnership, called a *limited partnership,* which limits the financial and legal liabilities of the partners to the assets of the partnership itself. This affords the partners greater protection from damages in lawsuits in return for satisfying additional governmental requirements: Documentation must be filed that states the names of all partners and the purpose of the partnership, annual financial reports must be filed with the appropriate governmental agency, and all changes to the partnership must be publicly announced and filed. In addition, the business must identify itself with the appellation "LLP," which stands for "Limited Liability Partnership."

Corporation

Corporations divide up ownership into a set number of *shares,* each of which counts as one vote in important decisions about the company. Shares can be owned by any number of people, called the *shareholders.* Shareholders elect a *board of directors* which exercises direct control over the company, deciding matters of policy, setting goals and hiring a management staff that runs the company on a daily basis.

It is possible for the same person to be involved in all levels of a corporation. For example, he can be a shareholder, chairman of the board of directors and chief executive officer. In fact, in closely held corporations where all of the shares are owned by only a few people, this particular arrangement is not unusual.

Shares can be traded freely. If listed on a stock exchange (see pp. 46-47), this is easily done through a broker. Otherwise, shares can be traded almost as easily as any other goods, the only additional requirement being that transfers of stock must be recorded so that the corporation knows who its owners are. Those buying and selling shares do not need to know each other, and in contrast to a partnership, no one else needs to agree before the change in ownership can take place. The ease with which ownership can be transferred is one of the greatest advantages of the corporation.

The other major advantage of the corporation is that personal assets cannot be reached by those who sue the company – including creditors, if the company goes bankrupt. The most a shareholder can ever lose (i.e., the limit of his risk) is the price he paid for the stock.

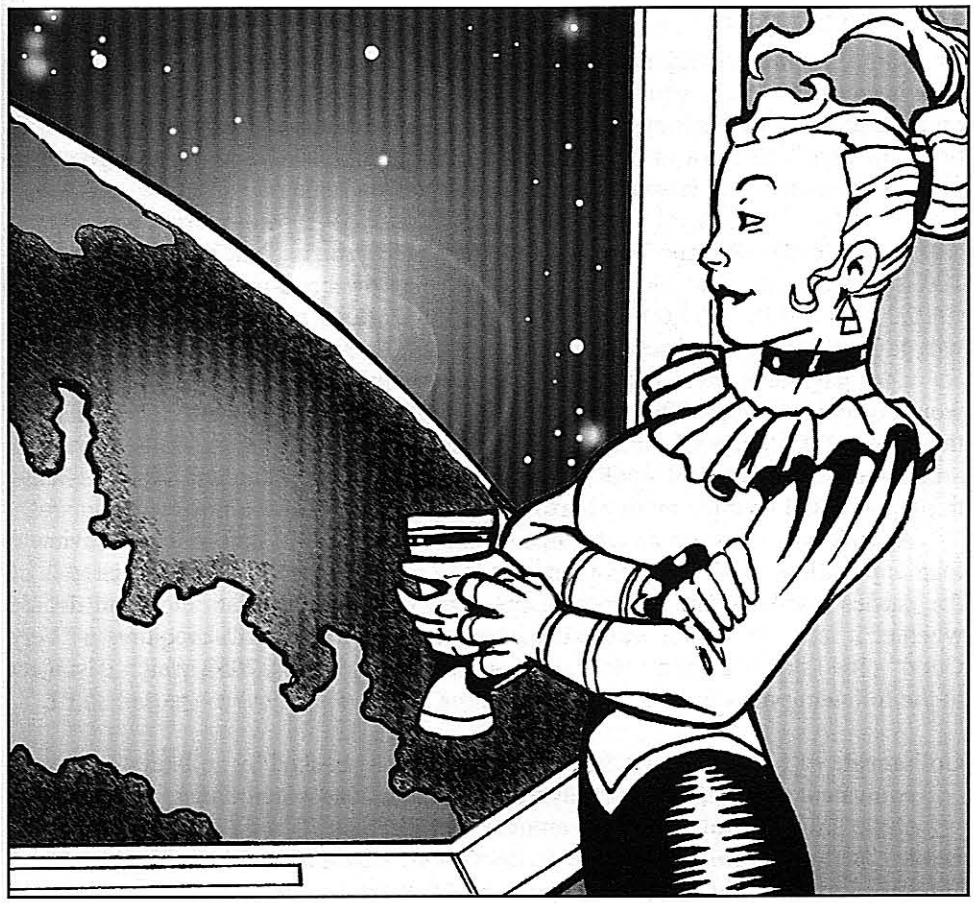
Private vs. Public Corporations

A corporation is *public* if it is traded on a stock exchange (see pp. 46-47); otherwise, it is *private.* As a general rule, shares in a private corporation will be held by a small number of people, while shares in a public corporation will be owned by thousands or even millions of people.

Due to the fact that public corporations are traded on public exchanges, they are of great interest to a large number of people and are closely monitored by traders and often the government. This means that a great deal of information will be freely available about a public corporation. Private corporations can afford to be much stingier with information: ownership is limited and fewer people are concerned with their performance, so they are less likely to be monitored.

Acquiring Capital

Capital is the money (or goods, like equipment) used to start and build a company. Unless you happen to have capital to begin with, you will need to obtain it before you can go into business. The most common method of acquiring capital is to borrow it – usually from friends and relatives. Those without rich family or friends can borrow money from banks, the government, wealthy patrons and megacorporations.



Business Plan

The first step in borrowing money from anyone is to create a *business plan* which states:

1. The purpose of the business and how it is expected to make a profit.
2. The amount of money needed to get the company going.
3. The proposed organization (proprietorship, partnership or corporation) and leadership.
4. The planned list of expenditures (equipment, advertising, etc.).

Creating an adequate business plan is similar to the invention process (pp. B186-187), and requires a "conception" roll and a "development" roll. The "conception" roll is against Merchant-5, and may be attempted once per day until it succeeds. As with inventing, failure simply means that you must try again; critical failure results in a flawed concept.

Once you have a concept in hand, it must be developed into a detailed and presentable business plan. The size and complexity of the business will affect the development of the plan. Estimate the size of the business, then roll vs. Administration skill with the modifier indicated below; those with any level of Accounting or Finance skill get +1, while those with *expert* level – 20 or better – get +2. This roll may be attempted once per week until it succeeds. Critical success gives +1 on the reaction roll for a loan application (see p. 44).

Size of Business	Modifier to Administration
Cr10,000-99,999	+2
Cr100,000-999,999	0
Cr1,000,000-9,999,999	-2
Cr10,000,000-99,999,999	-4
Cr100,000,000+	-6

Alien Business Organizations

[Continued]

Vargr

The Vargr strongly favor partnerships, but "Vargr partnership" can mean many things. To some, it isn't a legitimate form of business organization at all, but a convenient way for pirates to divide up booty, awarding shares to participants based on individual contribution and rank. To others, it means nothing more than a partnership where one (usually charismatic) partner will dominate decision-making and the rest will follow. At best, it refers to a partnership where a member will profit in proportion to his contribution. At worst, it means that each partner is on his own and susceptible to being stabbed in the back – sometimes literally.

Vargr corporations exist, especially for ventures too large for a single individual to influence. The mechanics are similar to those of Imperial corporations, but "sacking the CEO" is a much more common approach to problem-solving.

See ***GURPS Traveller: Alien Races I,*** pp. 85-86, for more information.

Vilani

Vilani and Solomani cultures have mixed so thoroughly that *any* form of business organization may be encountered, but where Vilani culture remains strongest, traditional preferences can be found. Vilani Bureaux resemble a cross between huge partnerships and vast public corporations with extremely widespread ownership. Smaller businesses tend to be partnerships, due to the appeal of equal decision-making power.

The Vilani are conservative, community-oriented and resistant to change for change's sake. Businesses in Vilani-influenced regions will have more difficulty getting started, perhaps even requiring a government permit to open or expand. At the same time, intellectual property rights (patents, copyrights, etc.) are much softer, reducing the economic incentive for innovation.

Continued on next page . . .

Alien Business Organizations
[Continued]

Zhodani

Business – as with everything in the Consulate – is heavily influenced by the nobles. Proles may own and operate small family businesses, and most executives in Zhodani corporations are intendants, but only the most insignificant venture is undertaken without the tacit approval and favor of the local noble, who receives an interest in the business in return. This is not seen as "favoritism," but as a necessary review of the social benefits that the venture represents. Stock in major Zhodani corporations is generally split among nobles and intendants; the Consulate itself is often a major shareholder and receives a large portion of its revenues from investments.

The concepts that a merchant might charge more than a reasonable profit or knowingly misrepresent the condition of goods are foreign to the average Zhodani. Zhodani enjoy the mental exercise of haggling, but only with the underlying assumption that everything is open and above board. Dealings with non-Zhodani within the Consulate are often assisted by telepathic mediators (to keep everyone honest and to make sure that a true meeting of minds occurs). Non-Zhodani who play by the rules will find it refreshing (in some ways) to deal with them. Zhodani practice is to simply refuse to deal with outsiders who are unwilling to make use of psionic mediators . . . since dishonest merchants are something the average Zho has little experience with, there are no specific laws against it, and an Imperial merchant need not fear being jailed for lying – merely shunned.

Zhodani merchants operating within the Imperium have usually undergone special training in dealing with non-Zhodani, and will abide by Imperial laws regarding the use of psionic powers – those trained in psychology, however, will find it a simple task to read body language and other non-psionic clues and can usually determine if they are being lied to. Anti-psionic prejudice still discourages many Imperial traders from doing business with the Zhodani, however.

See ***GURPS Traveller: Alien Races I***, pp. 26-28, for more information.

Banks and Loans

Banks are the primary source of loans (that is their main business, after all). A *loan* is an agreement in which a lender gives money to a borrower in exchange for a promise to repay that money (the *principal*), plus interest, within a specific period of time. *Interest* is the cost of borrowing the money, expressed as a percentage of the principal and charged per year of the period of the loan.

Example: Dr. Kromm borrows Cr10,000 (the principal) at an interest rate of 10% for two years. The total amount he will pay the bank over two years will be Cr10,000 plus 10% (Cr1,000) for *each* year of the loan period. In other words, he will pay Cr12,000 over two years to borrow Cr10,000 today.

Loan payments are usually made each month. In the example above, Dr. Kromm would be paying Cr12,000 over two years. Dividing the total amount to be repaid by the number of months of the loan gives a monthly payment of Cr500. If payments are not made on time, the bank will eventually call in the loan and repossess anything purchased with the money borrowed.

A bank will insist on an adequate business plan (p. 43) before it will review a loan application. It will then examine the loan application, the financial histories of the parties involved, the purpose of the loan, the business plan, etc., and decide whether it is in the bank's interest to approve the loan. Approval requires a "Very Good" (16+) or better result on a reaction roll (see pp. B204-205), which is subject to the following modifiers:

Collateral: +1 per full 5% of the loan amount that is backed by collateral (assets of equivalent value). For down payments on large, single-item loans, use total purchase price instead of the loan amount.

Bank Location: *Main:* +1. *Feeder:* 0. *Backwater:* -2. *Frontier:* -4.

Interest Rate: +1 per full percentage point of interest to be paid, with a minimum 2% (+2).

Loan Amount: -1 per MCr10 to be borrowed (round up).

Loan Period: -1 per 10-year period of the loan (round to the nearest 10 years).

Reputation: A good Reputation will help the bank decide that the borrower is a worthy credit risk; a bad Reputation will discourage the bank from loaning him money.

Risk Level: *Extreme* (mercenary companies, exploration or trade outside the Imperium): -2. *High* (speculative trading, hazardous travel areas): -1. *Moderate* (sector-wide cargo transport, belt mining): 0. *Minor* (manufacturing, agriculture): +1. *Negligible* (single-system service industry, planetary businesses): +2.

Status: Those with high Status hold positions of trust and respect, as well as power, and are regarded as more reliable credit risks. They are not necessarily more trustworthy, but they are more traceable, and could risk losing their Status if they are unable to repay their loans.

Other Reaction Modifiers: The GM may decide that other modifiers (applicant's Appearance, loan officer's Intolerance, etc.) are relevant. Banks are not normally susceptible to these kinds of modifiers, however.

Short-Term Loans

Short-term loans are loans for periods of one year or less. They are helpful when an individual or his business needs (for instance) a piece of equipment that is just beyond his current means. There are two kinds of short-term loans: *personal* and *business.*

Personal Loans: The total amount of money that an individual can borrow personally each year is equal to his annual income, computed using the *Job Table* (p. GT106). If no appropriate career is listed, the GM should determine a reasonable amount. The sum of *all* personal loans for one year cannot exceed this amount; neither can the total amount owed at any one time. Once this limit is reached, legitimate applications for further loans will be automatically denied (see p. 46 for fraudulent loans).

Example: The most that a starship crewman with Rank 0, Status 0 and skill 12 could borrow in one year would be [Cr80 × 12 (skill)]/month × 12 months = Cr11,520.

Business Loans: A company may apply for a business loan to purchase equipment, speculative cargo, starship parts, etc. A business loan must be backed by *collateral;* i.e., assets the company owns. The total amount of short-term money that a business can borrow is equal to its collateral. This figure includes all of the company's cash and all of the equipment and starships it owns – even if owned only in part (see *Bank Financing,* p. 44).

Example: A business that has purchased a MCr30 starship and operated it for 8 years will own 25% of the total value of that ship. This means that it has MCr7.5 invested in the ship, and can borrow up to that amount in short-term loans.

Approval: Whether or not a short-term loan will be approved and the amount available are determined by a reaction roll (see pp. B204-205). Roll three dice on the following table for the loan officer's reaction:

9 or less – Application denied.
10-12 – Neutral: 10% of annual income or collateral available.
13-15 – Good: 25% of annual income or collateral available.
16-18 – Very Good: 50% of annual income or collateral available.
19 or better – Excellent: 100% of annual income or collateral available.

Modifiers:
Any level of Accounting skill: +1; *expert* level (20 or better): +2.
Reputation or Status: +1 per level.
Number of other loans outstanding: -1.

The normal reaction roll can be avoided by using Finance skill to attempt an influence roll (p. B93). Critical success will result in an "Excellent" reaction, success will give a "Very Good" result. Failure means a "Neutral" reaction and critical failure means the loan is denied.

Short-term loans have a fixed interest rate of 10% and payments must be made monthly. Borrowers who make a habit of making payments late or missing them altogether may gain a bad Reputation. Persistent failure to pay can also result in repossession, freezing of assets and even the hiring of a licensed bounty hunter or skip tracer to track the culprit down and bring him to court.

Loan Sharks

Banks aren't the only source of short-term loans. *Loan sharks* are people – usually affiliated with organized crime – who loan money easily (they often don't *care* whether or not the borrower can repay the loan on time) but at high interest rates. Loan sharks are willing to loan substantially greater sums of money than are banks; the total amount available is 200% of an individual's annual income or a business' collateral.

To find a loan shark, roll against Streetwise once per day, at a penalty equal to the CR. Failure simply means you must try again the next day. Critical failure can lead to trouble with local law enforcers or criminals (GM's choice).

Once a loan shark is located, roll three dice on the following table for his reaction; all reaction modifiers under *Short-Term Loans* (p. 44) apply here as well:

3 or less – Failure.
4-6 – Bad: 10% of annual income or collateral available.
7-9 – Poor: 25% of annual income or collateral available.
10-12 – Neutral: 50% of annual income or collateral available.
13-15 – Good: 100% of annual income or collateral available.
16-18 – Very Good: 150% of annual income or collateral available.
19 or better – Excellent: 200% of annual income or collateral available.

Company Names

Certain labels are attached to company names to indicate whether the company is a corporation (and whether it is public or private) or a partnership. These abbreviations help people doing business with such companies keep track of what form of business they are dealing with and what laws will protect them in the event of future difficulties. It is understood that most corporations in the Imperium, public or private, will have the appellation "LIC," which stands for *Limited Imperial Corporation.* This is often omitted in common usage; e.g., "SuSAG" is often used instead of "Schunamann und Sohn AG, LIC."

Public Corporations

AG *Aktiengesellschaft*
Inc. Incorporated
LIC Limited Imperial Corporation
N.Hv. *Ngekdues Hvaek* (Vargr: "Merchant Contract/Agreement")
Plc. Public Limited Company
SA *Société anonyme*
S.H. *Syarei Huakh* (Aslan: "Searchers for Profit")
ZhI. *Zhievr Ielinzh* (Zhodani)

Private Corporations

GmbH *Gesellschaft mit beschränkter Haftung*
LIC Limited Imperial Corporation
Ltd. Limited
SARL *Société à responsibilité limitée*

Partnerships

Appellations like "& Sons," "& Company" and "& Associates" do *not* necessarily designate a partnership. Such names can be used for sole proprietorships and corporations.

LLP Limited Liability Partnership
N.Th. *Ngekvol Thaeghz* (Vargr: "Trading Pack")

The normal reaction roll can be avoided by using Streetwise skill to attempt an influence roll (p. B93). Critical success will result in an "Excellent" reaction, success will give a "Very Good" result. Failure means a "Poor" reaction and critical failure means the loan is denied.

Loan sharks are willing to loan to just about anybody, but they do so at a steep premium. The interest rate for borrowing money from a loan shark is 20% – or more! The duration is one year, and monthly payments *must* be made – or else; failure to do so is not only likely to earn you a bad Reputation, but can be hazardous to your health. Loan sharks and their flunkies are not above using physical intimidation and corporal punishment ("leg breaking") to extract late payments. As well, bounty hunters and skip tracers – of both the legal and illegal variety – may be used to track down those who default on loans made by a loan shark; treat this as an Enemy disadvantage.

Since many if not most loan sharks are part of large criminal organizations, they may be willing to "forgive" late payment, or even waive payment altogether, in exchange for services – usually illegal. Treat this as an Involuntary Duty (p. CI77); in many cases, it is also an Extremely Hazardous Duty (p. CI78).

Note that at low Control Ratings (CR 0 or 1), banks may operate much like loan sharks!

Bank Fraud

Interstellar trade depends on the honesty and fairness of everyone involved, but there are always those who seek to cut corners and take more than they are entitled to. Banks, because they have lots of money and are in the business of lending it to people, are prime targets for fraud.

To obtain a fraudulent personal loan, you must represent your Status or occupation as being better than it really is, and you must be able to back this up with falsified documents. Savoir-Faire skill is needed to misrepresent your position, while Forgery skill covers creation of the supporting documentation. Rolls against both skills must be made before making the reaction roll for the loan. Fraudulent business loans work the same way, except that Accounting skill is used instead of Savoir-Faire.

If either roll fails, so does the loan application; if both fail, the bank also becomes suspicious, and will investigate the applicant if he attempts any future transactions. On any critical failure, the authorities will be alerted immediately and the criminal will be arrested at the scene. If both rolls succeed, however, roll normally on the reaction table (see *Short-Term Loans,* p. 44).

If (more likely, when) a successful defrauder fails to make payments, skip tracers will probably be hired and the authorities will be alerted and given his "identity." Treat this as an Enemy disadvantage. The con man can attempt to use Disguise skill to avoid exposing his true identity to the risk of arrest.

Incorporation

Incorporation is the act of forming a corporation (see p. 42). The corporation is not only a popular and effective way to organize a business, but also an excellent way to acquire the capital needed to finance a company. By offering shares for sale, a company can quickly accumulate the cash necessary to get started. The process is not without its risks, however.

To incorporate, a company must submit a business plan (see p. 43) and a fee to the appropriate governmental agency, along with a request for approval. Approval requires a successful roll against Merchant or Finance skill, modified for Control Rating (see table below). There is no fee to become a Limited Imperial Corporation (LIC), but the Ministry of Commerce will examine your business plan and your

Interstellar Financial Transactions

An "interstellar financial transaction" is any instance of money moving between two star systems. Those who have lived their entire lives on a single planet – including the players and many PCs – are used to financial transactions being processed and cleared over the planetary data network at or near the speed of light. Things get more complicated for interstellar transactions, which are limited to the speed of jump and take weeks or months to conduct. In general, communications move at one jump per week along trade routes, which means 4 parsecs/week on Xboat routes and 2 parsecs/week elsewhere.

Most free traders live "hand to mouth," so managing their financial affairs in a way that minimizes these delays can mean the difference between success and bankruptcy. The precise details of the Imperial banking and financial systems are described throughout this book; the rules below address only the issue of how easy it is to make an interstellar financial transaction. They can be used whenever the characters want to transfer money from one account to another, get paid or make payments (e.g., on a ship mortgage).

Transferring Money

The ease of a transaction depends on the financial ties between the origin and destination worlds, which are themselves a simple function of Bilateral Trade Number (BTN; see p. 15): If BTN > 10, then a *branch* bank exists on the destination world. If BTN > 8, then a *correspondent* bank exists on the destination world. Otherwise, neither exists on the destination world.

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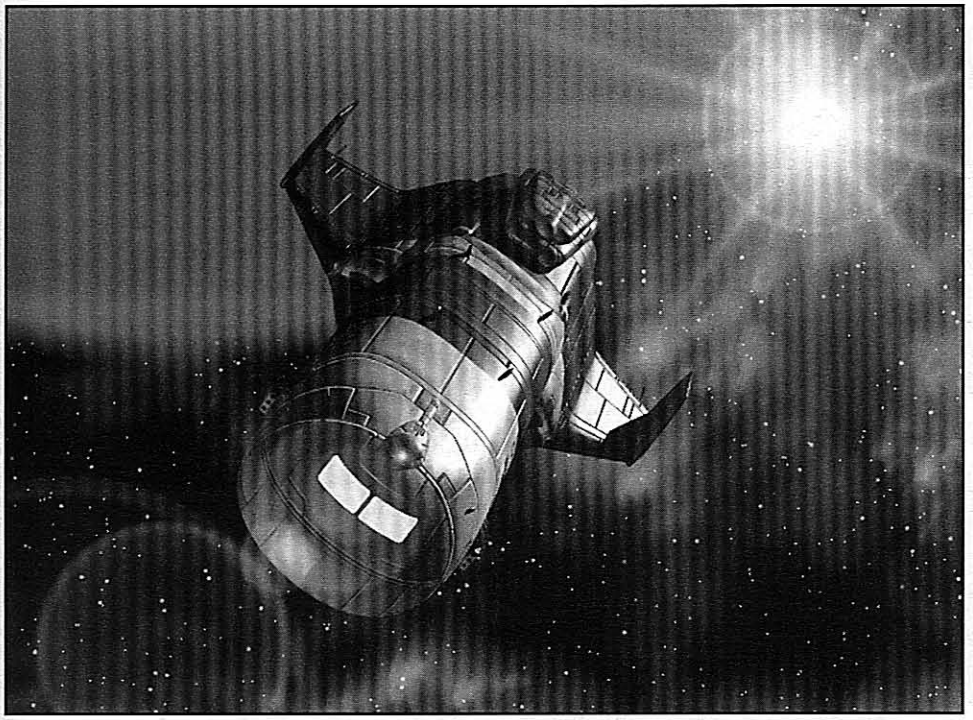


books, and 2% of all shares must be given to the Emperor, who will usually assign their control to a local noble. If incorporating on just one planet (which must have a CR of 2 or higher), the fee is determined by the Control Rating of the system:

CR (Cr)	Fee Modifier	Incorporation
2	100	+4
3	500	+2
4	1,000	0
5	5,000	-1
6	10,000	-2

Once the prospectus is successfully prepared and the fee is paid, the incorporation process is complete and the shareholders can elect the initial board of directors. The company now enjoys all the legal privileges of a corporation and can do business in that form. Shares can now be sold privately – that is, one person can sell them to another, person to person – but they cannot be sold on a stock exchange yet.

To publicly sell stock, the corporation must be listed with a particular stock exchange and make an *initial public offering* (IPO). If the company's business activities are limited to one system, it will be listed on a *planetary stock exchange* (PSE); if it does business in multiple systems, it will be listed on an *interstellar stock exchange* (ISE).

Interstellar Stock Exchanges

These exchanges are designed to assist and promote trade between systems. They are authorized and supervised by the Imperial Ministry of Commerce. The Ministry has a strong "hands off" policy, so each ISE can have different rules and is usually administered by the local system government. The Ministry only gets involved if the local authorities are hampering trade on the exchange. A system must have a Control Rating of 3 or higher, a tech level of 5 or better and a World Trade Number (see p. 11) of 4 or greater to have an ISE.

Listing Fee: To be listed on an ISE requires a listing fee of Cr10,000 × WTN (of the system that manages the exchange), which must be paid *annually.* A parent corporation and its subsidiaries may be listed on only one exchange apiece, but each may be listed on a different exchange as long as all requisite listing fees are paid.

Interstellar Financial Transactions

[Continued]

When a branch bank is available, transferring money between accounts involves obtaining a bank draft (p. 74) for up to the full amount of money in your account on the first world and taking it to the second world for deposit in your account there. You can get at your money without doing this, but there are some restrictions. Branch banks will honor a portion of claims on account balances on other worlds. The exact amount is determined using the short-term loan rules (pp. 44-45), with the account balance as the maximum amount. This "loan" is interest free, and is considered repaid when the bank completes its own fund transfer. The speed of this transfer is limited only by the speed of communications; the time required is the round-trip time between the two worlds.

When a correspondent bank is available, transferring money between worlds can be handled just as for branch banks, but using a letter of credit (p. 74). Correspondent banks will help you fill out a letter-of-credit request if you do not currently have one that is valid on that world. In this case, the transfer must first travel to the nearest branch of the your bank and from there to its ultimate destination. Calculate travel time normally based on this distance. It is also possible to get short-term loans against off-world balances from correspondent banks, but there is a 1% fee.

If neither a branch nor correspondent bank is available, then you can either physically transport the cash yourself or ask the bank to do so through the mail. Sending small amounts of cash (under Cr10,000) through the mail carries a 3% fee; amounts up to Cr100,000 can be sent for a 5% fee. Larger amounts must be sent by courier.

If you are patient, you can get your money transferred to a nonbranch, noncorrespondent bank without handling cash. This requires inter-bank drafts and a lot of time. Like a game of "six degrees of separation," the two banks must find the shortest link between them, using either a chain of correspondents or branches or correspondents on the same world that can clear the transaction through the planetary network. The GM can simply assume that this takes 3 weeks times the distance between the two worlds. Those who like detail can instead find the nearest world where both banks have correspondents, then multiply the round trip distance in parsecs by 1 week. This service costs Distance Modifier (p. 14-15) × 2%.

Exchange Rates

Some Imperial member planets maintain their own currency. When visitors come to these worlds, they must exchange Imperial credits for the local currency (and convert back again when they leave). This currency may be called anything: credits, dollars, rupees, drachmas, solars, etc. Its name is not important; its purchasing power is. Purchasing power depends on tech level, as shown on the *Exchange Rate Table* (below).

The *Exchange Rate Table* assumes that the ratio of currency to population is the same everywhere. For instance, if the average TL12 person earns 15,000 Imperial credits per year, it is assumed that local currencies on TL12 worlds are set so that the average person earns 15,000 "local credits" per year as well. If the GM wishes, some currencies may have higher or lower ratios. If the world has more or fewer credits per person, multiply the first column by ("local credits" per person)/15,000 and divide the second column by the same number.

For planets which lack their own currency and use Imperial credits instead, the GM should multiply the prices of all goods and services that cannot be traded between systems (restaurant meals, hotel stays, equipment repairs, etc.) by the number in the second column (*Local Credits to Imperial Credits*). This represents the lower standard of living and labor costs on worlds below the TL12 "leading edge" (see *Technology, Productivity and Exchange Rates,* p. 15).

Exchange Rate Table

TL	Imperial Credits to Local Credits	Local Credits to Imperial Credits
12	1.0	1.0
11	2.0	0.50
10	3.2	0.31
9	5.0	0.20
8	8.0	0.12
7	13.0	0.075
6	20.0	0.05
5	33.0	0.03
4	50.0	0.02
3	100.0	0.01
2	145.0	0.007
1	200.0	0.005
0	330.0	0.003

Initial Public Offering (IPO)

The corporation must first determine the price of each share. This is typically less than Cr100/share for new companies. To calculate the initial value, divide the current and anticipated assets of the company by the number of shares issued. For instance, a company with MCr100 in assets and 100,000 shares would have an initial value of Cr1,000/share. If it had 1,000,000 shares, its initial value would be Cr100/share.

The actual sale of stock is a Quick Contest of Finance skills between the corporation (using the highest skill from among its representatives) and the effective skill of the market. Modify the corporation's skill by +1 per *full* 10% of the total amount of shares being offered for sale and by +1 per *full* 10% reduction of price below initial value.

Example: Widget, Inc., LIC has MCr10 in assets and 100,000 shares. Its initial value is Cr100/share. If it offers the shares at a 10% discount (Cr90/share), it gets +1 on the offering roll. If it offers 20,000 shares for sale (20% of total shares), it gets an additional +2.

To determine the effective skill of the market:

1. Start with the World Trade Number (see p. 11) of the system.
2. *Add* the Distance Modifier (see pp. 14-15) for the company's range of operations (e.g., a company trading within the sector would have a Distance Modifier of 3). For any enterprise that mainly involves starships, use the highest jump value of its ships or 3, whichever is greater.
3. *Subtract* the Risk Level (p. 44) of the business (e.g., an "extreme" risk level would raise the market's skill by 2; a "minor" risk level would lower the market's skill by 1).
4. *Add* +4 per previous failed (*not* delayed) IPO.

Results: Once modified skill is known for each side, roll a Quick Contest of Skill. The results will depend on both the quality of the rolls (i.e., critical failure, failure, success or critical success) *and* the numerical margin of victory of the winner. The winner is determined solely by this margin, not the quality of his success; it is possible to critically succeed and still lose the contest! All increases and reductions in value are expressed in percentage points per share.

Corporation Fails Critically; Market Succeeds or Succeeds Critically: The IPO fails and a new IPO may be not be attempted for 6 months. Corporate reputation is tarnished; IPOs in other systems will be at -6 for the next year.

Corporation Fails Critically; Market Fails: The IPO is delayed by one month. It may be modified or tried again "as is."

Corporation Fails Critically; Market Fails Critically: Market disruption! The stock exchange moves down one performance level (see p. 51). The IPO is delayed by one month, as above.

Corporation Fails; Market Succeeds or Succeeds Critically: The IPO fails. A new IPO may be attempted in two weeks.

Corporation Fails; Market Fails or Fails Critically: The IPO is delayed by one month. It may be modified or tried again "as is."

Corporation Succeeds; Market Succeeds Critically: The IPO succeeds and stock is sold; roll at -2 on the *Stock Sales Table.* If the corporation won, the value of its stock is increased by its margin of victory; if the market won, the value of the stock is reduced by *twice* its margin of victory.

Corporation Succeeds; Market Succeeds: The IPO succeeds and stock is sold. The value of the stock is modified by the winner's margin of victory: reduced if the market won, increased if the corporation won.

Corporation Succeeds; Market Fails: The IPO succeeds and stock is sold; roll at +2 on the *Stock Sales Table.* The value of the stock is increased by the corporation's margin of victory.

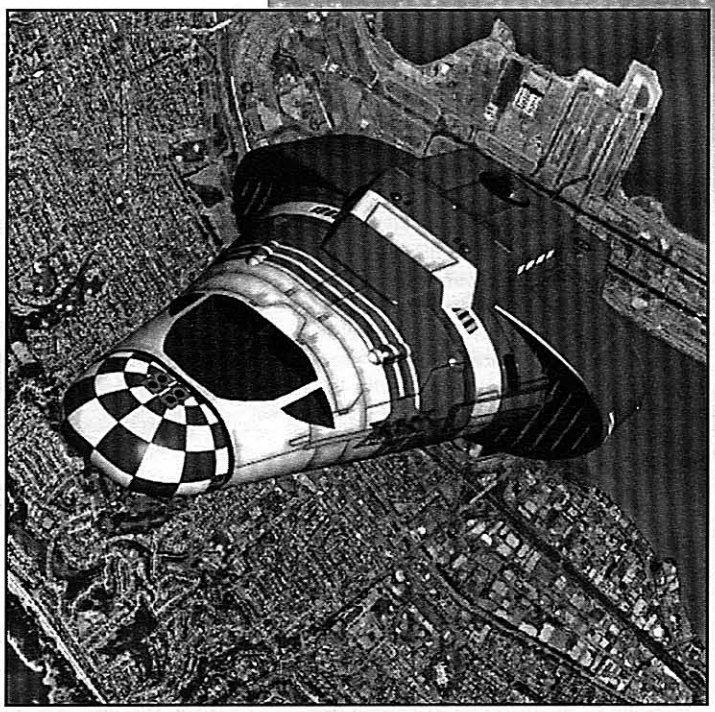
Corporation Succeeds; Market Fails Critically: The IPO succeeds and stock is

sold; roll at +2 on the *Stock Sales Table.* The value of the stock is increased by *twice* the corporation's margin of victory.

Corporation Succeeds Critically; Market Fails or Fails Critically: The IPO succeeds and stock is sold; roll at +4 on the *Stock Sales Table.* The value of the stock is increased by *four times* the corporation's margin of victory.

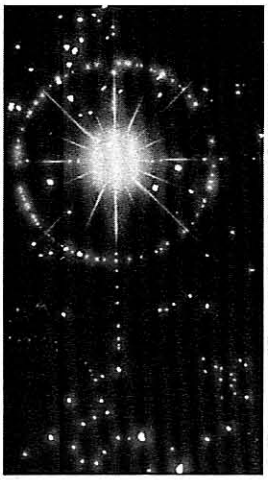
Corporation Succeeds Critically; Market Succeeds: The IPO succeeds and stock is sold; roll at +2 on the *Stock Sales Table.* If the corporation won, the value of its stock is increased by its margin of victory.

Corporation Succeeds Critically; Market Succeeds Critically: Market boom! The stock exchange moves up one performance level. Double the initial stock value and reroll the IPO. If the offer succeeds, rolls at +4 on the *Stock Sales Table.*



Stock Sales Table

This table determines what percentage of stock offered for sale is actually sold. It is only used when the corporation itself offers stock to the public. Stock values can be especially sensitive at these times (see *Stock Performance,* p. 50); the GM may wish to track changes in the stock price each month until all of the stock being offered is sold.



Roll (3d)	Stock Sold
3-5	None!
6	5% sold per month.
7	10% sold per month.
8	20% sold per month.
9	30% sold per month.
10	40% sold per month.
11	50% sold per month.
12	60% sold per month.
13	70% sold per month.
14	80% sold per month.
15	90% sold per month.
16	95% sold per month.
17	Sell out in first month.
18	Sell out in first day.

Modifiers: The Status and Reputation of the chairman of the board. Any modifier indicated in the IPO results. Any bonus to the IPO roll gained from discounting the price of the shares.

Raising Additional Capital

Once a corporation has gone public, it may find that it needs additional capital to expand or support its operations. In addition to bank loans, corporations have two other tools that they can use to raise new capital: new issues and corporate bonds.

New Issues: The issue of new issues must be approved by the shareholders in a vote (normally held at the corporation's annual meeting). Some fraction of the shares still held by the company is decided upon and placed on the open market. These shares are sold at the established stock value. Use the *Stock Sales Table* to determine how rapidly they are purchased.

Corporate Bonds: A *bond* is a debt that must be paid after a specified number of years. The seller of the bond owes money to the buyer. The bond is sold for a set amount and has a fixed interest rate. Each year, the seller must pay the bond holder the interest on the bond. At the end of the period of the bond, the seller must also repay the buyer the full amount of the bond.

Dividends

Those who hold shares in a corporation profit when its stock value increases. To pocket those earnings, though, they must sell some of their stock, which means giving up some control over the company. Many investors, especially those with strong ties to the company, would be less inclined to buy stock if this were the only way to make money on it; fortunately, it isn't. Shareholders also earn a *dividend:* a share of the corporation's profits. Each share entitles its holder to a payment of (annual income - annual expenses)/(number of shares) on profit-earning years. "Annual expenses" are things like salaries, equipment costs, business expenses (permits, etc.) and repayment of loans.

A corporation need not pay out *all* of its profits as dividends; in fact, most do not. The board of directors can instead decide to reinvest some or all of the profits as new capital. This raises the value of each share by (reinvested profits)/(number of shares) and lowers the dividend paid on each share by a like amount. It can take a few weeks for the market to recognize this increase in value, however.

Continued on next page . . .

Dividends
[Continued]

Annual profits, expenses and reinvestments can be used to calculate dividends. This how dividends *should* be calculated when the PCs are on the board of directors and must pay them out! To calculate dividends on "generic stock," though, use the following system: A company with "negligible" risk level (p. 44) returns, on average, 1% of share price per annum. Each increase in risk level *doubles* this return; e.g., "high" risk gives 8%. This is more than the cost of a loan for most companies, but they *have* to make loan payments, while they can simply reinvest profits indefinitely if the board approves.

Example: Widget, Inc., LIC sells Duke Norris a Cr10,000 10-year bond at 5% interest. This means that every year for ten years, Widget must pay the Duke 5% of the bond's value (Cr500). At the end of those 10 years, it must also pay him the Cr10,000 value of the bond. Over the full 10-year period, Widget will pay Duke Norris Cr15,000 in return for Cr10,000 from him in the first year. The Duke will thus earn Cr5,000.

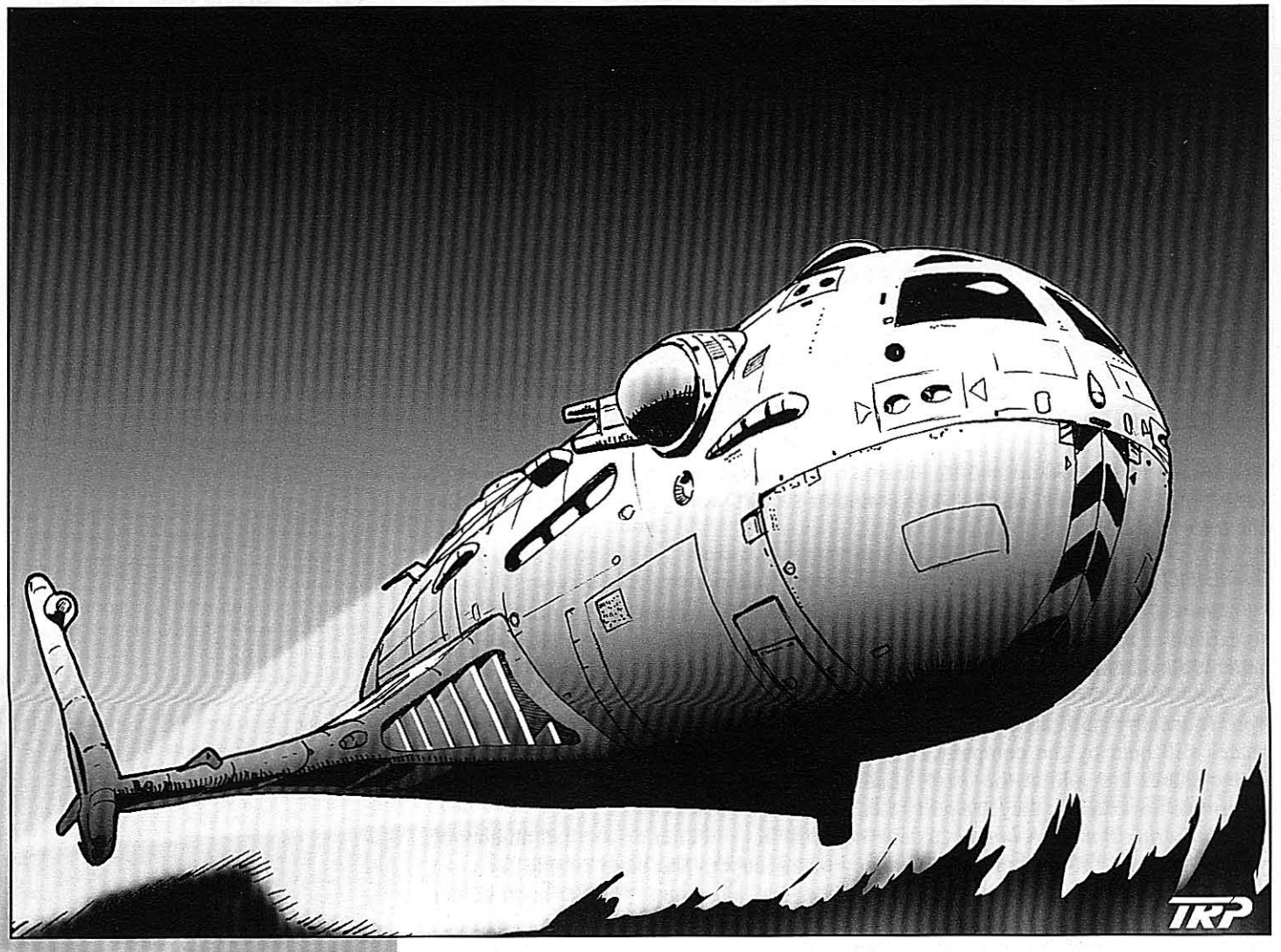
The issuance of a bond is similar to the loan application process. First, a *bond agreement* must be drafted according the rules under *Business Plan* (p. 43), but using Finance skill rather than Merchant. This agreement states how many bonds will be made available and applies to all bonds sold. Next, a reaction roll is made, subject to the modifiers listed for the loan application process (p. 44). A successful bond offering requires a "Very Good" reaction or better (16+). Finally, the *Stock Sales Table* (p. 49) is used to determine how quickly the bonds sell.

Playing the Market

Traders with surplus cash (rare though that may be) may choose to invest their hard-earned credits in the stock market.

Stock Performance

To predict the performance of a particular stock, it is first necessary to determine the state of the stock market itself.



Market Performance

The market's performance level will determine the likelihood of a change in the value of an individual stock. There are five levels of market performance: *boom, growing, stable, declining* and *bust.* The default level is "stable," but the GM is free to change this as necessary. The performance of an individual exchange can be determined using the following table:

Roll (3d)	Performance Level
3	Boom
4-5	Growing
6-15	Stable
16-17	Declining
18	Bust

Individual Stock Performance

Once market performance level has been determined, roll 3d on the *Stock Performance Chart* to see if an individual stock goes up, down or has no change. If its value changes, roll as indicated to find the percentage change in the stock's value.

Stock Performance Chart

Market's Performance Level	Individual Stock Performance *Down*	*No Change*	*Up*
Boom:			
Roll (3d)	3-4	5-7	8-18
% Change	-1d/2	–	+3d×2
Growing:			
Roll (3d)	3-5	6-10	11-18
% Change	-1d	–	+3d
Stable:			
Roll (3d)	3-6	7-14	15-18
% Change	-2d	–	+2d
Declining:			
Roll (3d)	3-10	11-15	16-18
% Change	-3d	–	+1d
Bust:			
Roll (3d)	3-13	14-16	17-18
% Change	-3d×2	–	+1d/2

Modifiers:

Corporation showed net profit/net loss in the past year: +2/-2.

Corporation went bankrupt: -4.

Company, board director or senior executive investigated for criminal activity: -2, or -6 if convicted!

Other positive/negative press (GM's decision): +1/-1.

Example: Widget, Inc., LIC last had a value of Cr100/share. The market performance level roll is 14, indicating a stable market. Three dice are rolled on the *Stock Performance Chart* and the result is 15. Looking at the entries for a stable market, we see that this means that the value of Widget stock goes up 2d percent. Two dice are rolled, giving a 4. Thus, the value of Widget stock increases by 4% to Cr104/share.

These performance results assume a yearly evaluation, but the same mechanism can be used to track stock values on a more frequent basis. To do this, simply divide the percentage change by the time analyzed: by 12 if tracking monthly, by 50 if tracking weekly and by 250 if tracking daily (although if you want to track a stock on a daily basis, it is suggested that you choose a real-world stock at random and use the percentage changes in that stock).

The Travellers' Aid Society

The Travellers' Aid Society (TAS) started out as a private club for gentlemen adventurers, offering a place of refuge, an exchange of information and a source of contacts to travelers far from home. Over the years, the TAS has grown into one of the largest and most influential non-governmental organizations (NGOs) in the Imperium and surrounding territories. As an impartial body with Imperial scope, it provides important services to corporations and trade in addition to regular member services.

Vessel Standardization and Classification

The Imperium makes little effort to standardize ship types and classes across its territory; there are simply too many ship builders and shipyards to make the effort worthwhile. Imperial policy is to set minimum standards for safety and competence and leave enforcement to the representative on the scene. Corporations, banks and insurers, however, need a unified, objective standard for judging the condition and capabilities of merchant ships offered for sale or operations; e.g., to determine whether cabin space is suitable for paying passengers.

The Travellers' Aid Society will inspect, classify and issue a description of any vessel upon request; member planets use this information when issuing a ship's registry (TAS Form 3A). The inspection can take place at any Class IV or V starport with a TAS facility, requires about one hour per 100 dtons of vessel, and costs Cr100 per dton. This is normally required only for newly built vessels or those that have undergone extensive modification.

Insurance Underwriters

Originally a service to members, who often couldn't get conventional insurers to cover them for liability or loss during their more *interesting* activities, insurance underwriting has become the single largest moneymaker for the TAS. The Society is said to insure for or against anything for a price, and its vast information network ensures that its assessments of risk are the most up-to-date available.

The *Travel Zone* advisories (p. GT70) posted by the Society are an outgrowth of this risk-assessment function that the TAS shares with its members as a courtesy. These are also warnings: venturing into a posted Amber Zone (p. GT19) without paying an additional risk premium could result in non-payment of insurance claims, while deliberately entering a Red Zone (p. GT56) voids most insurance agreements. Of course, if nothing happens, there is nothing to report.

Continued on next page . . .

The Travellers' Aid Society
[Continued]

Traveller News Service

The TAS has always collected information from all over the Imperium and surrounding space. At first, this took the form of a members' newsletter, compiled from short notes from the membership that outlined interesting or unusual events as they occurred. The picture of events this provided became so popular, however, that the Society began selling the newsletter and buying stories from freelance reporters.

The *Traveller News Service* (TNS) is now the largest news agency in the Imperium, with permanently established bureaux or local affiliates on most inhabited worlds. It has a well-deserved reputation for accuracy and reliability in reporting, but still takes leads (and even full stories) from members as a matter of editorial policy. Since TAS members are *making* the news as often as reporting it, this gives the TNS an unrivalled edge over the competition.**www.sjgames.com/gurps/traveller/news.html.**

Journal of the Travellers' Aid Society

Travellers' Aid Society members publish longer, more thoughtful articles in the *Journal of the Travellers' Aid Society (JTAS).* Topics range from descriptions of planets, cultures, life forms or equipment, to discussions of aspects of the traveling life, to stories and anecdotes about people or adventures. Having a story published means name recognition (considered a 0-point Reputation) throughout Imperial space.

JTAS is offered on a monthly basis, and is free to members; university subscriptions can run to Cr18,000 per year. Back issues are also available to members in the libraries of TAS hostels – online at smaller facilities, in bound volumes at the finest. *JTAS'* standards of authorship are demanding, but it is not a professional publication, and members who find items of interest should confirm them with other sources.

Forms

TAS Form 1	(Ship's Articles)
TAS Form 3	(Ship's Registry)
TAS Form 4	(Ship's Type Classification)
TAS Form 8	(Business Plan)
TAS Form 11	(Crew/Passenger Manifest)
TAS Form 12	(Flight Plan)
TAS Form 14	(Cargo Manifest)
TAS Form 18	(Repatriation Bond)
TAS Form 46	(Qualified Operator Certificate)

Trading

Brokers and Commissions

Stock is normally bought and sold through *brokers,* who enter their clients' orders, perform transactions and pay or charge their clients as appropriate. They also recommend when to buy or sell. Brokers charge a commission on all transactions they perform equal to a percentage of the Control Rating of the star system.

A broker's financial expertise is valuable and usually balances the price of his commission. When the *Stock Performance Chart* indicates a change (up or down) in the value of a stock, a successful Finance roll by the broker (at -2 in a growing or declining market, -4 in a boom or bust market) will affect the amount of money lost or gained by the customer (*not* the actual change in value of the stock). If the stock value drops, subtract one from the roll to determine the amount lost; if the stock value rises, add one to the roll to determine the increase in value.

Trading Licenses

A trading license allows an investor to trade directly and avoid brokers' commissions. A license can be purchased for Cr10,000 × WTN (of the world managing the stock exchange), and is usually good for one year. Some worlds have other requirements, and will not issue a license to just anyone.

Options

One of the greatest advantages of having the Finance skill is the ability to utilize *options.* An option is an agreement to sell a certain amount of stock at predetermined price at a specific time in the future. There is a cost for the option, but it is much less than the cost of the stock itself.

To profit from a stock option, a speculator will find a stock that he predicts will increase in value over a particular amount of time. In anticipation of this increase, he will try to purchase an option to buy that stock at a price well below what he predicts its value will rise to. At the end of that period of time, if he has predicted correctly, he can purchase the stock at the previously arranged price, immediately sell it at its current price, and pocket the difference as profit.

If the value of the stock has not risen above the price set in the option agreement, the speculator will normally choose not to exercise his option. He then loses only the amount he paid for the option agreement – not the drop in the stock price, which would normally be much greater. In other words, he risks only the price of the option, not the price of the stock itself.

A character can find a stock that he thinks will increase in value by making a Finance roll with the following modifiers: +1 per week of dedicated research (no other significant activity; maximum bonus is +4); -1 per month the prediction extends into the future; -2 in a growing or declining market; -4 in a boom or bust market; +1 for a successful roll against Area Knowledge (Local stock exchange).

The GM should then randomly determine the current value of the stock. The price of the option will be a percentage of the current value of the number of shares in the agreement; options are usually purchased in lots of 100 shares. The percentage will vary with the state of the market:

Market State	Percentage
Boom	4%
Growing	2%
Stable	1%
Declining	½%
Bust	¼%

At the end of the period of time in the option agreement, or at any time up to that point, another Finance roll with the same modifiers will determine the accuracy of the prediction roll. If accurate, roll for the increase in value as indicated on the *Stock Performance Chart* (p. 51).

Chapter Four

Ships and Shipping

The Third Imperium is, at its root, an economic entity – commerce is its lifeblood. The Imperial merchant is at least as important to the health of the Imperium as his counterparts in the Imperial Navy or Marines.

This chapter expands the basic travel, trade and commerce rules presented on pp. GT119-123. The intent is not to bog down a campaign with unnecessary detail, but to provide a realistic picture of the day-to-day business of the Imperium and act as a springboard for further adventure. As always, the GM is free to choose what elements to use in his campaign.

The Shipping Industry

Some aspects of interstellar shipping are the result of careful planning and slow, measured development over the centuries. Other aspects seem to have developed more or less at random, but have now become so ingrained in the system that they cannot be changed except through an industry-wide disruption.

Tramp vs. Liner Trade

The most efficient way to conduct interstellar trade is to have prearranged routes, with freight waiting for each ship as it arrives. This means that merchants can get the best deals from shipping companies, port time is reduced to a minimum, and sellers and buyers can depend on regular service as needed. Ships that follow a set, predictable route like this are called *liners.*

The universe, however, is not predictable: Ships break down; manufacturers receive rush orders too large for their usual shipping firms; a world's economy fluctuates resulting in an unexpected surplus. These are opportunities for a captain with spare capacity to step up and make a profit. Ships that traveled from port to port looking for such opportunities were historically called *tramps,* but *trader* has emerged as the accepted term within the Imperium. A *free trader* is one that works independently, without a parent corporation or coalition of other ships.

Freighter is a more general term, but is usually taken to mean *freight liner.*

Time is Money

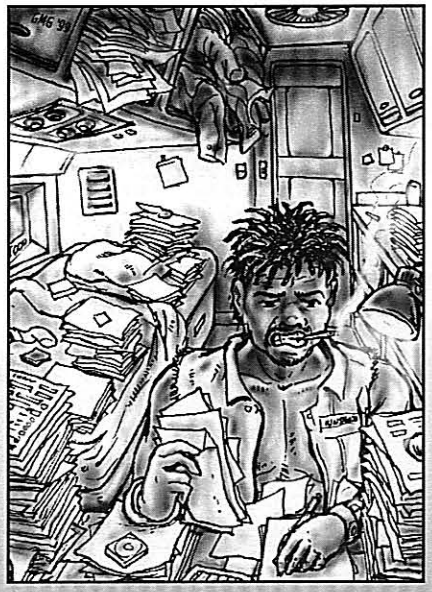
The oldest cliché in business – "time is money" – applies with a special vengeance to commercial shipping operations. Merchants are paid to pick up goods at one location and deliver them to another; the more often they can achieve this, the more money they can make.

Merchant operations, like many things in the ***Traveller*** universe, are constrained by the immutable physics of jumpspace. Ships travel one parsec per jump number, in just one week. The only way to realize higher speeds is to invest in ships of higher jump number, with the added expense and reduced cargo capacity (due to fuel tankage) that entails. Physics also limits the jump points that a ship can use to enter or leave a system. Often, the jump limit of the system's star masks that of the main world itself (see *System Entry,* p. 59), adding days to the time required to complete a voyage. This can be partially offset by better maneuver drives, again at the cost of expense and cargo capacity. At some point – which varies with the astrography and demographics of the particular system – additional speed gives diminished returns. Shippers must then look to other means to increase their profits.

The Captain

Much of this section is addressed to the ship's captain rather than to the other crew or to player characters in general. There is a good reason for this: by ancient custom and Imperial law, the captain is responsible for everything his ship does or fails to do. On his ship in flight, especially when cut off for a week at a time in jumpspace, he is the last of the absolute monarchs and his word is law. Even the ship's owner, if he is not the captain, can only give general guidance; *how* those instructions are carried out is still up to the captain, although the owner can always replace him at the next port if he is unhappy. PCs are notoriously independent, and may be uncomfortable with the captain's authority or unwilling to follow his orders. That is up to the party (and the GM) to settle, but the Imperium will expect the captain to be in charge; the GM should keep this in mind.

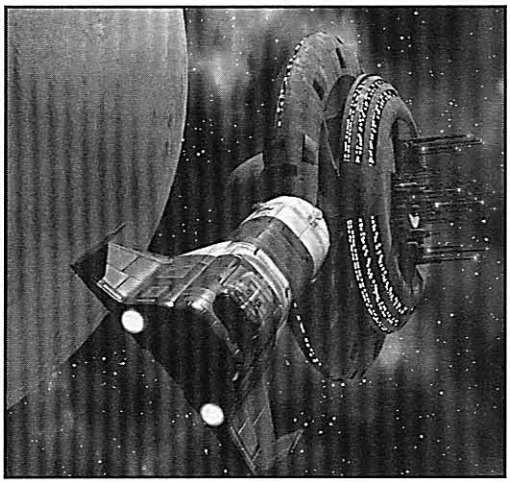
This does not mean that the captain must do everything himself. He can delegate the *authority* to accomplish some task (e.g., by having the first officer or purser supervise the loading of cargo), he just cannot delegate the *responsibility* for it.



One method is to reduce port time. A typical free trader spends as much time insystem – traveling to the main world, off-loading its cargo, seeking and loading a new cargo, then traveling out to the jump point again – as it does in transit between systems. This means that 50% of the time, a ship is idle, earning nothing. Large merchant liners reduce this idle time to as little as three days (i.e., 30% of the time) via unitization of cargo, shipper's agents and crew rotation.

Terms of Shipping

Two fundamental questions accompany freight on its journey from origin to destination: "Who owns it?" and "Who is responsible for moving it?" There are three parties involved: the seller (or manufacturer), the shipper (or carrier) and the buyer. The shipping industry has developed a series of standardized acronyms, called *terms of shipping,* which describe who does what and when in interstellar trade. They define not only who pays for the shipment and handling of freight, but also who assumes risk (liability) for goods in transit and when ownership passes from seller to buyer.



In *all* cases, the seller bears the risks of loss or damage until he has delivered the goods as specified under the terms agreed upon. Risks (and ownership) are carried by the buyer thereafter. Of course, while the cargo is aboard ship, the captain is also responsible for its safety.

EXW: *Ex-Works.* Buyer accepts the goods at the seller's premises. This represents the least obligation for the seller and the most for the buyer. Buyer is responsible for all shipping and handling.

FAS: *Free Alongside Ship.* Seller delivers the goods alongside the vessel's berth (or in lighters) at the port of origin. Buyer pays for shipping and handling, and must clear the goods for export.

FOB: *Free on Board.* Seller delivers the goods through the ship's hatch at the port of origin. Seller pays for handling at origin; buyer pays for shipping and for handling at destination, and must clear the goods for export. This is the most common arrangement for ships buying speculative cargo.

CIF: *Cost, Insurance and Freight.* Seller pays the costs and freight charges necessary to bring the goods to the port of destination, and must clear the goods for export. The goods are delivered when they pass through the ship's hatch at the port of origin, but the seller must pay for insurance (0.1% of the goods' value) against the buyer's risk of loss of or damage to the goods during carriage. This is the most common arrangement for freight.

DES: *Delivered Ex-Ship.* Seller delivers the goods on board the ship and uncleared for importation at the port of destination. Seller pays for shipping and for handling at origin; buyer pays for handling at destination.

DEQ: *Delivered Ex-Quay.* Seller delivers the goods to the buyer at the berth (or quay) at the port of destination, cleared for importation. Seller pays for all shipping and handling, and bears all risks and costs (like duties and taxes). This is the most common arrangement for ships selling speculative cargo.

DFD: *Delivered Free Domicile.* Seller delivers the goods to a named place on the destination world. The seller bears the risks and costs – including duties, taxes and other charges – of delivering the goods to this point, cleared for importation. Costs and risks after entry are negotiable. DFD shipments are usually accompanied by a bank draft (drawn on the seller's account at the destination world) to cover the costs of importation and on-planet movement.

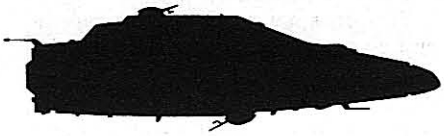
Tons?

In shipping, there are many units of measure that are called a *ton,* each with its own uses. It is important to specify what *kind* of tons are being discussed:

Unit	Abbreviation	Definition
short ton	ston	2,000 lbs.
metric ton	tonne	2,205lbs.
long ton	lton	2,240 lbs.
register ton	rt	100 cf
displacement ton	dton	500 cf*

* approximate volume of 1 ston of liquid hydrogen.

Far Trader uses short tons (stons) and displacement tons (dtons), and clearly distinguishes between the two. Note that these displacement tons are 500 cf (based on liquid hydrogen), not 35 cf (based on water; see p. VE4).



"I was raised in one of those frontier colonies you read about. The climate was mild, and I lived almost a decade in a salvaged freight container – my childhood nickname was 'Red Med' because I had red hair and the container said 'Medical Supplies' in faded letters on the outside."

– Jamie Lonnigan, Free Trader: Twenty Years Tramping

These terms are summed up in the following table:

Terms of Shipping

	Responsible Party†						
Event	EXW	FAS	FOB	CIF	DES	DEQ	DFD
Delivered to port	B	S	S	S	S	S	S
Loaded aboard ship	B	B	S	S	S	S	S
Carried aboard ship	B/C	B/C	B/C	B*/C	S/C	S/C	S/C
Discharged to quay	B	B	B	B	B	S	S
Delivered to named place	B	B	B	B	B	B	S

† Buyer (B), Carrier (C) (ship), or Seller (S).
* Buyer is insured by seller.

Offering to accept or deliver goods under terms of shipping that are more favorable to the other party gives +1 per level of difference to NPC reaction rolls for that transaction. Insisting on less favorable terms gives -1 per level difference.

Freight Handling

Unitization of cargo reduces the amount of handling (and therefore time) required to load and unload a ship already in port. Cargoes can be classified for handling by their degree of unitization.

Bulk

Bulk freight consists of an undifferentiated mass of material. Bulk cargoes are simple to handle: liquids and gases can be pumped through pipes; dry cargoes (like grain or sawdust) can be blown through pipes. Bulk cargoes are generally the lowest in value and the most specialized in terms of profitable source-market pairings.

Breakbulk (B/B)

Breakbulk freight comes individually packaged, and is sometimes called "package goods." This is the most general cargo, and the type most often offered for tramp trade (see pp. 21-22). Any freight with a unit size of 1 dton or less is breakbulk. Very large or awkward loads (aircraft, prefabricated structures, power plants, etc.) are also a form of breakbulk.

General cargo comes in *boxes*, which are included in the weight and cost of the freight. Empty boxes weigh approximately 1 lb. and cost Cr0.2 per square foot (sf) of surface area. Boxes are PD 0, DR 0; most are less than 200 cubic feet (cf) in volume, due to the strength limitations of the material.

Larger, heavier or more delicate loads require *crates*. The crates on the following table are all TL10, and have PD2, DR 4.

Crate Table

Volume (cf/dton)	Cargo Wt. (lbs.)	Loaded Wt. (lbs./stons)	Cost	HP	Remarks
2/0.004	40	50/0.03	Cr20	1	16″ cube
10/0.020	200	230/0.1	Cr50	4	
27/0.054	540	600/0.3	Cr100	8	3′ cube (1cy)
100/0.200	2,000	2,130/1.1	Cr250	19	
125/0.250	2,500	2,650/1.3	Cr300	23	5′ cube
250/0.500	5,000	5,240/2.6	Cr450	36	

Small or irregular loads can be consolidated and secured to *pallets:* flat, standardized panels (all TL10, with PD 2, DR 4), suitable for handling with forklifts or other gear. See *Containers,* p. 57; type 60/8.

Freight Handling in Orbit

Transferring freight between ships and stations in orbit is a more ticklish proposition than the same operation on a planet's surface. Orbital highports are designed with cargo docks that mate directly with the standard hatches on large freighters (see pp. 139-140), allowing freight handling to take place in artificial gravity and a shirt-sleeve environment. Small commercial vessels may actually land *inside* the dock and unload as if in a standard berth.

Planets without highports – and non-standard ships – must resort to more difficult measures. Ships in orbit can mate using a larger version of the armored passage tube included with the engineering module on p. GT153. Additional tubes cost Cr3,000 and take up 1 ston and 1/6 dton as cargo. Tubes require 30 minutes to rig or strike in vacuum, and freight-handling rates are reduced by ⅓ while using them. Sealed or vacuum-tolerant freight can be transferred directly; outsize cargo may *have* to be handled this way. Handling takes place at the normal rate (assuming sufficient hand thrusters, tethers, magnetic boots, etc., for the crews), but everyone involved must roll vs. Free Fall skill once per hour to avoid mishap; roll at +2 if the operation is slow (½ rate) and deliberate. If a mishap occurs, roll vs. Vacc Suit skill to avoid damage.

Hatches and Openings

All of the freight-handling rules and equipment assume standardized cargo hatches. Cargo vessels with less than seven dtons' cargo have small hatches: 12 feet wide by 12 feet high. Larger ships have one standard hatch per 25 dtons (or fraction) of cargo space, measuring 24 feet wide by 12 feet high. Very large ships may combine several hatches into a single opening that is a multiple of these dimensions.

Standard Orbits

A *standard orbit* is defined as a circular orbit from west to east (*prograde*), with an inclination to the planetary equator equal to the main starport's latitude and at an altitude between 1/10 and 1 planetary diameter. Traffic control authorities (if any) will assign altitude and relative position with a view to maintaining traffic separation. Even ships proceeding directly to the surface will intercept a standard orbit to begin their descent. This convention is a holdover from the days when starships used reaction engines and the extra speed gained from operating in the direction of planetary rotation resulted in important cost savings.

Nonstandard orbits are possible, and may be requested when filing a flight plan. *Polar* orbits, with an inclination near 90°, are useful for mapping because they cover more of the planet's surface. *Retrograde* (east-to-west) orbits can be useful for maintaining more frequent (but brief) contact with parties on the surface.

Pallet Table

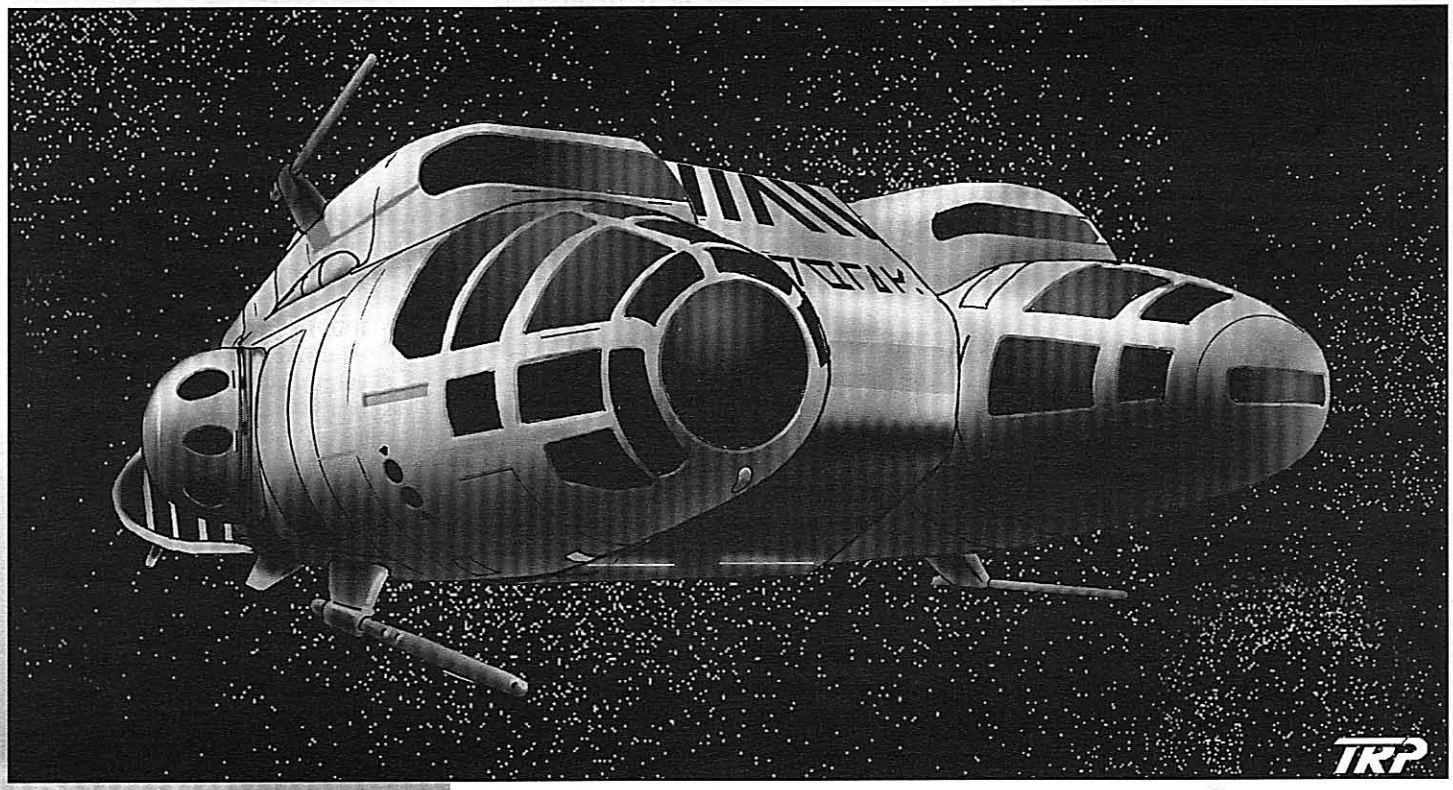
Volume (cf/dton)	Cargo Wt. (lbs.)	Loaded Wt. (lbs./stons)	Cost	HP	Remarks
27/0.054	540	550/0.3	Cr20	1	3′ by 3′
125/0.250	2,500	2,530/1.3	Cr50	4	5′ by 5′

Containers

Container freight comes in unitized loads ready for standardized handling. Any freight that comes in standardized units of more than 1 dton is containerized. This can include goods loaded on pallets or stuffed in standard metal containers, as well things like modular cutter modules (pp. GT142-143) or entire modular ship sections. Containers are cheap and quick to handle, because they can be loaded before the ship arrives in port. Specialized containers can also handle bulk or refrigerated goods, or even serve as modular building components.

Series 4 (Interstellar) Standardized Cargo Containers. There are four sizes of standard container: A, B, C and D, corresponding to 40-, 30-, 20- and 10-foot lengths respectively. All are 10 feet wide by 10 feet tall, and include all doors and fittings for freight-handling equipment. In ***GURPS Vehicles*** terms, all were constructed at TL8 with light, very cheap frames and cheap metal armor, and have PD 3, DR 10. Statistics for the A, C and D sizes are:

	4A	4C	4D
Volume			
(cf)	4,000	2,000	1,000
(dtons)	8	4	2
Area (sf)	1,800	1,000	600
Hit Points	1,350	750	450
Size Modifier	+6	+5	+4
Max Gross			
(lbs.)	96,000	48,000	24,000
(stons)	48.0	24.0	12.0



Containers are designated (size)(type)/(TL); e.g., "4A00/8" means a size 4A container of type 00, built at TL8. The empty weight and price of some common types are listed below. To get maximum payload weight, subtract empty weight from maximum gross weight for the size.

Container Table

Type	Description	Empty Weight (lbs.) and Cost (Cr) 4A	4C	4D
00/8	General Purpose	16,200 lbs. Cr18,000	9,000 lbs. Cr10,000	5,400 lbs. Cr6,000
05/8	Sealed	16,200 lbs. Cr54,000	9,000 lbs. Cr30,000	5,400 lbs. Cr18,000
32/8	Controlled Environment	16,600 lbs. Cr65,600 10 kW*	9,200 lbs. Cr35,800 5 kW*	5,500 lbs. Cr20,900 2.5 kW*
50/8	Open Top	14,200 lbs. Cr16,000	8,000 lbs. Cr9,000	4,900 lbs. Cr5,500
55/8	Open Frame	9,000 lbs. Cr10,800	5,000 lbs. Cr6,000	3,000 lbs. Cr3,600
60/8	Platform	3,600 lbs. Cr4,000	1,800 lbs. Cr2,000	900 lbs. Cr1,000
67/8	Modular	17,000 lbs. Cr54,000	9,400 lbs. Cr30,000	5,600 lbs. Cr18,000
70/8	Tank	18,600 lbs. Cr106,300 19,100 gal.**	9,400 lbs. Cr49,500 8,700 gal.**	4,700 lbs. Cr20,600 3,400 gal.**
90/8	Habitat	39,000 lbs. Cr163,100 8 men† 80 kW*	23,400 lbs. Cr87,100 4 men† 40 kW*	12,600 lbs. Cr49,100 2 men† 20kW*

* Controlled Environment and Habitat containers also have a *power requirement* in kW.

** Tanks are also rated for *capacity* in gallons.

† Habitat containers are also rated for passenger capacity.

Type 00/8: A simple box with doors at both ends. Can also be used for dry bulk containers (type 80/8).

Type 05/8: Same as type 00/8, but sealed. Does *not* include life support or environmental control.

Type 32/8: Also called a *reefer.* A type 05/8 with environmental control for heating and cooling. Can maintain any temperature between -30°F to 120°F; beyond those limits, it can raise or lower temperature by 40°F. Requires ship (or other) power, but comes with energy banks for 24 hours' independent operation.

Type 50/8: A type 00/8 with the top removed. Often provided with a flexible cover (DR 2, non-rigid).

Type 55/8: Essentially an open box frame with structural crossmembers. Armor protects normally against collisions, falls, rolls or swinging melee attacks, but has only a 2-in-6 chance of protecting vs. thrusting, missile or beam attacks. Sometimes used as a frame for heavy equipment, like power plants or life-support equipment for a colony. Often provided with a flexible cover (DR 2, non-rigid).

Type 60/8: Not really a container, but a flat slab 10' wide and of appropriate length for the size. Sometimes called a *pallet.* Oddly shaped or outsized equipment can be strapped down to the platform, which is then handled like regular cargo. When empty, 20 platforms can be shipped in place of one container.

Type 67/8: A box designed to come apart into its six sides. Can serve as type 00/8, 50/8 or 60/8. Can come apart and be stacked flat for shipment; four flattened containers can be shipped in place of one assembled container.

Starport Communicators, Sensors, and Navaids

The communications, sensor and navigation capabilities of a starport depend on TL. Imperial facilities are equipped to the higher of TL10 or the local TL: Class IV and V will be equivalent to a command bridge at minimum, while Class II and III will be at least equivalent to a standard bridge; see pp. GT160-162 for exact systems. Non-Imperial facilities will be equipped as follows:

TL	Equipment
0	Bonfire beacon.
2	Radar reflector.
4	Telescope.
5	Rotating searchlight, landing lights.
6	Radio comms, radar, precision radio navaids.
7	Lasercom, datalink, IFF transponder, GPS.
8	PESA, AESA.
9	Holocom, radscanner.
10+	Meson comms.

Radar reflectors are metal corner reflectors. Telescopes are 200× and fully stabilized; they are used to spot and identify inbound traffic before it lands. On planets with TL6 or less, fixed communications and sensor sites are the rule; control must be handed off between sectors (usually three) as each in turn rotates below the horizon.

Other Uses for Containers

Standardized containers are essentially big metal boxes or blocks; they can and have been used like a giant's construction toys. Leftover containers landed with military, industrial or colonization supplies can be used to construct an instant base. Walls made of containers can be used as fences (DR 20) or windbreaks. Filled with dirt, they can be used to build field fortifications (DR 3,600). If necessary, windows and doors can be cut in ordinary cargo containers to transform them into low-cost buildings. Containers can be buried and ramps dug to their openings to provide bunkers, shelters or pillboxes; they can even be stood on end to create towers. Of course, they can also be used "as is" for storage sheds.

"Funny how nervousness can mess with your mind: I remember when I was slated to do my first dog watch and the exec pops in to ask how I'm doing and spring a couple of questions on me, one of which is 'What is the distress signal procedure?' The only thing I could think of was that screaming 'HELP!' wasn't going to work . . ."

– Jamie Lonnigan,
Free Trader: Twenty Years Tramping

Type 70/8: An open frame with a standard tank inside for transporting liquids or gases in bulk. For most liquids, a full tank will exceed the rated maximum gross weight, requiring special handling and reducing the container's HT to 7.

Type 90/8: A modular office, building component or habitat. Provides full life support and standard – if cramped – cabin quarters for the indicated number of people. A wide variety of configurations are available; type 32/8 containers are often configured to act as additional corridors and storage. Requires ship (or other) power, but comes with energy banks for 24 hours' independent operation.

Ride On/Ride Off (RO/RO)

Ride on/ride off freight is anything that can load itself under its own power. This includes individual ground or grav vehicles, and even passengers! RO/RO cargo takes up *twice* its total volume (including all external pods and turrets) in cargo capacity.

Lighter Aboard Ship (LASH)

Lighters are non-starships, usually hull class 100 or larger, used to off-load unstreamlined freighters on planets without an orbital port. Specialized starships are designed to carry these lighters directly, much like battleriders and their tender. See p. 140 for sample designs.

Heavy Cargoes

Heavy or dense loads, up to 25 stons/dton (100 lbs./cf), can be carried in ordinary cargo holds at the cost of additional wear and tear on the vessel's structure and drives. Recalculate the vessel's performance and HT (p. 58) based on the actual loaded weight.

Especially heavy or dense loads (those over 25 stons/dton), occupy 1 dton of cargo hold per 25 stons regardless of how they are configured. Charges are calculated accordingly. This accounts for blocking, bracing, shoring and gravitic compensators, and avoids over-stressing either the bulkheads or the drives. Note that vehicle bays are expressly designed to withstand the stresses produced by their contents, and purpose-built heavy cargo carriers (e.g., military transports) are also possible.

Loading/Discharge Time

Cargo loads and discharges at the following rates:

Type	Rate	Remarks (dtons/hr)
Breakbulk	30	Less than 1 dton/unit or nonstandardized.
RO/RO	120	Includes 50% wastage for vehicles.
Container	180	One dton or more/unit, standardized.
Dry Bulk	360	Loaded by conveyor or pipeline; otherwise treat as container.
Liquid Bulk	540	Loaded by pipeline.

These rates are constrained by freight-handling techniques, the availability of marshalling areas and contact area between the freighter and its berth; they don't vary much with the size of the ship. Additional stevedores and handling equipment, higher-capacity pumps, etc., can increase rates by ⅓, at increased cost (see p. 66). For hazardous cargoes and those requiring special handling, decrease rates by ⅓.

Rates for ships in orbit depend on the availability of shuttles, lighters, oilers, etc. LASH freighters can launch all carried lighters or load a full complement (assuming the loaded replacements are standing by) in under an hour.

Starport Operations

If interstellar commerce is the lifeblood of the Imperium, then starports are its heart. Starports are where the business of the Imperium takes place: freight changes hands, passengers meet their ships, and deals (legal or otherwise) are struck.

Transponders and Flight Recorders

Most readers will be familiar with these two devices. In the universe of ***Traveller,*** however, both have features which deserve further explanation.

Transponders

IFF transponders transmit a broadband radio signal with a recognition code in response to a properly configured active radar or AESA pulse. This increases range to detect and recognize the transponder-equipped ship by a factor of 4.5 million (+40 Scan), making traffic control simple and reliable.

All transponders are equipped with an on/off toggle switch, to prevent them from giving the ship's position away in a hostile situation. The captain of a civilian vessel must log the times that the transponder is off and the circumstances which led to his decision to shut it off.

Transponders have preset codes (*selective identification features,* or *SIF*) which identify the vessel, its home port, hull class, etc. On civilian ships, these cannot be changed; military versions are fully programmable. Transponders can also be programmed to transmit temporary identification codes (*discrete codes* or *squawks*) and give origin and destination information to assist traffic control. These codes can also be used for backup communications; there are standard predesignated codes for common emergencies like communications failure, general distress and hijacking.

Continued on next page . . .

Starports are also gateways to adventure; many a flint-hearted merchant caught the "traveling bug" as a child, standing at the extrality fence, watching ships lift for the stars.

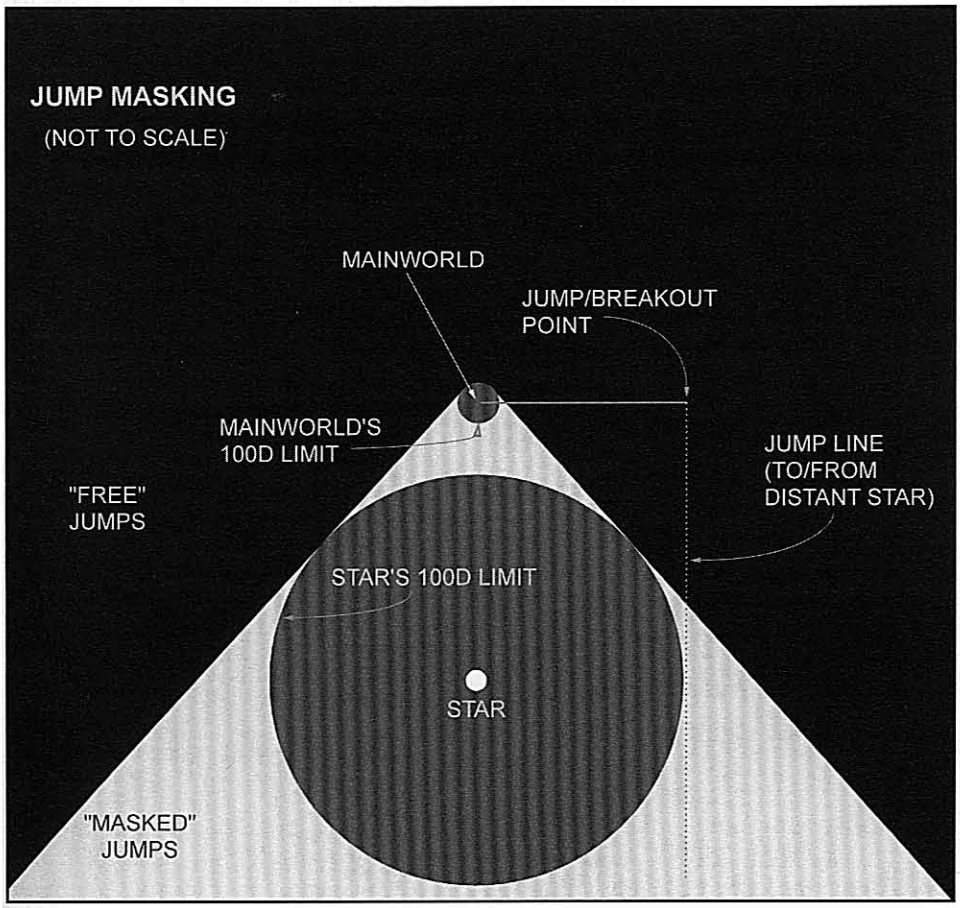
Merchant characters will spend a large fraction of their time in and around starports, so it is important to know how they operate. This section will follow a ship on breakout from jumpspace, through its port call, until it jumps out again on departure. ***GURPS Traveller: Starports*** will cover the details of how starports are designed, constructed and arranged.

System Entry

One of the most significant considerations in interstellar commerce is the time it takes to complete a voyage. This is the result of two factors: time in jumpspace and time spent traveling to and from the jump and breakout points. Time in jumpspace is fixed by the nature of jump travel: 168 hours (+/-10%), regardless of the distance jumped (p. GT44). Time to and from the jump and breakout points depends on the time to reach the 100-diameter (100D) limit. This would be a straightforward calculation based on the size of the main world and the g-rating of the ship's maneuver drives were it not for one problem: jump-point masking.

Jump Points and Jump-Point Masking

Jump-point masking occurs when the 100D limit of another astronomical body blocks (*masks*) the jump point of the main world. Since a ship trying to jump in through the 100D limit would be precipitated out of jumpspace well short of its destination (p. GT120), and since jumping out from within that radius runs the risk of misjump, astrogators must plot a course that just skims the 100D limit and begins or ends as close to the main world as possible (see illustration). Masking occurs about 78% of the time at either origin or destination, making completely *free* (unmasked) jumps less than 5% of the total. This adds 30 hours to the average voyage length.



Transponders and Flight Recorders

[Continued]

Flight Recorders

A pair of tough, "black box" flight recorders is installed on all Imperial vessels over 1,000 dtons. One is a flight data recorder, which automatically records readings from the ship's internal (power, life support) and external (sensors) instruments on a periodic basis. The other is a cockpit voice recorder, which maintains a continuous-loop recording of all voice communications on the cockpit or bridge. Smaller vessels make do with one system and interleave the two data streams.

These recordings are intended to allow reconstruction of the events leading up to a catastrophic accident, and to confirm or deny the pilots' account of the minutes before an accident – or to *give* such an account, if the crew doesn't survive or can't remember. This is a safety feature that has the added advantage of tempering the wilder impulses of the crew, who know that whatever they do, a record exists should something go wrong.

The data-storage densities available at TL10+ allow records of up to an entire year's traveling to be kept. If a ship is under investigation for any reason, the authorities can compare these recordings to the logbook (p. 72) to reveal irregularities that point to illicit activities or warrant further investigation. It is possible to spoof the recorders, but not particularly easy: roll vs. Electronics Operation (Communications) or (Security Systems), at -6 for a two-box system or -4 for a single box (due to the inherent graininess of the combined data streams). Flight recorders are routinely purged or replaced during annual maintenance.

Declaring an Emergency

A captain's first responsibility is to the safety of his ship, passengers, crew and cargo (in that order). In an emergency, nothing in the regulations prevents him from taking whatever action he deems necessary to carry out that responsibility. He must, however, declare an emergency ("Mayday," "SOS" or "Signal GK"; see below) by whatever means are available: system advisory channel, guard channel, transponder code, emergency beacon, etc. Within 24 hours of the resolution of the emergency, the captain must file a complete report, including copies of supporting logbook entries, with the Imperial Shipping Commissioner, Legate or Consul (see *Imperial Officials,* sidebar, p. 73) at the nearest port.

Some captains have an unfortunate tendency to let serious situations develop until they are out of control. A good rule of thumb is: when in doubt, declare the emergency and sort it out in port.

The Imperial Navigation Act of 103 requires any ship receiving an emergency transmission to clear the channel used to handle the emergency, give way to the vessel in distress, and render whatever assistance is possible without endangering itself. Well-trafficked systems have high-gee rescue craft on 5-minute alert to handle these situations; frontier or backwater systems may not. The crew of a vessel responding to a distress call is entitled to shares of any salvage on a *no-cure, no-pay* basis – that is, they can only collect if their assistance helps to solve the problem.

Distress Signals

There are three distress signals commonly used within the Imperium and surrounding space. The first is *Signal GK,* from the Vilani *gasimeku kaalariin* ("vessel in distress"). This originated on Vland as a distress signal in maritime and aviation activity, and was one of the standard communications codes of the First Imperium. When the Second Imperium succeeded the First, Signal GK was retained, along with the Solomani *Mayday* (from the French *m'aidez,* meaning "help me"), for use on voice channels, and the code signal *SOS* (• • • – – – • • •). Coded signals for non-voice use can take many forms: lights, sensor beacons, digital channels, smoke signals, colored panels, etc. If possible, a distress call should include the identity of the vessel, its location and the nature of the emergency.

Continued on next page . . .

Determining Masked Jump Points

Before jumping into a system, the GM should roll to determine whether the main world jump point is free; otherwise, the characters will have to jump to an unmasked breakout point and travel in. Use the following table to determine masking and travel time:

Jump-Point Masking Table (Main Sequence Stars)

Spectral Class	Diameter (Solar Diam.)	100D (AU)	Free (Roll 3d)	Time to Jump Point (Max)* At 0.5G	At 1G	At 2G
O5	18.00	16.84	auto	2 w	10 d	7 d
B0	7.40	6.92	auto	9 d	6.3 d	4.5 d
B5	3.80	3.56	auto	6.4 d	4.5 d	3.2 d
A0	2.50	2.34	17	5.2 d	3.7 d	2.6 d
A5	1.70	1.59	16	4.3 d	3 d	2.1 d
F0	1.30	1.22	15	3.8 d	2.7 d	45 h
F5	1.20	1.12	14	3.6 d	2.6 d	43 h
G0	1.05	0.98	12	3.4 d	2.4 d	40 h
G5	0.93	0.87	no	3.2 d	2.2 d	38 h
K0	0.85	0.80	no	3 d	2.1 d	36 h
K5	0.74	0.69	no	2.8 d	2 d	34 h
M0	0.63	0.59	no	2.6 d	44 h	31 h
M5	0.32	0.30	no	45 h	32 h	22 h
M9	0.13	0.12	no	29 h	20 h	14 h
Unknown	n/a	n/a	8	2.6 d	44 h	31 h

* In weeks (w), days (d) or hours (h).

Free is the chance (on 3d) that any point on the main world 100D limit will be unmasked by the jump limit of the stellar primary, based on its spectral class (see pp. S98-105). If spectral class is unknown (or the GM doesn't want to keep track of it), use the "Unknown" value. "Auto" means the main world jump point is automatically free; "no" means the jump point will always be masked (too close to the primary). Roll separately for origin and destination, and add +1 to the target number for a main world that is the satellite of a gas giant.

The travel times on the table are the *maximum* values for each type of star. To find the actual time required, the GM can simply multiply the maximum time by 0.7; this method should also be used when spectral class is unknown. Alternatively, the following more detailed method can be used.

First, determine whether the main world is sometimes free (spectral class G4 and higher) or always masked (G5 and lower). For planets that are sometimes free, roll on the following table and multiply travel time by the listed factor. The adjusted travel time will not be less than the time to reach a free jump/breakout point (see *Free Jump Point,* p. 61):

Travel Time Factor Table I

Roll (1d):	1	2	3	4	5	6
Factor:	0.2	0.4	0.6	0.8	0.9	1.0

For planets that are always masked, roll 1d. On a 1-3, the jump/breakout point is on the near side of the system and the actual travel time depends on the spectral class of the primary star:

Travel Time Factor Table II

Spectral Class:	G5	K0	K5	M0	M5	M9
Factor:	0.4	0.5	0.8	0.8	0.8	0.9

On a 4-6, the jump/breakout point is on the far side of the system. Roll on *Travel Time Factor Table I* and compare the factor generated with that from *Travel Time Factor Table II;* the result will be the higher of the two.

Information about jump-point masking for known systems is readily available from common navigational databases as far in advance as the characters require. This information changes with time, however. Specific travel times are good for about a week. Ships retracing their voyage should use their previous results, unless they have been on planet longer than a week. Between a week and a month, reroll the actual travel time (if required); longer than a month requires a new roll for jump-point masking.

Free Jump Point

If the main world jump/breakout point is free, travel time depends on the main world's diameter (or that of the gas giant it orbits, if a satellite). Use the following table:

Free Jump Point Table

Main World Diameter	Time to Jump Point (hours) At 0.5G	At 1G	At 2G
Asteroid	0.9	0.7	0.5
1,000 miles	2.7	1.9	1.3
2,000 miles	3.8	2.7	1.9
3,000 miles	4.6	3.3	2.3
4,000 miles	5.4	3.8	2.7
5,000 miles	6.0	4.2	3.0
6,000 miles	6.6	4.6	3.3
7,000 miles	7.1	5.0	3.5
8,000 miles	7.6	5.4	3.8
9,000 miles	8.0	5.7	4.0
10,000 miles	8.5	6.0	4.2
Small Gas Giant	14.7	10.4	7.3
Medium Gas Giant	19.0	13.4	9.5
Large Gas Giant	24.0	17.0	12.0

Approach and Landing – Starport Facilities and Requirements

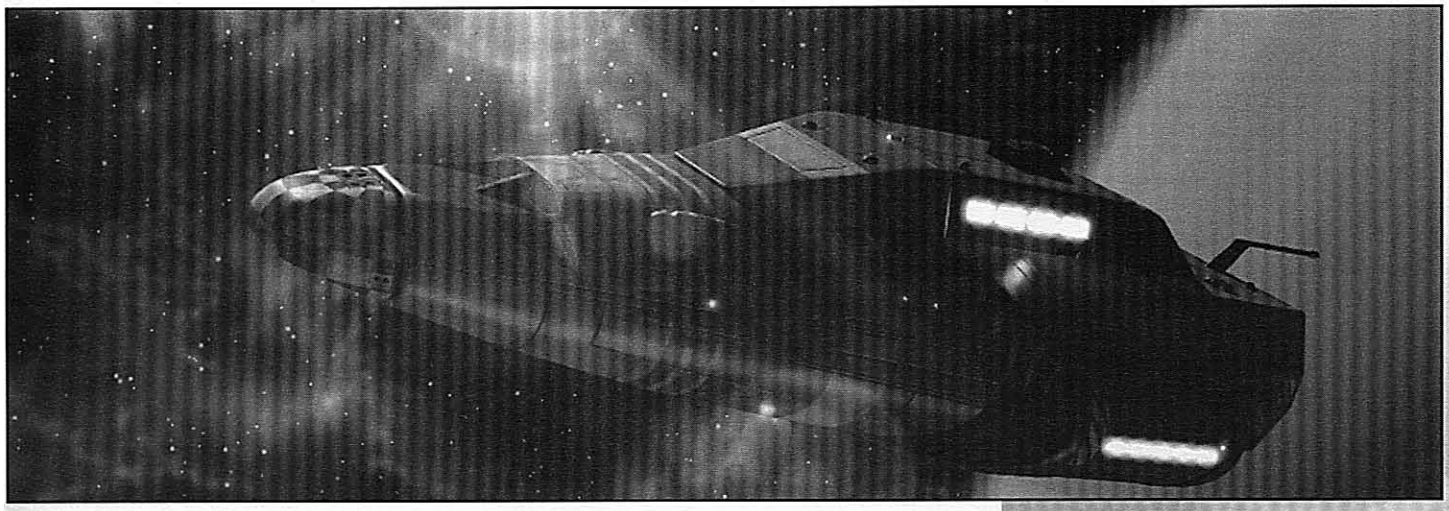
When a starship enters a new system, there are a variety of tasks that must be accomplished before it can safely and legally land at the starport. The captain must communicate with local authorities, state his intentions (and perhaps request permission to carry them out), and make arrangements to land or dock. Every starport is different; under Imperial guidance, however, certain important aspects of starport operations and procedures have been standardized.

Declaring an Emergency
[Continued]

A precautionary (*Pan-Pan, XXX* or – • • – – • • – – • • –) call indicates an urgent situation not amounting to an emergency, but which requires special handling or consideration. Legitimate precautionary calls include a reaction-drive ship low on reaction mass, communications failure, or any ship with a non-critical life-support system malfunction.

Guard Channels

All shipboard broadcast communications equipment comes with a set of special channels, usually activated by a large button or switch on the main panel. Called *guard* channels because their use is guarded (reserved) for emergencies, transmissions on these channels automatically preempt all other communications traffic, and are received by all communicators within range. Space defense warnings, for example, are often transmitted "on guard" to ensure that all vessels receive the warning. Unauthorized or frivolous use of a guard channel is frowned upon, and may result in a fine.



Traffic Control Procedures

Traffic control, whether air or space, uses its own language that may seem completely arcane to the outside observer. Here is an example of a free trader departing from a Class V starport, with all the conversation involved. Most of this patter could also be conducted automatically through the planet's digital communications networks, but pilots and traffic controllers are people, too, and like the interaction.

"Regina Ground Control, this is S.S. *Freeman,* berth 94, with customs clearance number Alpha-Romeo-two-zero-zero-one. Request taxi instructions for orbital departure."

"*Freeman,* this is Regina Ground. You are cleared to air taxi via lane Charlie to departure pad 4 North. Exercise caution for oversize traffic passing to your front on lane Delta. Contact Tower holding short."

"This is *Freeman,* traffic in sight, roger."

"Regina Tower, this is S.S. *Freeman,* holding short of departure pad 4 North, bound outsystem to Jenghe with a block time of 21:00. Request you open my flight plan; standing by for instructions."

"*Freeman,* you are cleared onto departure pad 4 North; clearance on request."

"*Freeman,* you are cleared to the Jenghe jump point as filed; flight plan is activated as of 21:34:40-113-1120. Squawk 3237. Maintain heading 090 on climb-out until intercepting standard orbital profile; contact Regina Departure Control on channel 5 passing through 5,000 feet. Have a safe trip."

"Regina Tower, this is *Freeman,* transponder set to 3237, on the go. Frequency change to Departure Control at this time; thank you, and good day."

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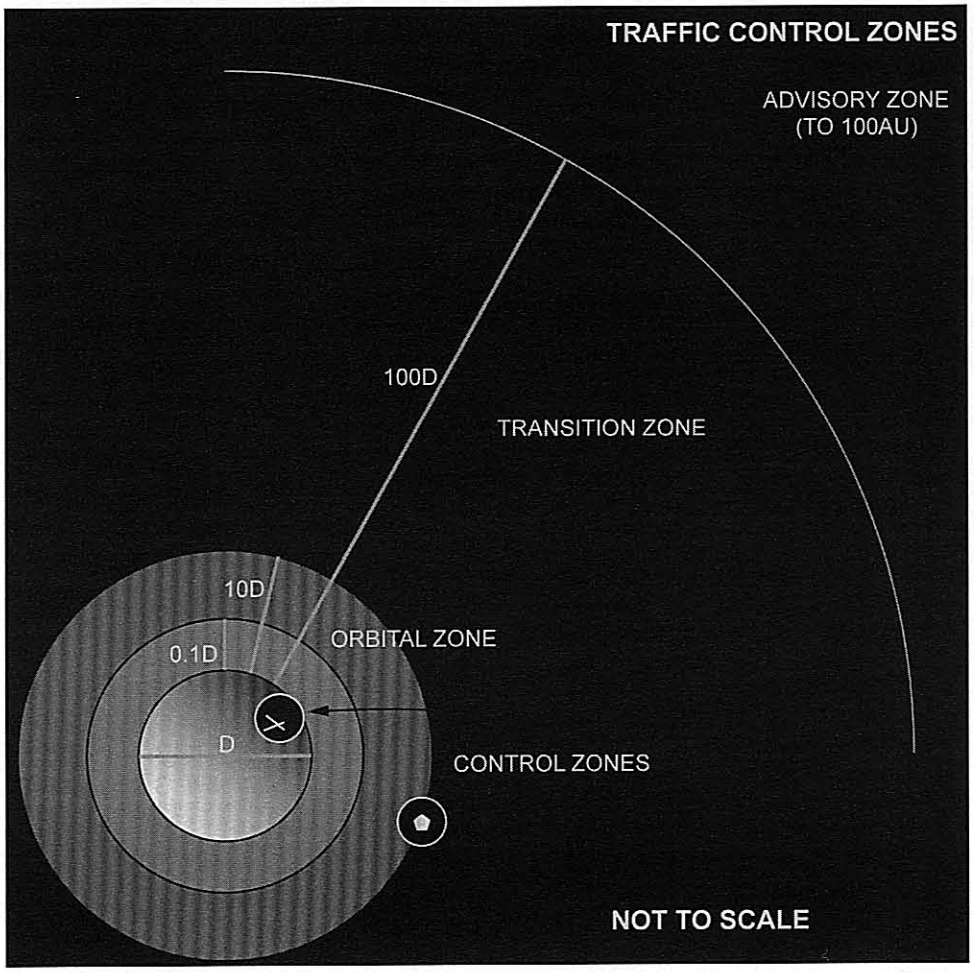


Traffic Control

Traffic control zones and *traffic control agencies* help to manage arriving and departing starships. They are intended to provide safety and smooth operations at the port through exchange of information, separation in time and space, and positive control (see below). Complexity increases with starport class (see p. GT123, p. S122); each class incorporates all lower classes as well.

Traffic Control Zones

Class 0: *None.* This is uncontrolled space.

Class I: *Advisory Zone.* Extends from planet's surface or outer limit of controlled space (whichever is greater) to 100 AU from the primary star or to the orbit of last charted planet in the system, whichever is greater. The Advisory Zone is still considered uncontrolled space.

Class II: *Starport Control Zone.* Covers the physical extent of the starport (on the surface or in orbit), a ten-mile radius around it and up to 50,000 feet above it.

Class III: *Airspace Zone.* Extends from the planet's surface to 1/10 diameter above its surface.

Class IV: *Transition Zone.* Extends from the upper limit of the Airspace Zone to 100 planetary diameters above the surface.

Class V: *Orbital Zone.* Extends from the upper limit of the Airspace Zone to 10 planetary diameters above the surface. The Orbital Zone is *inside* the Transition Zone, and supersedes it.

Traffic Control Agencies and Requirements

Class 0: *None.* No requirements.

Class I: *System Advisory.* A single common channel that all ships in the system (outside controlled space) must use to exchange intentions and information.

Class II: *Starport Tower/Starport Ground Control.* Provides positive control* of all craft movements within the Starport Control Zone. Starport Ground controls craft from after landing to just prior to takeoff; Starport Tower controls all other movements, including takeoff.

Class III: *Approach Control/Departure Control.* Provides procedural control** of craft passing through a planet's airspace. Also provides weather advisories and separation along flight path.

Class IV: *Orbital Control.* Provides procedural control** of craft moving to or from the 100-diameter jump limit.

Class V: *Orbital Control.* Provides positive control* of all craft in orbit around planet. This is the same agency as Class IV, but their requirements are more stringent in the Orbital Zone.

* *Positive control* is a method of traffic control and separation that relies on positive identification, tracking and direction of all craft within a traffic control zone, conducted by an agency that has authority and responsibility there.

** *Procedural control* is a method of traffic control and separation that relies on craft adhering to published procedures within a zone, using advisories and information provided by an agency that has responsibility there.

Administrative Requirements

Administrative requirements are the paperwork and "red tape" required to enter a system, clear freight for import and export, and exit the system again. Requirements become cumulatively more stringent with planetary Control Rating (CR). Transient ships stopping "under seal" at an Imperial port with no business insystem must meet the CR 3 criteria.

CR 0: None!
CR 1: Bill of health; contact traffic control with intentions.
CR 2: Flight plan; customs declaration.
CR 3: Landing and departure clearances; flight plan approval; portside manifest or physical spot inspections.
CR 4: Boarding party; inspections of cargo and passenger/crew manifests with full physical spot checks.
CR 5: Flow control: flight plans require approved arrival and departure block times; full physical inspections of passengers, crew and cargo.
CR 6: Port guide; comparison of logbook and flight recorder; exit visa.

Welcome! - Entry Procedures

There is a significant difference between interstellar travel that occurs entirely within the Imperium (or any other star-spanning political state) and travel that crosses the boundaries between interstellar states. In the first instance, starships will depart one system and arrive at another, all under Imperial law and supervision. This is referred to as arriving from or departing (to) *outsystem* (interplanetary voyages are called *insystem* travel). Paperwork and requirements are locally derived, and are designed to protect the commercial and security interests of the system visited.

Travel to or from a port outside the Imperium is another matter. Called arriving from or departing (to) *foreign*, such travel is subject to Imperial interest and scrutiny. Tariffs and trade restrictions apply; passenger and crew identities will be carefully checked against the manifest, and any discrepancies will result in an interview with Naval Intelligence. Captains are advised to pay a personal visit to the Imperial Consulate, to ensure that there are no hidden requirements or stumbling blocks. Planets outside the Imperium apply similar procedures for their own protection. In multi-system states (such as the Sword Worlds or the Darrian Confederation), only the first port of call in the state (called the *port of entry*) results in the increased scrutiny. Subsequent stops in the same state follow procedures for arriving from/departing outsystem.

Traffic Control Procedures
[Continued]

"Regina Departure Control, this is S.S. *Freeman,* climbing through 5,000 feet, bound outsystem for Jenghe."

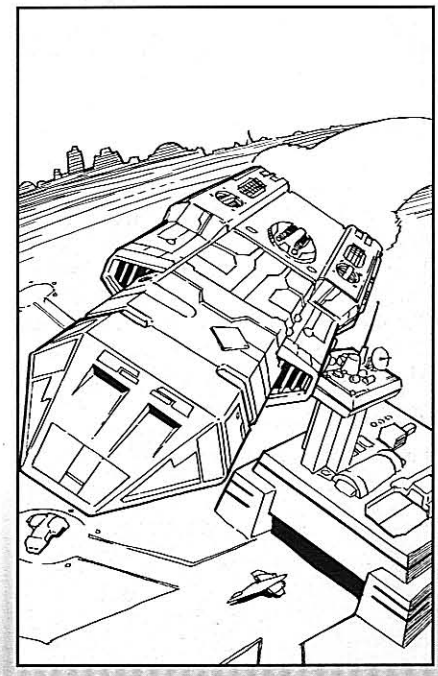
"*Freeman,* Regina Departure has you in radar contact. Continue standard departure profile; remain this channel until passing 100D, no need to contact Orbital. Current weather advisory is for a storm front with moderate, occasional severe turbulence and tops greater than 45,000 feet, 50 miles south of your current course."

"Regina Departure, *Freeman* has the storm front in sight; passing through 50,000 feet, no factor."

"Regina Departure, this is S.S. *Freeman,* passing the 100D limit, jumping outsystem to Jenghe at this time, no estimated time of return."

"*Freeman,* I show you departing Regina System at 16:05:15-115-1120. Jump approved; squawk 0000. Come back and see us sometime."

"Regina Departure, this is S.S. *Freeman,* squawking all zeroes; will do, thanks and out."



Mail and Incidentals

Subsidized merchants and liners in the Imperium may receive mail-delivery contracts, usually as an adjunct to their established routes. In order to receive such contracts, the ship must be able to dedicate five dtons of cargo capacity to postal duty on a full-time basis, the ship must be armed, and at least one gunner must be part of the crew at all times. The captain is paid Cr25,000 for each trip made regardless of the amount of mail carried on that trip. The actual tonnage will not exceed a total of five dtons per trip. Mail is breakbulk cargo for handling purposes (p. 55). Ships carrying mail may not discharge or load other cargo or passengers until *all* mail has been turned over to the appropriate authorities and accounted for.

Other freighters may be asked to carry mail on a per-trip basis if they are fitted for mail as described above. Mail is available on a roll of 12 or less on 3d. If there is mail, tonnage will never exceed one dton, for which the planetary government will pay the captain Cr10,000 (regardless of the amount of mail). No mail means no pay, but the mail locker may then be used for other small cargo.

Starship crew members may, on occasion, be approached by individuals to deliver private messages or small packages. Private mail is usually intended for delivery to a specific point or person. It is usually accompanied by a Cr20 to Cr120 honorarium and a letter of introduction from the sender to the intended recipient. This can be a useful way to make contacts.

Mail Safes

Sometimes, there is no financial instrument available that can take the place of physically moving cash around. Truly large amounts of cash travel by special courier or heavily escorted freighter. Smaller amounts of cash – the amounts that traders might deal in – are transported through the Imperial Mail in mail safes. Mail safes are extremely secure portable safes, with PD 4, DR 100 walls and an electronic lock (-15 to Lockpicking skill). Furthermore, *no* key will open a mail safe until three days after the date when it is scheduled to arrive at its destination.

Forcing open the safe results in both the cash and the perpetrator being sprayed with indelible ink, rendering the cash worthless and the perpetrator very conspicuous. Furthermore, the safe will spread micro-fibers in a 10-meter radius. Sweeping for these fibers is a routine part of customs inspections; discovery of such fibers results in serious law-enforcement attention.

Inspections

Most entry inspections are conducted by an official party that meets the ship at its berth. The degree of bureaucratic inquisition depends on the CR of the world (see *Administrative Requirements,* p. 63).

Paranoid or exacting local governments may insist on an in-person search of an incoming ship; this is rare for ships landing at the main starport, but routine for ships landing outside the main starport's Imperial extrality zone (p. GT64). Inspectors may also board seagoing ships or aircraft arriving at the port if it is impractical to halt them at the extrality line (see *XT Line*, sidebar, p. 66). Boarding parties may conduct several types of search, depending on their composition.

Health Inspection (Quarantine)

The quarantine officer is a medical doctor or veterinarian whose sole interest is in preventing the spread of infectious organisms to the host planet. Such organisms could be animal pests (rodents, insects or their interstellar equivalents), fungi or microbes (bacteria and viruses). The inspector will be particularly interested in reports of illness among the ship's crew and passengers, or at any of its previous ports of call, and in any fragile or live cargo (plant or animal) which prevented routine decontamination of the holds.

If the quarantine officer is satisfied, he will issue a clean bill of health (also called a *free lishun*, from the Vilani word for "health"). If not, he may place the ship under quarantine, which prevents it from landing, or discharging passengers or cargo, until the situation is resolved. If he is unsure of the status of the ship (e.g., due to inconclusive indications of a disease on board), he may issue a restricted bill of health (or *limited lishun*), which allows the ship to discharge cargo so long as contact between the crew and the local populace is kept to a minimum. The crew is usually prohibited liberty is such cases, but the captain or first mate may go ashore to conduct ship's business.

Quarantine restrictions may also be imposed for the protection of a ship's crew from local outbreaks of disease; the Imperial representative on planet can confirm the need for restrictions of this type.

Customs Inspection

The captain must provide a *customs declaration,* outlining all dutiable goods on board (whether intended for import or not), before arriving at port; this will form the basis for the customs inspection. Otherwise, he must declare the entire ship "under seal" (see below).

Customs inspectors are searching for potential violations of planetary import restrictions (i.e., smuggling) and for other types of contraband – particularly weapons – whether intended for import or not. Customs inspection parties must have access to every space on the ship, public or private, that is not under seal (see below); they are often referred to as "the Forty Thieves" by crew members. The captain must ensure that the passengers and crew do not conceal contraband goods, as he himself will be issued any fines. Once the chief inspector is satisfied, he will issue a *customs clearance,* which permits the cargo to enter the planet's jurisdiction.

Restricted and Prohibited Items: Whether or not an item is prohibited or restricted from import to a particular planet is a function of the item's Legality Class (LC) and the planet's Control Rating (CR). Most goods are LC 6, unless they can be hazardous if misused (LC 5) or are intended as weapons (LC varies; see pp. GT114-115). Goods with an LC equal to or greater than the CR are usually permitted entry (although customs duties may apply; see below).

For items with an LC *less* than the CR, the GM is free to specify whether they are restricted or prohibited based on circumstances (e.g., weapons for a planet experiencing a civil war), or roll 2d+LC-CR. On an 8 or more, the item is restricted and an import permit is required; roll versus Administration-CR to obtain one. On a 7 or less, the item is prohibited from import.

The GM should make a note of import restrictions that are likely to come up again. Customs regulations aren't really random, and won't change much over time.

Customs Duties: Most planets charge an import duty of one to 6% of the value of incoming goods as the principle means of generating revenue for the port. Smaller ports must charge proportionally more due to fixed costs. Day-to-day expenses are met with port tariffs (p. 66); customs duties go to pay bonds, upgrade or repair facilities, and make other real improvements. Customs duties of up to 10% will not significantly affect trade. Higher duties may be imposed on specific goods (particularly military supplies) or on goods from specific planets to encourage local industry or as a form of economic warfare.

Customs Seal: Captains can avoid taxing or confiscation of items carried on board and not intended for use or sale in the system by submitting them to *customs seal.* All restricted items are inventoried and locked in the ship's locker or an unused cabin or hold. The customs inspector then applies a seal, which is uniquely identified on the customs documents. Seals vary in sophistication with the TL and CR of the planet, from actual wax seals to stickers to electronically active monofilament tape.

Captains of transient ships with no business beyond the Imperial extrality zone (or beyond refueling, in non-Imperial star systems), may elect to declare their *entire ship* "under seal" and avoid local customs altogether. Full crew, passenger and cargo manifests must be submitted to the planetary customs and immigration authority, which issues them to its extrality-line personnel. The captain and first mate are permitted to go on planet to conduct ship's business, but if any other person or item on the manifests attempts to leave the starport (or the ship itself, if no extrality zone exists), the "seal" is "broken" and full customs procedures apply.

Immigration Inspection

All planets have controls to prevent undesirables – criminals, troublemakers, roleplaying-game designers – from free entry onto their worlds. The precise measures (e.g., checks at the extrality line) will depend on planetary CR. As well, overcrowded worlds or those that are highly desirable locations will restrict the number of immigrants they allow to settle. In either case, a boarding party may insist on accounting for all passengers and crew before they are allowed to debark.

The immigration officer will want a copy of the crew and passenger manifests, and will compare each name on the list to the person and his identification. Even planets that do not mandate in-person inspections may require filing manifests with the customs office in port. If there are any problems, the captain will have to ensure that those denied entry remain on board for the duration of the port call. An immigration officer will also board to take charge of any stowaways found on board during the voyage (those who survived the trip, that is).

Copies of the manifests will be available to extrality line personnel, starport security and perhaps local police outside the fence.

Port Guide

For the true connoisseur of red tape, the local planetary government can require a *port guide* on all ships entering or leaving their system. Unlike seaport harbor pilots, port guides do not take physical control of or navigate the starship – after all, there aren't any hidden shoals to run aground on. Rather, the port guide is present as a witness, to supervise and ensure the captain's compliance with port procedures and regulations (and to count up the fines for the ones he misses). This is routinely sugar-coated with the excuse that the port guide "provides valuable local knowledge and experience with port protocols," but in fact a competent pilot can fly any published approach without undue difficulty.

LASH Operations

Starships cannot increase their profits by trans-shipping cargoes; the waiting occasioned by the 10% uncertainty in jump transit times eats up any time (and operating costs) saved. Lighters can, however, conduct their operations independently of the freighter itself. For legs inbound from or outbound to free jump points, the procedure is similar to that for conventional freighters. When *both* jump points are masked, the usual sequence of events is:

1. A high-g small craft (pinnace or shuttle) – sometimes disparagingly referred to as a "bumboat" – departs the starport with the crews of the lighters that are due in (LASH designs don't usually have enough staterooms to carry lighter crews through jump with them). It arrives at the jump point 12 hours prior to the expected arrival time of the freighter (*zero-hour*). Since two-thirds of all jump exits are within 12 hours of zero-hour, this means that most of the time, they will have less than one day to wait. About 1/6 of the time, the ship arrives earlier; another 1/6 of the time, the ship arrives later (though never more than 5 hours later, for a normal jump).

2. Once the freighter arrives, the lighter crews board their ships, cast off and drive for the main world at maximum acceleration. Freighter crew members granted liberty ride back to the port with the bumboat, or take the ship's small craft for a liberty boat.

3. At the same time, lighters for the outbound leg and oilers carrying jump fuel depart the starport heading for the outbound jump point.

4. The freighter, now empty and considerably faster, drives for the outbound jump point to rendezvous with them. Loading the lighters takes less than an hour, but refueling may take several hours more.

5. The crew, having completed its liberty (2-12 hours, depending on distances and relative accelerations), reboards the bumboat and drives out to rendezvous at the jump point. Some crew may have exchanged places with other crew waiting on planet; this is usually the only way to take more port liberty.

6. At the jump point, the bumboat drops off the liberty party and picks up the lighter crews, then returns to the starport as the freighter jumps outsystem once more.

This complicated ballet saves, on average, one complete leg into the main world (about 24 hours), which results in about four additional jumps per year.

Leaving the Port – The XT Line

The border between the Imperial extrality zone and the rest of the host planet is called the *extrality* or *XT* line. XT lines are usually designed to support local customs laws by preventing smuggling. On particularly repressive worlds, the planetary side of the line may instead be intended to keep the inhabitants in – a 57th-century Berlin Wall.

The XT line can be divided into two sections. The actual *access points* are where traffic (ground or grav) can move from one side to the other. Air, water and space traffic will generally be met by customs officials where it lands, but security arrangements and the level of scrutiny will be similar.

The rest of the XT line is called the *fence,* whatever its physical arrangement. Physical security measures will be similar to, but less strenuous than, those at the access points. Sensors will concentrate on area coverage to detect and locate a breach. At minimum, there will always be an actual fence or other physical barrier, even on planets with CR 0, to prevent the locals from wandering onto the starport by accident. Physical security and strength will increase with both the TL and CR of the host planet. Barrier height will be at least 10 feet divided by local gravity in gees; planets with extensive air traffic will rely more on sensors and anti-aircraft weapons to enforce XT-line restrictions.

Continued on next page . . .

The Price of Doing Business – Port Tariffs

Berthing fees, handling costs, facilities use charges and other starport fees – collectively called *tariffs* – are a common practice, and must be paid as they occur. The tariffs below replace the abstract weekly berthing cost on p. GT159 (which may be used for simplicity, if the GM prefers). These fees work out the same on average, but a careful captain can shave over 50% off the total using separate fees. Unless otherwise specified, "dtons" means "dtons *of freight*" below.

Berthing fee: Includes power, life-support and data hook-ups at the berth, access to facilities for maintenance, and often courtesy transportation to the main starport terminal. Once paid, berthing fees cover unlimited arrivals and departures for the entire duration, although crowded ports frown on berths standing empty for too long. *Cr20 × hull class for the first six days, Cr2 × hull class per day thereafter.*

Customs Duties: These aren't port tariffs, but appear here for completeness. They typically amount to 1 to 6% of the fair market value of freight; see p. 19.

Fuel: Cr350/dton (at the berth or in planetary orbit), Cr450/dton (at planet's 100D limit, delivered) or Cr750/dton (at star's 100D limit, delivered).

Handling fees: These include labor and equipment rental. They can be ignored by self-sustaining vessels (those with their own freight-handling equipment and personnel). RO/RO freight does not incur a handling fee, but wharf fees still apply. *Cr20/dton (general cargo), Cr4/dton (containers) or Cr1/dton (bulk by pipeline). Minimum fee is Cr500. Add 50% for +⅓ rate (see p. 58).*

Lighterage fee: Freight handling fees are separate, and may be required at both ends. *Cr10/dton (surface to orbit), Cr15/dton (to planet's 100D limit) or Cr40/dton (to star's 100D limit).*

Port guide fee: To add to the insult, starports that require port guides also routinely require the starship captain to pay for the "service" of having him aboard. *Cr100.*

Shuttle ticket: One way, for one person and up to 200 lbs. of baggage; excess baggage is carried at lighterage rates. *Cr50/person.*

Special handling: Special handling is required for any freight which contains hazardous material or which is fragile, very valuable, live or perishable. Rates may be higher (perhaps much higher) for extremely dangerous or valuable goods. Discharging, storage and loading of hazardous cargo may be restricted to certain areas of the port, or even to completely separate facilities. Handling rate is -⅓ (see p. 55). *+50%* ***total*** *fees.*

Starport fee: This covers the expense of administration, maintenance and operation of the port, as well as search and rescue services. Contragravity craft of less than 10 dtons (5,000 cf) displacement are considered ground vehicles, and are exempt. *Cr500.*

Tug fee: Tug crews are responsible for grappling and navigation of the combined ships while under tow. Time is figured from port to rendezvous and back. *Cr0.2 × rated thrust (in stons) per hour.*

Wharf fees: Cover the use of port facilities for transferring and storing freight at the berth. Include warehousing and area on the berth itself. Paid by the owner of the freight, according to the terms of shipping (see p. 54). *Cr20/dton for up to 30 days; Cr2/dton per day thereafter.*

Fines

Fines are the *personal* responsibility of the ship's captain unless the fine is the direct result of misconduct by a crew member. Even then, the captain pays the fine and collects it from the crew member later (perhaps by reducing his pay).

Failure or refusal to vacate berth when ordered: Cr1,000/hour.

Violation of port or Imperial regulations: Cr500 per incident.

Outside the Gate – Port Support Operations

A number of businesses exist to support the shipping industry. At the high end, these companies have offices right in the starport terminal; cheaper versions of the same services are located outside the starport gate. In very small starports, there may be nothing more than a bulletin board (literal or virtual, according to TL) where starships and those desiring or providing services post messages to one another; these bulletin boards continue to exist in some form in even the largest of ports.

Shipper's Agents/Brokers

A broker is someone who facilitates transfers of cargo from one owner to another. He may be an independent operator, charging a fee for his services, or the employee of a shipping line. Brokers working for a shipping line are organized into the company's sales department (see p. 80). A character with the appropriate skills, advantages, etc., may act as his own broker or as a broker for others once he is licensed to do so (see p. 85). See Chapter 2 for more details.

Passenger Agents

Passenger agents match people desiring passage off-planet with ships willing to carry them. Most interstellar travel takes place on large, scheduled passenger liners. Lines with scheduled stops on a planet will have at least one agent there; if port calls are infrequent, a single agent may handle several lines. Passenger agents are also invaluable when placing passengers aboard small, unscheduled (tramp) vessels.

In the case of small ships, the passenger agent will introduce the passengers to their captain. Larger liners will detail a purser or a steward to run a check-in desk in the terminal. The final decision to accept or reject any passenger, of course, rests with the ship's captain.

On planets with repressive governments, the operations of passenger agents may be subject to severe restrictions and scrutiny, or may be illegal altogether. In these cases, the government immigration office carefully regulates which of its citizens are permitted to leave the planet, and may purchase all tickets itself for later distribution. Captains taking on passengers on such worlds may know nothing about their charges until they arrive at the ramp.

Ship Chandlers and Outfitters

Starship life-support systems are extremely efficient and self-contained, but for quality of life aboard ship, nothing beats fresh provisions – fruit, vegetables, meat, beverages, etc. Ship's chandlers and outfitters exist to meet this need and to supply all the routine parts, spares, filters and other equipment required to keep a starship running smoothly. Crews will obtain the majority of their starship-oriented supplies and gadgets from these merchants, and the typical ship's locker is filled with their goods. Some chandlers provide or specialize in services: there is almost always a skiff or air/raft from a cleaner-and-laundry nearby when a large ship docks.

Departure Procedures

The requirements the captain must meet before departing a given planet are similar to those imposed on arriving; they depend on planetary CR and whether the ship is departing foreign or merely outsystem. The captain loads cargo and passengers, has customs stamp the manifests, settles all open accounts, obtains a clearance to depart from customs, files a departure flight plan (or requests a departure block time) and retrieves his ship's registry from the Imperial Legate (p. 74), if required.

Before the ship can clear customs outbound, a customs representative must reboard and check the integrity of any seals. If immigration checks were required on entry, a corresponding check will be required just prior to closing the hatches for departure, to ensure that all personnel required have made it aboard.

Once again, the GM must check to see if the course to the next destination is masked by the 100-diameter limit of the system's stellar primary. Then the ship jumps out to another system, and the cycle starts all over again.

Leaving the Port – The XT Line

[Continued]

CR	Physical Security Measures: XT Fence	Access Points
0	Single fence.	Open gate.
1	Single fence.	Gate with gatehouse.
2	Cleared buffer zone.	Guards.
3	Anti-intrusion fence.	Random ID/ manifest checks.
4	Double fence; sensors.	100% ID/ manifest checks.
5	Nonlethal traps; patrols.	Random search.
6	Lethal traps; deadly force.	100% physical search.

Higher-level measures may be added during times of heightened alert.

TL	Physical Security Technology: Sensors	Barrier DR/HP
0-4	Mk. 1 eyeball; unaugmented hearing.	4/10
5	Searchlight.	8/20
6	Radar, metal detector, microphone,	12/30 rad counter.
7	LLTV, thermograph, X-ray, geophone,	16/40MAD.
8	PESA, AESA, chemsniffer.	24/60
9-10	Radscanner.	40/100
11	Densitometer, biosniffer.	60/150
12	Neural activity sensor.	100/250

Freight Consolidators

Specialized freight forwarders collect many small cargoes, consolidate them, and ship them to a destination planet as a single lot. A freight consolidator is an agent who brings together a number of shipments for one destination to qualify for preferential rates, usually by filling standardized containers. The consolidator will issue a bill of lading for the shipment which includes a description of the contents of each sub-shipment.

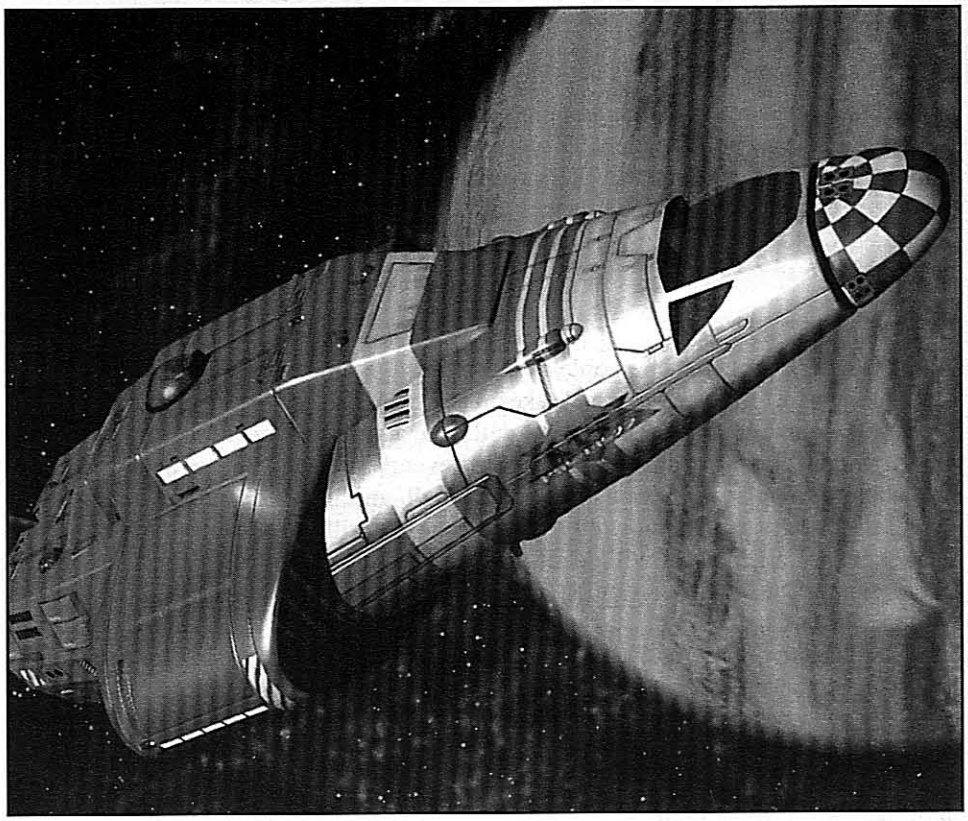
Routine Vehicle Operation (RVO) Programs

The Routine Vehicle Operation program enables the ship's computer to control it in normal operations, especially enroute to or from a jump or breakout point, or in jumpspace. The program will steer clear of obstacles and respond to simple instructions from traffic control, but will not perform dangerous maneuvers, "push the edge" or Dodge in combat. If a situation arises that is beyond its capacity to handle – or at preset intervals or events – the program will sound an alarm and rouse the pilot to take over.

The RVO program is rated at Piloting-12 for normal operations, but its capacity is extremely limited. In an emergency, the RVO program is capable of landing or docking the ship, but simple failure results in a mishap and critical failure results in disaster. By comparison, a pilot must suffer a critical failure (simple failure when fatigued) to encounter a dangerous situation, and can avoid it on a second roll. A failure on the second roll results in minor damage, and only critical failure on the second roll results in disaster.

Ship's Business

Running a starship, even a small free trader, is a complex and demanding task. There are a host of legal and practical requirements surrounding every aspect of day-to-day operations – paperwork, personnel, accounts, maintenance – collectively known as *ship's business.*



Ship's Registry

A ship's registry is a physical document (equivalent to an Imperial Identity Document for a ship; see p. GT40) that uniquely identifies the ship by type, home world and hull number. The Imperium does not issue standardized registrations to commercial vessels (it leaves that function to individual planets), but it does specify the information that must be included, such as hull class, passenger and cargo capacity, required crew, ownership information and weapons mounted. Like an ID card, the information contained can be read off and transmitted – a routine procedure when entering most systems. In some cases, the ship's captain may be required to surrender the registry to the Imperial Legate (p. 74) on arrival; e.g., to prevent the ship from jumping out without paying a fine.

Loss or Destruction of a Registry

Losing or destroying a registry is a serious matter, requiring an inquiry from the Imperial representative at the next starport to substantiate the loss before the registry can be reissued. Conducting ship's business without a registry is as difficult as getting along without proper ID is for a person; a "zeroed" ship will have a hard time getting *any* legitimate business or service. Forging a registry (either a replacement or an alternate) is covered in Chapter 6.

Outfitting the Ship

A starship costs tens of millions of credits, yet some owners will begrudge a few tens of thousands to keep their investment in top shape. Here are a few basics to consider when outfitting a new ship.

Auxiliary Equipment

Auxiliary equipment includes every item that isn't part of the ship's basic design. Freight-handling equipment is an investment – a ship that is self-sustaining is a ship that can make a profit where others can't. Environmental gear for the ship's locker and survival gear for the crew and passengers (especially sufficient rescue balls in every compartment) can mean the difference between life and death. Finally, shotguns and snub pistols enough to equip the crew will let them repel boarders and hijackers *without* frying the bulkheads.

Ship's Locker

"Ship's locker" is a catch-all term for the miscellaneous stores and supplies a ship maintains to support its operations and crew. On small ships, it may be a physical locker; on larger ships, it is a storeroom or hold. Contents of a ship's locker can include environmental and survival gear, personal convenience items and consumables for the crew (the *slop chest*), and medical supplies. Most equipment is issued as needed but remains the property of the ship's locker.

Slop chest items (junk food, mild recreational drugs and alcohol, toiletries, entertainment and educational chips, even uniforms and T-shirts) are purchased in bulk by the purser and sold to the crew at cost or charged against their unpaid salaries. On small merchant ships or those that carry only a few passengers in addition to their cargo, the passengers may have access to the slop chest through the purser on a cash-only basis. Large liners run separate concessions for the convenience of their passengers.

Parts and Stores

Spare parts cost 0.1% of the ship's original purchase price per year; their volume is included in that of the engineering space. This is in addition to parts required for annual maintenance (p. 76).

Ships' life-support systems can produce edible food from algae and mycoprotein, but this isn't very tempting: a bland-tasting, dry, flaky paste or cake, often gray or brown. Flavor additives (100 single-meal packs weigh five pounds and cost Cr50) make it more palatable. Fauxflesh vats produce real animal protein via applied biotechnology, but ships with fewer than 50 staterooms may have room to grow only one variety ("Beef *again?* I'd kill for lamb!").

Fresh provisions are the alternative of choice, and a necessity on any ship that intends to offer high passage. Preserved provisions are 2 lbs., 0.04 cf and Cr6 per man-day. Fresh ("real") food ranges from two to four times that price and up (although at the high end, the quality of the product depends more on the Cooking skill of the chef), and has twice the weight and volume. Both are carried as cargo: 12,500 man-days of preserved provisions or 6,250 man-days of fresh provisions per dton. Fresh provisions are also perishable.

Programs

Don't scrimp on programs! Remember that bridges are equipped with *three* computers (p. GT161). A complete package for a free trader costs kCr129 at TL10, and consists of Datalink (run one copy per communicator), Targeting +8 (run one copy per turret and a third for the missile fire director on the bridge), Damage Control with ship's specifications in a database, Routine Vehicle Operation (Piloting-12, Cr2,000, Complexity 2; see p. 68), Astrogation (Jump-1) and Library Data. Add a Limited (Cr2,000, Complexity 4) or Full (Cr5,000, Complexity 5) Personality Simulation to make the ship more user-friendly, if desired.

Security and Anti-Hijacking

Ships come with electronic locks, but consider installing after-market intruder defenses (including digital cameras, motion sensors and weapons) and a high-security alarm system (Cr3,000, effective skill 20). If the ship is equipped with internal sensors, an Anti-Hijack program (Criminology-14, Cr10,000, Complexity 5) can alert the captain to suspicious patterns of activity.

Odds and Ends

The following items are intended especially for crew members of starships. Refer to pp. GT107-117 for other relevant equipment.

Pocket Pack (TL8)

A collection of five items that most crewmen find invaluable; it is standard issue on well-run ships. It includes a penlight (runs on an AA cell for 24 hours; Cr4, 1/16 lb.), a Swiss army knife (screwdriver, scissors, small knife, file, tweezers, bottle opener and toothpick; Cr10, 1/8 lb.), a roll of vacuum-proof sticky tape (150 yds. × 2 inches; Cr2, 1/8 lb.), a marking pen (writes on metal or glass in temperatures from -150°F to 400°F, in zero gravity and in vacuum; Cr4, 1/16 lb.), and a candy bar (in a vacuum-proof wrapper, temperature resistant as is the marking pen, tastes like chocolate-covered sawdust; Cr1, 1/8 lb.). Cost is Cr20 (saves Cr1 over the cost of the items bought separately); weight, with wrapping, is ½ lb.

Sr5/8 Survival Rifle (TL8)

The Sr5/8 is a simple lever-action rifle made entirely from lightweight alloys and plastics. It breaks down easily into three basic components (barrel, action, stock); the barrel and action can be stored in the hollow plastic stock. The rifle uses an internal 12-round magazine, which may be topped up with individual rounds at any time. It fires a 5mm caseless round (identical to that used by the 5mm body pistol, p. GT110). Dmg. 2d, Acc 6, SS 11, ½D 140, Max 1,700, Wt. 1.1 lbs., RoF 3~, Shots 12, ST 8, Rcl -1, Cost Cr72. 500 rounds of ammunition weigh ½ lb. and cost Cr1.

Wrist Computer (TL9)

This general-purpose computer is the size and shape of a large wristwatch. Complexity is 2. It has no display, only a verbal interface (although it still tells time), and can be linked to a communicator or directly to a larger computer to download data (making it very handy for spies!). Cr300, 1/8 lb.

Survival Watch (TL9)

Incorporates a dedicated wrist computer (Complexity 2) with a 0.1-gig database of survival lore, a chronometer, a rad counter, a magnetic compass, a homing beacon (p. UTT40) and an inertial compass (p. UT22). It is voice-activated and displays information on a tiny, high-res screen. Runs for one year on an A cell. Cr300, ¼ lb.

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Odds and Ends
[Continued]

Survival Kit (TL10)

Imperial regulations require commercial ships to carry one survival kit per passenger in lifeboats designed for surface landings; this requirement is routinely disregarded (and thus often a useful excuse for other searches). A typical kit might consist of a 20″ × 16″ × 6″ carrying case (Cr10, 7.5 lbs.) containing:

- Air mask with built-in respirator, mini-air tank and filter (p. GT112); Cr250, 2 lbs.
- Atmosphere tester (p. GT112); Cr100, ¼ lb.
- Autograpnel (p. UT83); Cr100, 1.5 lbs.
- Belt flashlight (p. S46); Cr10, ¼ lb.
- Biphase rope, 40 yds. (supports 2,000 lb; p. S45); Cr20, 2 lbs.
- Commlink/transponder (10,000 mile range); Cr600, 3 lbs.
- Emergency medkit (p. S70); Cr300, 1 lb.
- Filtration canteen (p. S45); Cr44, 1 lb. (empty).
- Flares ×8; Cr2, 1 lb.
- Food concentrates for 30 days (p. S45); Cr200, 9 lbs.
- Inflatable raft (1 person or 240 lbs.); Cr100, 1 lb.
- Reflectorized tarpaulin; Cr50, 1 lb.
- Shelter suit (combination thermo suit and desert environment suit, but without water-recycling capability; p. S46); Cr400, 5 lbs.
- Survival knife (p. S45); Cr100, 1½ lbs.
- Survival rifle and 500 rounds (see above); Cr73, 1.6 lbs.
- Survival watch (see above); Cr300, ¼ lb.
- Towel (p. S45); Cr10, 1 lb.
- Utility belt (p. S45); Cr25, ½ lb.
- Water, 8 × 0.5-quart cans; 9 lbs.

"A working passage is not quite the same as being shanghaied, but on some ships it can be the next best thing."

– Jamie Lonnigan,
Free Trader: Twenty Years Tramping

Weapons

Not all merchant ships need to be armed; in the core sectors of the Imperium, armed turrets are not only a waste of valuable space, but will attract unwanted attention as well. Ships operating on the fringes and those contracted to carry mail will need some form of armament, however.

A mix of one missile rack, one laser and one sandcaster per turret is usual for commercial vessels. On average, two sandcasters will buy a free trader an additional laser hit before it takes major damage. Lasers are useful offensive/defensive (anti-missile) weapons, while missiles are the most effective purely offensive weapon. Since small ships rarely use all five bridge crew stations in combat, one useful technique is to hand off missiles to the remaining crew station(s) after they are fired, using the bridge's lasercom for guidance and allowing the gunners to concentrate on anti-missile and anti-ship fire.

There is no magic formula for how many missiles and sandcasters to buy. In general, the ship with the most ammo wins, so buy as many as possible.

Cash

Don't forget to maintain a cash reserve. Ideally, this should be enough for three months' expenses – but no one ever manages to save that much. Just keep *something* back, for quick speculations, repairing battle damage, meeting unforeseen equipment requirements, making "contributions" to a local official's personal economy, etc.

Hiring Crew

Manning requirements are determined by the Travellers' Aid Society (p. 51) or other classification agency (like Lloyd's in the Solomani Confederation) as part of the registration and classification of a ship. Operating short-handed is possible, especially due to illness or injury, but routine voyaging without a full crew is an invitation to have the ship's insurance canceled. The procedure for advertising a position wanted or needed to fill is outlined on pp. B194-195.

Officer Requirements

Every ship requires a captain, who carries a master's license (p. 84). On ships smaller than hull class 200, he may be the *only* crew member if he is qualified to carry out all of the functions below or has the appropriate automated support. Such a ship is required to have an approved Routine Vehicle Operation (RVO) program (Piloting-12) to perform watch-standing functions while the captain sleeps. See sidebar, p. 68.

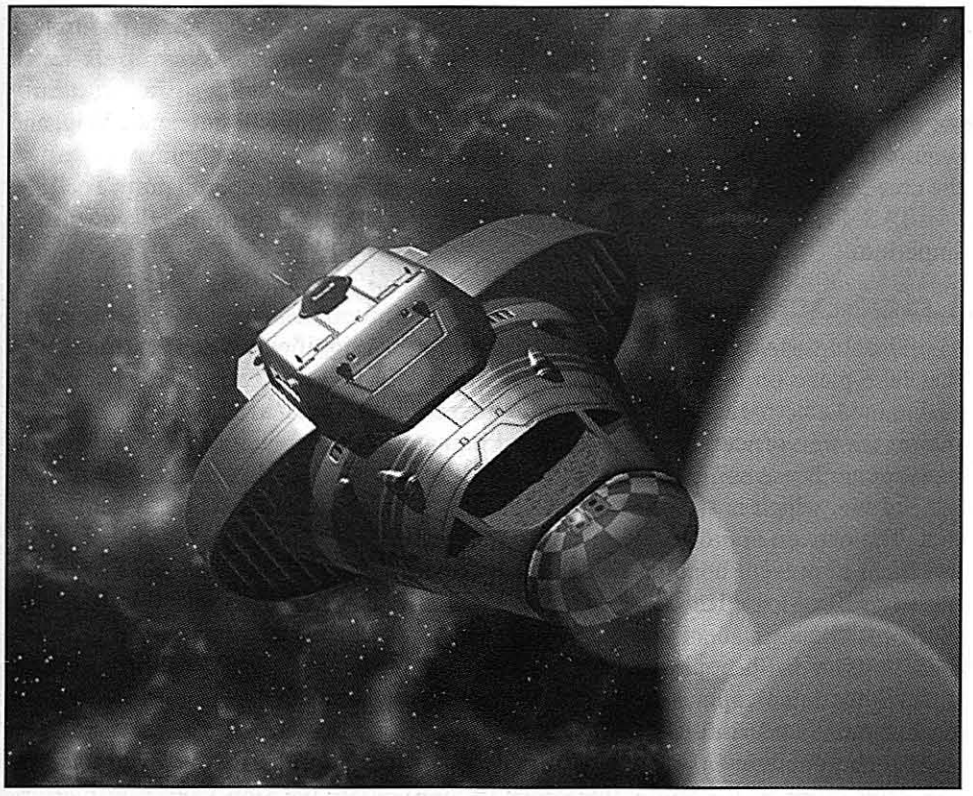
Commercial ships of hull class 200 or more require a minimum of *three* licensed mates or masters (including the captain) to stand watches on the bridge. They also require a minimum of one licensed engineer (and two assistants, for hull class 1,000 or more). Most shipping lines require the first officer to have a master's license, as a backup to the captain. Engineers may also be used to stand watches if they are qualified mates. An RVO program may substitute for one mate on a temporary basis (usually by having the remaining two stand heel-to-toe watches, with the RVO program as backup), but the shortage should be made up as soon as possible.

All ships carrying cargo for pay require a certified cargomaster; on small ships, he may double as one of the other officers. Hazardous or other special cargo requires a more advanced certification for safety.

Traditionally, the first officer is also chief pilot and in overall charge of port operations, the second officer is navigator, the third officer is second pilot and the fourth officer (if any) is in training for all of the above. On a free trader, positions are more flexible and everyone cross-trains for more than one duty. A typical arrangement is shown under *Merchant Rank* (p. 81), but that is by no means the only possibility.

Other Crew Members

All ships of hull class 200 or more require a certified medical technician, a communications operator (with Electronics Operation (Comm)) and a sensor operator



(with Electronics Operation (Sensors)). These positions may be filled on a part-time basis by officers. On large ships, there may be one specialist *per watch,* or a single specialist may be awakened whenever required.

Other crew members are generally classified as "deckhands," "drive hands" or "stewards." Stewards often double as gunners on armed merchantmen.

Crew Salaries

Crew members must be paid monthly, usually at the first port of call each month. Non-player characters must be paid according to the Job Table on p. GT106. Player characters may bargain for better pay rates or elect to accept worse, and may tie their fortunes to the owners' by accepting shares in the proceeds of the ship's activities in lieu of part or all of their salaries. Salaries (and shares) should be noted next to each crewman's name on the crew manifest.

Working Passage

A captain with a crew shortage may hire an individual to fill a vacant position in return for passage rather than money. Working passage may not continue for more than three jumps or the crewman is considered to have been hired for standard salary – retroactive to the date he joined the ship. Those working for passage do not sign the ship's articles (below); instead, an entry is made in the ship's log (p. 72) detailing the circumstances and terms of the contract. In order to sign on for working passage, the crewman must have some expertise in the position for which he is hired (although he need not be fully certified). Baggage totaling 2,000 lbs. or 1 dton is allowed. Working passage costs the individual nothing; he receives passage, room and board in lieu of a salary.

Ship's Articles

A ship's articles are its "constitution" – a contract that spells out, in broad terms, the responsibilities of the ship's captain and crew. Articles may be *standing,* on a ship which keeps the same crew from voyage to voyage (common among free traders), or valid for the current voyage only. By signing the articles, crew members "sign on" with the ship and agree to the conditions of the ship or voyage.

Damage to Cargo

When cargo is damaged in routine transit, the owner inevitably attempts to prove negligence on the part of the ship (that is, the captain, since he's responsible) in order to make the captain pay reparations. If the captain has been reasonable and prudent in handling the ship (as demonstrated by his logs), then the goods are paid for according to the terms they were shipped under (see *Terms of Shipping,* p. 54). Disputes between ships and consignors are settled by the Imperial Shipping Commissioner or Legate (p. 81).

When cargo is damaged during an emergency, on the other hand, how the situation is resolved depends on how the damage occurred. If a cargo somehow *caused* the emergency, its owner will be held liable for any damage that was done. Again, who owns the cargo at any given moment is determined by the terms of shipping.

If the cargo was involved in the emergency directly without being the cause, the owner of the cargo bears the loss himself. This rule is called *particular average,* for historical reasons. For example, if there were a fire in the cargo hold, any livestock that burned or suffocated from the fire would be the responsibility of their owner.

If, however, the cargo was not damaged by the emergency directly, but as a result of efforts to contain or correct the emergency, then the loss is shared proportionally by every party that had cargo on board. This is called *general average,* and assumes that every party benefited equally from resolving the situation – whether their cargo was saved or not. In the example above, if the captain decided to evacuate the cargo hold to put out the fire, the owners of all shipments aboard would pay a share of the loss of the livestock, according to how much their cargo was worth. Cargo jettisoned to lighten the ship's load would also fall under general average.

There are attorneys who make a comfortable living arguing nothing but cases of damage to cargo, and particular and general average.

Hey, Why is Murphy on the Cargo Manifest?

There are three cases where sophonts appear on a cargo manifest:

1. Low-berth passengers.
2. Troops being transported.
3. Slaves (which are illegal in the Imperium anyway).

These are all "cargo," not "passengers," for legal purposes (e.g., the ship doesn't need as many stewards or medics).

Keeping a Logbook

Keeping a logbook is a great way to add flavor to a mercantile campaign. Not only does it provide a record of the party's adventures, but it helps to establish the proper frame of mind.

First, get a blank journal or composition book; hardbound is easiest, but some captains may prefer loose-leaf. Next, write the name of the ship, its home port, registry number, etc., inside the front cover, together with the voyage or volume number of the log. Attach the ship's papers to the first few pages, or save space to insert them later. Finally, write down the date, time, location and a brief description of major events or anything out of the ordinary that affects the ship or its crew. It isn't necessary to include *everything,* or to try to capture all the routine operations (watch changes, safety and navigational checks, course adjustments) that really occur aboard ship.

Typical entries might include: arrival at a new system; entry into orbit; results of sensor scans or surveys; landing or docking; entry through customs; discharging cargo and passengers; making repairs; crew changes (signing off or on); taking on supplies; taking on cargo or passengers; filing a flight plan; clearance to depart; takeoff; entry into jumpspace; encountering patrol ships; attacks on the ship; accidents, illness, or injury to passengers or crew; damage to cargo; loss or damage of ship's registry, transponder or flight recorder; attempts to hijack the ship; stowaways; violations of ship's discipline and punishment imposed, and ship's accounts.

Passenger, crew and cargo manifests can be recorded in the logbook, attached to the log using standard forms, or kept in a separate file with a pointer in the log entry.

Articles generally require the crew to obey the orders of the captain and other officers while underway; detail salaries, shares or other pay arrangements; set watch schedules in port and underway; require the captain to provide *liberty boats* to carry the crew to port (when time permits) at stops where the ship will not be docking, and require the captain to log matters of discipline, and any complaints brought to him by the crew, for review by the Imperial representative at the next Imperial port of call.

TAS Form 1 (*Ship's Articles,* p. 71) is the standard form used within the Imperium.

Logbook

The ship's logbook is a permanent record of all significant activities and events that take place on board or affect the ship directly in some way. Starship logs are maintained electronically. The *rough log* is recorded in read/write format. The ship's master (or first officer, if the captain so designates) keeps running notes on events as they occur. These can be adjusted or edited before being included in the *smooth* or *official log,* which is stored in a non-volatile "write once/read many" (WORM) format. The captain approves all entries in the official log, and may wish to sign or initial them to prevent unauthorized entries. Larger ships may keep separate engineering or medical logs, but only the most significant entries in these will be transferred to the official log.

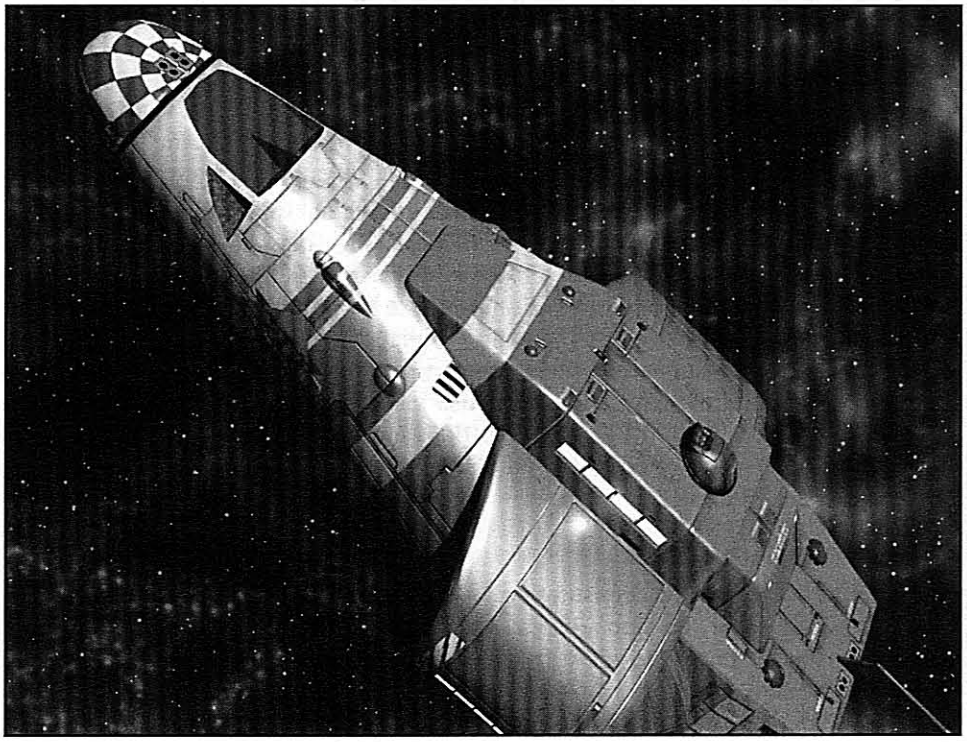
Contrary to the opinion of some, the logbook is for the protection – not the bedevilment – of captain and crew. By logging everyday activities, the log demonstrates their concern for the safe operation of the ship. Unusual events, accidents, emergencies and deviations are recorded in enough detail to establish the facts, and can offer proof of the ship's innocence or substantiate the ship's position in questionable circumstances.

Manifests

A *manifest* is a list of goods or passengers carried aboard a starship.

Cargo Manifests

A cargo manifest serves as a receipt for goods delivered, a definition of the contract for shipping the goods, and a transfer of title to a specific shipment to the captain for the purpose of transporting it from origin to destination. It can be requested



by customs officials (to determine dutiable goods) and used as a basis for inspections. Captains must realize that if they accept an illicit cargo (e.g., nuclear weapons or illegal drugs), they are responsible for it as if they were the original owner.

Cargo manifests can be recorded on TAS Form 14 (p. 142) or by entering the following information into the ship's log for *each* cargo carried: lot number, lot size, origin, destination, terms of shipping, general contents and special handling.

Crew/Passenger Manifests

Crew/passenger manifests identify and account for all persons on board a ship. Crew manifests often include information on position, salary and shares of ownership, and can be attached to the ship's articles. They can be requested by immigration officials and used as a basis for inspections.

Crew/passenger manifests can be recorded on TAS Form 11 (p. 142 - the same form is used for both, with the appropriate word deleted) or by entering the following information into the ship's log for *each* person: full name, title, position/occupation, home world, salary and shares.

Flight Plans

A flight plan is a declaration of intent to pilot a vessel from one location to another. Flight plans let traffic control agencies program loads and sort out traffic conflicts, let ground controllers assign berths, let customs and other officials meet incoming ships with minimal delay, and let system defenses distinguish legitimate traffic from pirates or marauders. Flight plans also form the basis for search and rescue operations, as they can be used to determine when a ship is overdue and where to begin a search.

Although flight plans can be filed by submitting a form at the starport, most flight plans are simply text or voice messages sent in a prescribed format. TAS Form 12 (Flight Plan, p.142) is a convenient format for collecting and transmitting all required information:

1. Craft name, or the name of the lead craft, if more than one. This is also the callsign for the flight.
2. Registration number or mission designator.
3. Type of flight: **A**tmospheric, o**R**bital, **S**ystem, **I**nbound jump or **O**utbound jump.
4. Number of craft in flight.
5. Type of craft. For starships, give type classification code letters.
6. Hull class.
7. Port of origin and date and time of departure. Specify estimated or actual.
8. Acceleration or cruising velocity.
9. Route of flight. Omit if "direct" from origin to destination.
10. Port of destination and date and time of arrival (estimated).
11. Total time enroute (estimated).
12. Alternate destination (if any) and estimated time to alternate.
13. Remarks. Any comments that aren't covered elsewhere: request refuel, shuttle or lighter support; request special handling (remote control, sensor vectors); prior permission for restricted destinations; VIPs on board, etc.
14. Number of people on board.
15. Craft color and markings.
16. Number and type of lifeboats, rescue bubbles, etc., carried.
17. Name of ship's captain or pilot-in-command.

After a flight plan has been sent (and approved, if required), it must be opened (activated) by the ship's captain – usually on takeoff. Type I (inbound jump) flight plans are opened when they are transmitted, as soon as possible after breakout from jumpspace.

Once a vessel has arrived safely, it is the captain's responsibility to ensure that the flight plan is closed (canceled) with the proper authorities. Failure to do so can result in being fined the cost of unnecessary search and rescue operations.

Imperial Officials

The Imperium tries to ensure that it is represented on every member world and on many of the planets along its borders – client states, non-aligned worlds or members of other star-spanning governments. Imperial officials intervene only when necessary to protect Imperial interests or to prevent the locals from harming Imperial citizens (or vice versa).

Foreign Delegations: Other states will have their own Ambassadors and Consuls (see below) in ports inside the Imperial border, serving the same functions that the Imperial officials do for Imperial citizens. Small delegations may combine the functions of Ambassador and Consul, while large ones may have a separate Consul in every port.

Imperial Ambassador

The Ambassador is the chief Imperial diplomat and personal representative of the Emperor on a planet outside the Imperium. He is responsible for the whole spectrum of relations with the planet in question: political, military, economic and cultural. He is normally appointed to perform this role on one planet only, but in sparsely settled regions along the Imperial border, he may have informal supervision over several neighboring worlds that lack their own Ambassador. The Ambassador's residence and office, called the Embassy, enjoys the same extraterritoriality as an Imperial starport (p. GT64).

Ambassadors Extraordinary and Ministers Plenipotentiary

There are a very few Imperial Ambassadors, called *Ambassadors Extraordinary,* who perform the same duties as an Ambassador but who are not assigned to any specific planet. These powerful individuals, often high-ranking nobles as well, are the diplomatic troubleshooters of the Imperium. They are often found where serious problems are developing.

Equip one of these with an Imperial Warrant (pp. GT42-43) and he becomes a *Minister Plenipotentiary,* capable of making or breaking treaties and agreements, and declaring or ending wars, with the voice and authority of the Emperor himself.

Continued on next page . . .

Imperial Officials
[Continued]

Imperial Consul

Consuls are Imperial diplomats who rank below (and are subordinate to) Imperial Ambassadors. Consuls are appointed to planets outside the Imperium, and look after Imperial commercial interests. There is generally only one Consul per system, with offices at the main starport. There will usually be a Consul on every world within six parsecs of the Imperial border, even on worlds that do not rate their own Ambassador. In that case, the Consul assumes many of the responsibilities of an Ambassador (which he may be, in all but name).

The Consul may be assisted by Consular Agents (lower-ranking diplomats), who serve as his representative at other major ports in the system – particularly the main world highport (if present).

Imperial Legate

Legates combine the functions of Ambassadors and Consuls on Imperial member planets. On planets where the Imperium is the only government (occupied worlds, research stations, depots, scout outposts), the Legate may be called the *Governor* or *Viceroy* instead. How much power he actually wields varies with local circumstances: population, technology, relations with the Imperium, presence or absence of a titled Imperial noble, importance of the planet to Imperial trade or defense, etc.

Shipping Commissioner

The Shipping Commissioner is an Imperial bureaucrat who represents the Imperial Shipping Commission (ISC) on a planet. The ISC is a subdivision of the Ministry of Commerce; it monitors the customs duties and restrictions set by member planets, makes decisions about interference in interstellar trade, hazardous and contraband cargo, etc., then recommends action to the Ministry. The Commissioner collects shipping information, records registries and licenses, and acts as the crew's advocate in disputes over pay or conditions. This function is often only one of many performed by a single Imperial bureaucrat who has several other responsibilities.

Commercial Attaché

The Commercial Attaché is an embassy staffer who advises the Ambassador directly on commercial matters. Merchant characters will not normally have dealings with the attaché unless he is representing the Ambassador on some errand.

Getting Paid

In a universe where a determined crook can outrun the news of his misdeeds and instantaneous account verification is a thing of the past, just getting paid for services rendered can be a major hassle. There are three forms of payment generally used in the Imperium: *letters of credit, bank drafts* and good, old-fashioned *cash.*

Letters of Credit

A letter of credit is a document from one bank to another that guarantees the drafts (checks and other withdrawals) of a customer. It is literally money in the bank – but a different bank from where the funds will be drawn. With a letter of credit, a person can make withdrawals and write checks through any bank that will honor the letter. The honoring bank will later settle accounts with the bank that issued it. A letter of credit will state the amount of credit and the period of time for which the credit is available. After this period expires, the letter will not be honored.

A letter of credit will often state which other banks will honor it, by prearrangement between the banks. It will not always be honored automatically, however – it must sometimes be confirmed by communication between the two banks involved, and the holder of the letter will not be able to draw upon the funds until then.

Bank Drafts

A bank draft is an order from a client to the bank where his account is held to issue funds from that account to the whoever is named as the payee in the draft. A bank draft is, in essence, an interstellar check. Bank drafts are the most common form of payment for firms large enough to maintain a sizeable account on every world where they trade.

Cash

There are times when cold, hard (or folding) currency is the only way to go – not just for shady deals, but also for small contracts that can't justify banking fees, and for business done by small firms or individuals who don't have the accounts needed to support interstellar bank drafts or letters of credit. Cash transactions are also common in speculative trade. Interstellar trade is conducted in Imperial credits by default; conversion to and from local currency may cost a few percent at both ends.

Advertising and Advance Notice

Shipmasters, even on free traders, would greatly prefer to have their cargoes and passengers waiting for them when they arrive insystem – it saves considerable time, and time is money. They achieve this in part by announcing their schedule of port calls as far in advance as possible. Messages can be sent by Xboat or carried by ships headed in the right direction.

A simple announcement, posted to a projected port of origin's public bulletin board, costs Cr30 per port; this adds a +1 bonus per week posted when seeking cargo and passengers. For every ×10 spent on advertising (more or flashier announcements, hiring freelance agents), the ship receives an additional +1 per week: +2 for Cr300, +3 for Cr3,000, etc.

Of course, if the ship changes its route, all benefits are lost. A ship that routinely fails to make its announced schedule may gain an unfavorable reputation as unreliable. The captain must carefully judge how far ahead he can count on meeting his port calls.

Maintenance and Supplies

The Imperium requires that at least 50% of all maintenance (including annual maintenance) on Imperial registry shipping each year be performed by member planets. Not only does this provide a check on illegal modifications, but it also supports Imperial shipyard capacity. Any ship that receives maintenance outside the Imperium must report its nature and amount to the Imperial Legate (see sidebar) at the port of entry when arriving from foreign. Foreign maintenance (other than bona

fide emergency repairs) over 50% annually is subject to a fine equal to the amount in excess.

Structural HT

Ships in ***GURPS Traveller*** have a structural Health (HT) statistic to reflect their general condition and resistance to wear, fatigue and breakdowns. The formula for a ship's HT is:

HT = [75 × (internal spaces in dtons) / (loaded mass in stons)] + 5.

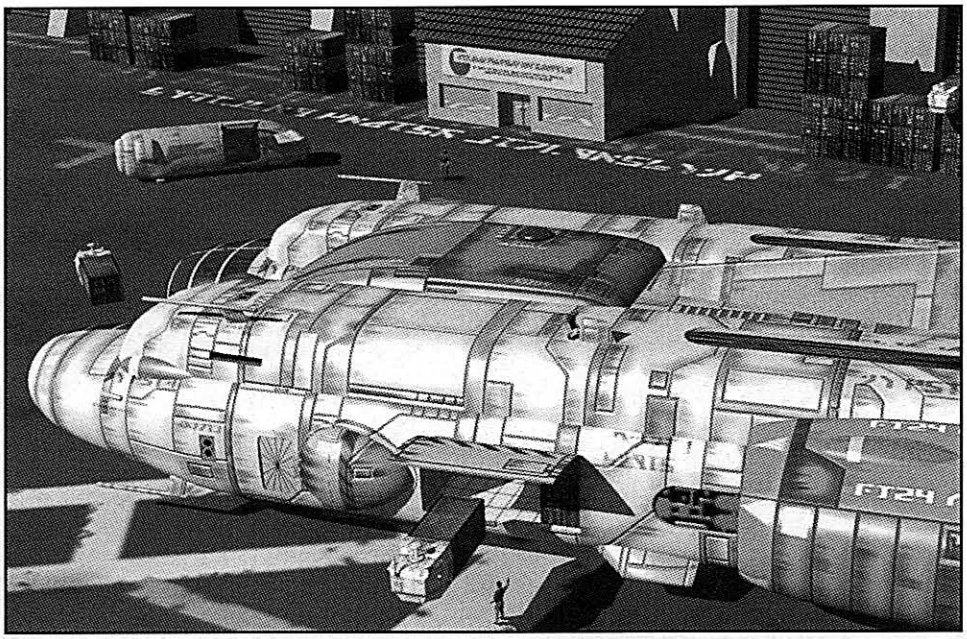
Round to the nearest whole number. Maximum HT is 12 or the ship's TL, whichever is greater.

Used ships may have reduced HT due to age and wear. If the purchase price was discounted to 50% or less, reduce HT by one; if it was 10% or less, reduce HT by two.

Routine Maintenance

Starships require daily maintenance. This requirement – expressed in man-hours – is given by:

Maintenance = 4.8 × (original purchase price in MCr) / (square root of actual purchase price in MCr).



Used ships (those bought at a discount) will thus have higher maintenance requirements, reflecting greater age and wear. This requirement is divided among all engineering department personnel (at 8-12 hours per person per day); additional man-hours can be provided by equipment operators (communications, sensors, weapons, etc.) or other crew members, if qualified.

Maintenance is cumulative over a voyage (port call to port call); maintenance shortfalls may be deferred until the ship is in port. For every 4 man-hours of maintenance not made up before the ship lifts, roll against the average Mechanic skill of the engineering department, at -4 for every missed check after the first. On a failure, roll against the ship's HT. Failure on the HT roll indicates a minor breakdown; critical failure indicates the loss of 1 point of HT and a *major* breakdown (GM's choice, or use the *Major Damage Table,* p. GT174). Repairs are conducted using the damage control rules on p. GT170; restoring a point of HT is equivalent to repairing major damage.

Directions and Numbering Aboard Ship

Finding your way around a ship can be confusing without a system, even on smaller vessels. On larger vessels it can often be a matter of life and death.

Directions

Directions aboard ship can be relative ("forward of bulkhead 30") or absolute ("the aft airlock"). The following conventions are in common use:

Drive Axis: Directions on board ship often refer to its *drive axis,* an imaginary line that runs from the center of thrust of the primary drives through the center of mass of the ship. Ships with more than one drive configuration may have both a primary and a secondary drive axis; if so, the primary drive axis is meant.

Deck Orientation: A ship is called a *belly-lander* if its main deck is parallel to its drive axis, a *tail-lander* if it is perpendicular. Belly-lander designs are common among freighters; this configuration maximizes the area for cargo hatches in proximity to a dock. It is also suited to lifting-body designs, owing to streamlining. Military and scientific vessels, and those designed purely for zero gravity, are often tail-landers (e.g., the laboratory ship, p. GT145; the mercenary cruiser, p. GT139).

Fore and Aft: Forward (fore) is in the direction of the drive axis (i.e., toward the nose); after (aft) is in the opposite direction.

Port and Starboard: The left and right sides of the ship, respectively – always determined while facing forward and with the belly directly below. The term "port" refers to the Solomani custom of placing the primary airlock (and hence access to the starport) on that side; Vilani-influenced designs show no particular preference.

Dorsal and Ventral: The top (back) and bottom (belly) of the ship, while facing forward and with port to the left. On tail-landers, "port" is arbitrarily defined by the location of the main airlock, then "starboard," "ventral" and "dorsal" are defined from there.

Outboard and Inboard: Outboard is away from the drive axis and toward the skin of the ship; inboard is toward the drive axis.

Continued on next page . . .

Directions and Numbering Aboard Ship
[Continued]

Numbering

Starships often have many identical components located throughout the hull; when it is important to distinguish them clearly, a standard numbering system is used. Odd numbers are used on the port side, even numbers on the starboard side. Numbering is consecutive, in order from inboard to outboard, fore to aft, dorsal to ventral. Items on the drive axis are numbered after any others of the same type.

For example, the cabins on a *Beowulf*-class free trader (pp. GT132-134) are numbered, starting on deck 1, from fore to aft on the deck plan: 1-3-5 on the left (port) side and 2-4-6 on the right (starboard). On deck 2, the captain's cabin on the port side is #7, while the double occupancy cabin is #8 and the remaining crew cabin #10 (the low berth compartment could be called #9). The two drive units are #1 on the left and #2 on the right; the dorsal turret is #1, the ventral turret #2.

Different ships may have slightly different conventions, and all components should be clearly labeled in any case to prevent confusion. When the chief engineer tells a crewman to "cut off power to the #3 drive, and hurry!", though, he should at least know where to look!

Maintenance and HT for Existing Ship Designs

Maintenance statistics for the starships and long-voyage non-starships described on pp. GT130-146 are given below. All of these classes normally have HT 12 (cases where HT would drop for heavy loads are noted).

Class	Maintenance (man-hr./day)
Interplanetary shuttle	14.5
Suleiman	24.7
Suleiman II	24.7
*Beowulf**	25.8
Animal	28.6
Empress Marava	29.5
Vanderbilt	32.8
Lady of Shallot	33.5
*Akkigish**	36.3
Kugashin	41.0
Dragon	52.7
Broadsword	71.7

* HT drops to 11 at maximum load.

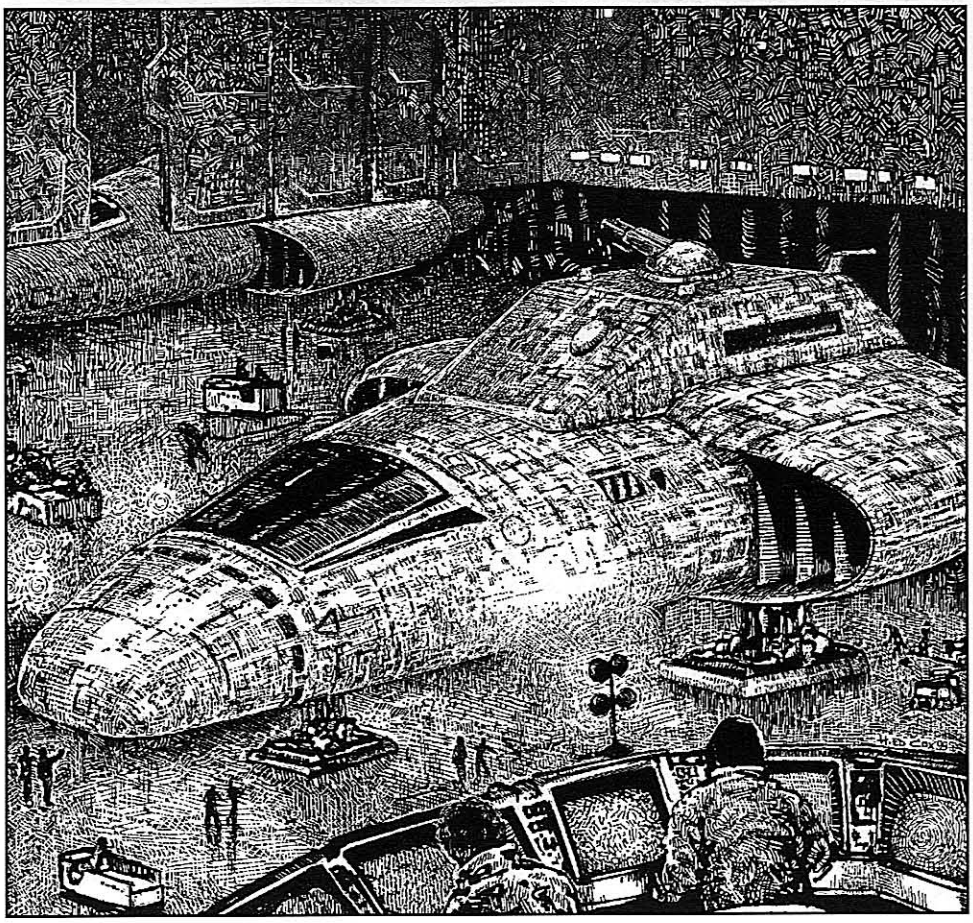
As well, roll against HT at the end of any battle in which the ship dodges in combat and whenever the ship exceeds its rated load capacity (don't forget to recalculate HT for the new loaded mass!) or otherwise stresses itself in ways it was not designed for. On a failure, apply damage as described above.

Annual Maintenance

A ship should be given a complete overhaul once per year to ensure that it is kept in good working order. Annual maintenance restores HT lost due to poor maintenance and removes any remaining faults (other than battle damage, permanent "bugs," etc.). Such maintenance costs 0.1% of the original purchase price of the ship and requires two weeks at a Class IV or V starport. The owners must make provisions for the payment of the maintenance fee when it comes due, and should take into consideration the revenue lost while the ship is laid up. Crew members serving on standing articles generally take their vacations at this time, but must still receive their salaries.

This maintenance can be conducted by the crew at a Class III or better starport in twice the normal time (four weeks), provided the required parts have already been purchased at a Class IV or V starport. These parts cost half as much as shipyard maintenance (purchase price/2000) and occupy a volume of (ship's hull class/200) dtons. There is no additional cost above crew salaries and berthing fees, but the crew obviously gets no vacation. At a Class I or II starport, this do-it-yourself maintenance takes eight weeks.

For 50% of the difference between the ship's original and actual purchase price, a ship can receive a complete rebuild from the hull up. This takes time in dock equal to (hull surface area in sf/4,000) weeks, minimum two weeks. Restore HT to its maximum value and recalculate maintenance requirements as if for a new ship (i.e., actual price equal to original price). Permanent "bugs" may be "bought off" with character points at this time.



Freight-Handling Equipment

The freight-handling rates on p. 55 assume a team of 2-12 stevedores per hold, equipped with freight-handling equipment appropriate to the TL and cargo: two forklifts, exoskeletons or workpods for general cargo; two grav lifters or two forklifts plus container racks for containerized cargo. Ships that carry these personnel and equipment (or equivalent) can load and unload themselves, and are called "self-sustaining." Other ships must either rent the equipment or pay port handling tariffs, depending on the terms of shipping (p. 54).

5-ston Forklift (TL8)

This is a standard heavy-duty forklift, designed to handle general cargo up to 10,000 lbs. (5 stons). It is small enough to work inside a ship's cargo hold or an orbital station. The operator's compartment is sealed and provides life support for six hours' work in hostile environments, but the entire vehicle has to be depressurized to open the hatch. The towing hitch is strong enough to pull 60 stons – equal to two fully loaded 4C (20-foot) containers or one 4A (40-foot) on a rack. The forklift rents for Cr11/hour without an operator.

- **Subassemblies:** Off-road wheels (4 wheels) with improved suspension and all-wheel steering options.
- **Propulsion:** 160 kW wheeled drivetrain with all-wheel drive (HP 19, 160 kW).
- **Instruments and Electronics:** Short-range communicator (10 miles).
- **Miscellaneous:** Forklift (10,000 lbs. capacity, HP 250, 10 kW). Towing hitch.
- **Controls:** Electronic. *Crew Station:* "Driver" (requires Driving (Construction Equipment)) runs all systems from roomy crew station.
- **Occupancy:** Short. *Crew:* Driver. *Environmental Systems:* Limited life system, ¼ man-day (six hours, HP 5, 0.5 kW).
- **Power:** 3,683 MWs rechargeable energy bank (6 hours, HP 25).
- **Access Space:** 5.4 cf. *Empty Space:* 140.3 cf.
- **Volumes:** Body 400 cf. Wheels 80 cf. *Areas:* Body 400 sf. Wheels 125 sf.
- **Structure:** Extra-heavy frame, very cheap materials.
- **Hit Points:** Body 2,400, each wheel 375.
- **Armor:** PD 3, DR 10 cheap metal.
- **Surface Features:** Sealed.
- **Statistics:** Weight 22,018 lbs. (11 stons). Maximum (external) payload 10,000 lbs. (5 stons). Loaded weight 32,018 lbs. (16 stons). Volume 480 cf. Size modifier +4. Price kCr130. HT 12. LC 5.
- **Performance (loaded):** Top speed 55 mph. gAccel 2 mph/s. gDecel 10 mph/s. gMR 1.25. gSR 5. Very high GP. Off-road speed 9 mph.
- **Performance (unloaded):** Top speed 70 mph. gAccel 3 mph/s. gDecel 10 mph/s. gMR 1.25. gSR 5. High GP. Off-road speed 18 mph.

Container Rack

A wheeled trailer that allows two 4C containers to be towed on and off ship. It adds 6″ to the height of the combined load and 5% to its volume. It rents for Cr12.8 per *day,* and is designed to be left attached and transported with the containers to their destination.

In the statistics below, the vehicle's "body" is actually two 4C containers; see p. 57 for PD, DR and other data. Container cost is *not* included!

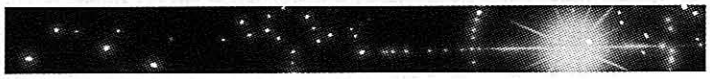
- **Subassemblies:** Small wheels (96 wheels).
- **Miscellaneous:** Towing pin.
- **Volumes:** Body 4,000 cf. Wheels 200 cf. *Areas:* Body 2,000 sf. Wheels 250 sf.
- **Structure:** Extra-heavy frame, very cheap materials.
- **Hit Points:** Body 1,500, each wheel 31.
- **Armor:** PD 3, DR 10 cheap metal, open frame.
- **Statistics:** Weight 4,400 lbs. (2.2 stons). Maximum payload 96,000 lbs. (48 stons). Loaded weight 100,400 lbs. (50.2 stons). Volume 4,200 cf. Size modifier +6. Price Cr12,825. HT 8. LC 5.
- **Performance (combined 5-ton forklift, container rack and two containers):** Top speed 25 mph. gAccel 1 mph/s. gDecel 10 mph/s. gMR 0.125. gSR 4. Extremely high GP. No off-road speed.

5-ston Exoskeleton (TL8)

An exoskeleton is a man-shaped robotic framework, controlled by an operator using kinesthetic feedback. This one is roughly twice man-sized (12 feet tall), and can lift and carry a total weight of 10,000 lbs. (5 stons). Its open frame construction provides no environmental protection for the operator (who rides completely within the torso), but there is ample room for him to wear a vacc suit and life-support system. The exoskeleton rents for Cr11/hour without an operator.

- **Controls:** Battlesuit crew station, pilot (w. 200 lbs. pilot weight); requires Exoskeleton skill.
- **Communicator:** Short-range radio (10 miles).
- **Arm Motors:** Two ST 250 arm motors with cheap and bad grip options (each HP 10, 1.25 kW).
- **Drivetrain:** Leg drivetrain with two legs and 7.5 kW motive power (each HP 13, 3.75 kW).
- **Accessories:** Two spotlights, siren, cutting torch, fire extinguisher.
- **Power:** Energy bank with two rE cells (each HP 2) stores 360 MWs. Endurance 10 hours.
- **Subassemblies:** Left and right arms, left and right legs.
- **Arm Design:** Left arm houses arm motor, fire extinguisher and 3.1 cf empty space; right arm houses arm motor, cutting torch, and 3.26 cf empty space.
- **Body Design:** Body houses battlesuit system, energy bank, spotlights, siren and 13 cf empty space (including 40 lbs. and 0.8 cf for pilot's vacc suit and life-support system).

- **Leg Design:** Each leg houses a leg motor and 2.35 cf empty space.
- **Surface Area:** Arms and legs 19 sf each; body 50 sf; total surface area 126 sf.
- **Structure:** Extra-heavy, cheap.
- **Hit Points:** Arms 228 each, body 300, legs 114 each.
- **Armor:** PD 3, DR 15 metal, open frame.
- **Statistics:** 2,500 lbs. (1.25 ston) design weight, including pilot. 12,500 lbs. (6.25 ston) loaded weight. Volume 40 cf (12' tall). Size Modifier +2. Price kCr134. Body ST 500, arm ST 250, DX equals pilot's (-4 for fine manipulation), HT 12 (10 at max. load)/300. Reach 2. Speed 4 (loaded), 10 (unloaded). Cannot float. LC 4.



48-ston Grav Lifter (TL8)

This is a contragravity lifter attached to a container grapple. It expands to accommodate any standard cargo container, and is sized to fit through standard cargo hatches with an attached container. The operator uses a radio link or remote terminal on a 10-yard fiber-optic cable to move the lifter at a walking pace. It rents for Cr60/hour without an operator.

- **Propulsion and Aerostatic Lift:** Contragravity lifters rated at 120,000 lbs. (HP 12, 120 kW). Four 3,000-lb. reactionless thrusters with vectored thrust option (each HP 100, 1,500 kW).
- **Instruments and Electronics:** Short-range communicator (10 miles). Cable jack. Remote-control unit (separate): Small computer dedicated to Datalink, short-range communicator, cable jack.
- **Miscellaneous:** External cradle, 96,000 lbs. capacity (HP 250). Towing pin with explosive bolts.
- **Controls:** Electronic (requires Piloting (Contragrav)).
- **Power:** 22,032 MWs rechargeable energy bank (1 hour, HP 100).
- **Volume:** Body 425 cf. *Area:* Body 340 sf (using "exact" option).
- **Structure:** Extra-heavy frame, expensive materials.
- **Hit Points:** Body 2,040.
- **Armor:** PD 4, DR 60 advanced metal, open frame.
- **Statistics:** Weight 24,020 lbs. (12 stons). Maximum (external) payload 96,000 lbs. (48 stons). Loaded weight 120,020 lbs. (60 stons). Volume (with 4A container) 4,425 cf. Size modifier +6 (loaded), +4 (unloaded). Price KCr710. HT 8. LC 5.
- **Performance (loaded):** Static lift 120,020 lbs. Stall speed 0; can fly. Aerial motive thrust 11,980 lbs. Aerodynamic drag 2,140. Top speed 205 mph (restricted to 10 mph by operator). aAccel 2 mph/s. aMR 1.5. aSR 5. aDecel 6 mph/s.
- **Performance (unloaded):** Static lift 120,000 lbs. Stall speed 0; can fly. Aerial motive thrust 12,000 lbs. Aerodynamic drag 340. Top speed 515 mph (restricted to 10 mph by operator). aAccel 10 mph/s. aMR 2.5. aSR 4. aDecel 10 mph/s.

5-ston Workpod (TL8)

For general work around a starport (especially orbital), port personnel often use a workpod. Designed as a one-man vehicular alternative to working in vacc suits, the workpod provides a sealed environment for six hours. Work is accomplished using two robotic arms equipped with modular sockets to accommodate a variety of tools. The workpod can also be hitched to a 48-ston grav lifter, allowing the combined vehicle to be driven like a grav truck. The workpod rents for Cr33/hour.

- **Subassemblies:** Two arms (left and right).
- **Body Features:** Good streamlining.
- **Propulsion and Aerostatic Lift:** Contragravity lifters rated at 15,000 lbs. (HP 5, 15 kW). Two 750-lb. reactionless thrusters with vectored thrust option (each HP 30, 375 kW).
- **Instruments and Electronics:** Navigation instruments. GPS. Short-range communicator (10 miles). Four digital cameras (back, underside, each arm). Small computer with terminal and cable jack.
- **Miscellaneous:** Towing hitch. Two modular sockets (each 12 lbs./0.24 cf, each arm). Two ST 250 arm motors with cheap and bad grip options (each HP 10, 1.25 kW, each arm).
- **Controls:** Computerized. *Crew Station:* "Driver" (requires Piloting (Contragrav)) runs all systems from roomy crew station.
- **Occupancy:** Short. *Crew:* Driver. *Environmental Systems:* Limited life system, ¼ man-day (six hours, HP 5, 0.5 kW).
- **Power:** 16,589 MWs rechargeable energy bank (six hours, HP 75).
- **Access Space:** 22.5 cf. *Cargo Space:* 0.45 cf, in body.
- **Volume:** Body 150.66 cf. Arms 2.3 cf each. *Area:* Body 175 sf. Arms 11 sf each.
- **Structure:** Extra-heavy frame, expensive materials.
- **Hit Points:** Body 1,050, arms 132 each.
- **Armor:** PD3, DR10 advanced metal.
- **Surface Features:** Sealed.
- **Statistics:** Weight 4,950 lbs. (2.5 stons). Maximum (external) payload 10,000 lbs. (5 stons). Loaded weight 14,950 lbs. (7.5 stons). Volume 155 cf. Size modifier +3. Price kCr397. HT 12. LC 5.
- **Performance (loaded):** Static lift 15,000 lbs. Stall speed 0; can fly. Aerial motive thrust 1,500 lbs. Aerodynamic drag 480. Top speed 155 mph. aAccel 2 mph/s. aMR 3. aSR 4. aDecel 12 mph/s.
- **Performance (unloaded):** Static lift 15,000 lbs. Stall speed 0; can fly. Aerial motive thrust 1,500 lbs. Aerodynamic drag 80. Top speed 375 mph. aAccel 6 mph/s. aMR 3. aSR 4. aDecel 12 mph/s.
- **Performance (workpod towing grav lifter with 4A container):** Static lift 135,000 lbs. Stall speed 0, can fly. Aerial motive thrust 13,500 lbs. Aerodynamic drag 2,220. Top speed 215 mph. aAccel 2 mph/s. aMR 0.25. aSR 4. aDecel 6 mph/s.

CHAPTER FIVE

Characters

When ships to sail the void between the stars have been invented, there will also be men who come forward to sail those ships.

– Johannes Kepler,
Somnium, -2887 (AD 1634)

CHARACTERS FOR MERCHANT CAMPAIGNS

SHIPBOARD ORGANIZATION

Like the crew of a naval vessel, the crew of a large merchant ship is divided into departments by function to ensure smooth operation. Different departments require different skills; these are tied to the character templates on pp. GT87-105 and on pp. 85-97.

Deck Department

Responsible for the operation of the starship, including piloting, astrogation, communications and sensors, the deck department is headed by the first officer (and, in a sense, the captain). Members of this department are usually merchants (p. GT97) specializing in shiphandling skills.

Engine Department

The engine department is responsible for the maintenance of the ship and the operation of its drives. Its members are usually engineers (p. GT91) or mechanics/technicians (p. GT95), headed by the chief engineer (who may be more experienced and only slightly less powerful than the captain himself).

Purser's Department

The purser's department is responsible for obtaining, loading, caring for and discharging cargo and passengers, as well as maintaining accounts. Its members are usually merchants (p. GT97) or medical technicians (p. GT96). The ship's surgeon on a larger vessel will be a medical doctor (p. GT96), and may even be in charge of a separate medical department. Organization and titles in this department vary more than in the others. The department head may be called "chief purser," "chief steward" or "cargomaster."

Other Departments

Other departments are possible, and will be organized along similar lines. An exploratory trade vessel could have a science, survey or contact department. A ship with a number of gunnery personnel (usually former Navy or Marine gunners) on board might create a separate department for them under a chief gunner. Since these crewmen have little to do in jump-space, they often double as stewards or serve as guards and shipboard police. Ships with only a few gunners may include them in the deck department instead.

Character Points and Ships

Possession of a starship is an advantage, but what kind and how much does it cost? Certainly, a Multimillionaire (p. CI27) can afford simply to buy a personal yacht, but not all campaigns will focus on the exploits of the fabulously wealthy. As written, *Trading Points for Equipment* (p. CI17) and *Temporary Wealth* (p. CI18) can generate at most 20 times campaign starting wealth (×5 in cash for 10 points of Temporary Wealth, plus another ×15 in equipment for 30 points), which isn't even enough to make a down payment on a used free trader.

The Ship Patron (pp. GT84-85, p. 100) and Ship Owner (p. 101) advantages offer alternative means of acquiring a starship. The first is used when a Patron owns the ship and lets the crew use it; the second is used when the crew puts up some of the funds to purchase the ship and borrows the rest. The point cost of either advantage may be reduced by Duties, Sense of Duty or other disadvantages, at the GM's discretion. The GM has three options when dealing with these point costs for PCs:

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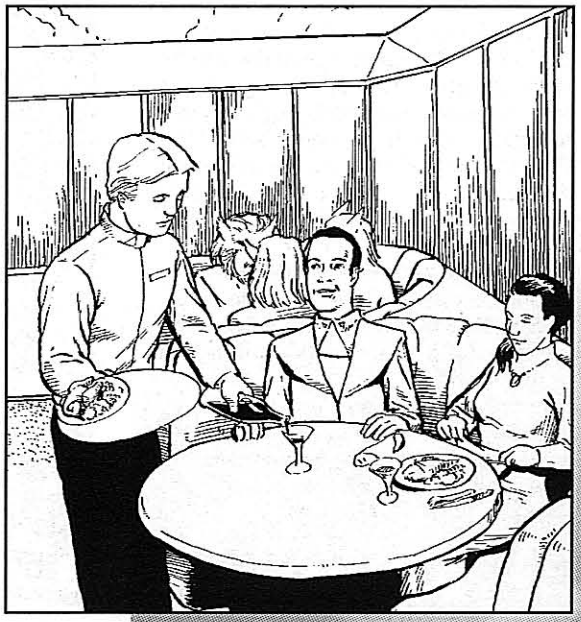

Character Points and Ships

[Continued]

1. Charge the listed point cost whether the ship is obtained during character creation or during the course of the campaign. Anyone who acquires a ship in play goes into "point debt" and must pay off the point cost with earned points. To keep character development from stopping completely, the GM may elect to specify that only a fraction of earned points (e.g., 50%) must be allocated to pay off the point cost.

2. Charge the listed point cost only if the ship is obtained during character creation (i.e., by someone who has a ship as part of his background). If a character enters play without a ship and acquires one later, there is no point cost; this also applies if he loses a ship and obtains another – although any points originally spent are gone. This option regards the time and effort (and roleplaying!) required to obtain a ship as payment enough. The GM may want to increase the point total of anyone who obtains a ship this way; this will make him more valuable as an Ally, Patron, etc.

3. Charge *no* points for the ship. If a ship is necessary for the campaign, if all of the PCs will benefit equally from having it, and if most rival NPCs will have a ship of their own (or equivalent resources), the GM may decide to simply give the party a vessel of his choosing. To offset this advantage, he may wish to increase the relative strength of opponents who lack ships of their own.

Free Traders

Ships classified as *free traders* (generally those of hull class 400 or less) are too small to have separate departments. Instead, a free trader crew functions as a single department which covers all aspects of operation and maintenance. Due to the versatility required to run a small ship like this, free trader crewmen have their own career template (pp. 86-88).

Shore Organizations

Any merchant line consisting of more than one or two ships will have an extensive support network on the planets it frequents. These organizations serve to expedite freight handling by arranging cargoes well in advance of the arrival of the vessel that will carry them, and provide an interface between ships, their crews and the planets they visit.

Some versions of these organizations may exist as independent operations, offering their services on contract to a number of small merchant vessels or fledgling lines. This is also common at small or infrequently visited ports, even for the larger lines; it saves having to maintain a permanent establishment for only one or two ships a month.

Administrative Department

The administrative department represents a large shipping company's interests on a particular planet. It takes care of ship support – including pay, maintenance, fuel, banking, medical care and mail. Members of this department are usually managers (p. GT94), although attorneys (p. GT87) are also prevalent.

Sales Department

The sales department enhances profits for a large shipping company by obtaining and disposing of cargoes. Its goals are for every ship to have a full load of cargo and passengers waiting when it jumps insystem, and for all cargo discharged to sell at a handsome profit. This department is responsible for advertising, and for dealing with freight and passenger agents. Members of the sales department of a large company are usually brokers (p. 92) or other merchant (p. GT97) variants.

Rank, Position, Pay, and Benefits

Rank has its privileges.
– Anonymous

Merchant Rank

Merchant ships and companies have a hierarchy which simplifies routine decision-making and enables them to function smoothly in a crisis. Each crewman's position within that structure is reflected by his Merchant Rank (see tables below). Shore organizations use Administrative Rank (p. CI19) in much the same way. Small vessels (especially nonstarships, but *not* free traders) may have an abbreviated hierarchy, depending on the size of the crew: Captain (Rank 2), Officers (Rank 1) and Crew (Rank 0), or just Captain/Command Pilot (Rank 1) and Crew (Rank 0). See also *Courtesy Rank* (p. 100).

Rank	Shipboard Department: Deck	Engine	Purser's
0	Deckhand	Drive Hand	Steward/Cook
1	4th Officer	3rd Asst. Engineer	Junior Purser
2	3rd Officer	2nd Asst. Engineer	Asst. Purser/Medic
3	2nd Officer	1st Asst. Engineer	Purser/Medic
4	1st Officer	Chief Engineer	Chief Purser
5	Captain		
6	Line Commodore		

Rank	Free Trader	Shore Department: Administration	Sales
0	Deckhand	Clerk	Clerk
1	4th Officer (Steward)	Asst. Manager	Junior Broker
2	3rd Officer (Sensor/Comm)	Manager	Asst. Broker
3	2nd Officer (Engineer)	Agent	Broker
4	1st Officer (Navigator)	Port Captain	Senior Broker*
5	Captain (Pilot)	Owner	Owner

* Senior brokers are sometimes called *factors.*

Pay and Benefits

Pay: As shown on the Job Table on p. GT106, ordinary crewmen receive (Cr80 × best appropriate skill) + (Cr200 × Rank) per month, or about Cr1,000 on average. Gunners often have the highest relevant skill levels among the crew, and are thus the best paid. Officers receive (Cr100 × best appropriate skill) + (Cr200 × Rank) per month, or from Cr1,500 to Cr2,000 on average (Cr2,500 for captains). Bonuses may be offered to those who can fill multiple requirements; total salary usually amounts to 75% of the combined salary for all jobs covered.

Shares: Crewmen may agree to work for a share of the profits of a ship or particular voyage in lieu of part or all of their regular salary. This is common among free traders not only because of the irregular nature of their cash flow, but also because it acts as a performance incentive. Any profit-sharing arrangement should be carefully specified in the ship's articles (p. 71) when the crew signs on, to preclude arguments about it later.

Shares are usually drawn on a ship's net profit (after bank payments, government subsidies, expenses and reasonable savings for future needs and reinvestment) on a monthly basis. The ship's owners automatically receive an amount equal to 50% of the total, the captain receives 10% and the remainder is divided among the crew according to the number of shares held.

Non-Merchant Characters in a Mercantile Campaign

There are, of course, countless possible backgrounds for characters in a commerce-oriented campaign. Many of these can be created directly from the character templates on pp. GT87-105.

Attorneys, Bureaucrats, and Managers

Members of Starport Authority Administration Branch (port masters or dock masters) are usually bureaucrats (p. GT89) or managers (p. GT94), as are low-ranking Imperial officials and the worst members of Customs/Security Branch; attorneys (p. GT87) are possible for any of these as well. All three character types make good "generic passengers."

Belters

A belter (p. GT88) is a businessman – albeit one who is in primary production rather than the service sector. Some belters are prospectors, seeking rich deposits for others to develop, and sell information. Others are miners, working a strike on their own and selling the ore as best they can.

Computer Technicians, Engineers, and Mechanics/Technicians

Ship's engineers are, not surprisingly, engineers (p. GT91); their assistants may be engineers or mechanics/technicians (p. GT95), as are communications and sensor operators (on ships large enough to have them). Most members of the Starport Authority Services Branch (who are often retired from shipboard service) are members of these professions as well, but computer technicians (p. GT90) are also common.

Diplomats

High-ranking Imperial officials – from the Commercial Attaché to the Ambassador himself – are career diplomats (p. GT91) from the Imperial Diplomatic Corps. Such characters generally have Status (1-4 levels) commensurate with the position itself and the prestige of the world to which they are assigned.

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Non-Merchant Characters in a Mercantile Campaign
[Continued]

Entertainers

Entertainers (p. GT92) can be found everywhere, from the sleaziest dives in startown to the luxury salons on the finest passenger liners. Most will focus on live performances in confined spaces rather than recorded or graphic arts. These may still be unusual: stage magicians (Sleight of Hand), hypnotists (Hypnotism), chefs (Cooking) and stand-up comics (Bard) are popular on liners. Entertainers also make great stewards, traveling companions for the idle rich – even cruise directors, on larger vessels.

Law Enforcers

Members of the Starport Authority Customs/Security Branch often start out as law enforcers (p. GT94). Some planetary customs offices are organized into customs services (like the U.S. Coast Guard), complete with military-style ranks and hierarchy. Members of such services are still considered civilians, like firefighters or police, but may be integrated into the planetary navy in wartime. Many shipping lines have their own internal security force, for anti-hijacking duty.

Medical Doctors and Medical Technicians

Every ship requires a CMT (pp. 84-85), who is usually a medical technician (p. GT96) on small ships. Larger vessels, especially those catering to large numbers of high or luxury passengers, will have a ship's surgeon (a medical doctor, p. GT96) aboard for emergencies and rich hypochondriacs. Starport Authority quarantine inspectors are also medical personnel.

Wealthy Traveler/ Remittance Man

The archetypal high passengers, although Travellers' Aid Society members traveling on their dividend vouchers fly middle passage. The template appears on p. GT100.

Others

Most starport personnel, if they have no other identifying skills, can be created using the rogue (p. GT98) or farmer (p. GT92) template. These folks have "Struggling" or "Poor" jobs as stevedores, panhandlers, pad chiefs (the guys with the Day-Glo sticks), fuel handlers, religious zealots and street sweepers – minimal skills, and fewer prospects.

Benefits: Members of a starship crew are entitled to free room and board for as long as they remain with the ship, except during its two-week annual maintenance period. They also receive free medical care; if their requirements exceed the ship's capabilities, the port captain (or the ship's captain himself, on small lines or in unfamiliar ports) is responsible for procuring and paying for appropriate care on planet.

Ship's articles will usually specify how much and how often port liberty is granted, and require the captain to provide transportation to and from shore facilities. Crew members are also entitled to draw advances on their pay (in local or Imperial currency) to make purchases, and to incidental storage of personal items in unused cargo space. Some ship's articles specifically allocate cargo space for individual speculation as a form of shares.

Starship crewmen often join merchant spacers' guilds or brotherhoods, which can provide a variety of services (treated as Claim to Hospitality, Contacts or Patron, as appropriate) in return for a monthly fee (Cr100 or so). The most common benefit is a retirement annuity, usually equal to 50% of the crewman's highest base pay, payable each year after he completes a full career in the guild (typically 20 years or more, although standards for computing length of service vary).

Repatriation Bond: A repatriation bond (similar to that issued as part of a mercenary contract) guarantees low passage for a crewman from any port along the ship's route to the planet where he signed on, and is usually specified in the ship's articles as a benefit. This ensures that a someone who is discharged or who misses his ship (due to medical care, for example) can return home. The cost of passage is paid by the shipping company into an escrow account at the start of the voyage; any interest or unused bonds accrue to the company at the end of the voyage.

Certification – Licenses and Certificates

A crew that owns its own ship can basically do as it pleases – and suffer any consequences, naturally. When the ship or its cargo belongs to somebody else, though, having the proper qualifications for the job becomes important. *Licenses* and *certificates* are guarantees that a crewman has the right skills for a specific job. They are also useful for converting military qualifications into their civilian equivalents.

How meaningful a certification is depends on the level of organization of the society that issued it. A CR 0 anarchy won't even have a standard, while on a CR 1 world, just about anyone who bothers to apply will qualify. An the other end of the spectrum, obtaining a broker's permit on a CR 6 planet might require a letter of introduction or a diploma from an accredited school of business (one that the bureaucrat in question recognizes, like the Lunion School of Economics in the Spinward Marches), and perhaps Area Knowledge or a Contact, all in addition to Merchant skill *and* a good reaction roll.

The Travellers' Aid Society issues most of the certifications associated with the mercantile world; *Medical Doctor* (p. 85) is a notable exception. Note that certifications are the *minimum qualifications* required to hold a particular position; for the full picture, see the career templates on pp. GT87-105.

In game terms, licenses and certificates are considered 0-point advantages with certain special effects. Applying for a new certification can be an opportunity for roleplaying. Certifications also let the GM describe an NPC's qualifications concretely without resorting to "rules speak" ("She's got an Unlimited Mate's License; what else do you want to know?").

Requirements for certifications fall into three categories: *prerequisites, experience* and *skills.* Prerequisites and experience cannot be waived, although it may be possible to forge the required documentation; skill requirements are considered met by anyone who can pass a test.

Prerequisites

Prerequisites are lower-level certifications that must be held before a higher class of certification can be awarded.

Experience

Experience requirements represent time on the job, and are usually expressed in character points applied to specific skills. If there are no experience requirements, a character can acquire multiple levels of certification at any time. If experience is required, he must either meet the requirements during character creation (reflecting experience acquired before the start of the campaign) and start with the certification, or obtain the requisite experience in play.

Skills

Skill requirements represent demonstrated competence, which can only be measured by a test of some sort. If the candidate has *all* of the requisite skill levels, he passes automatically.

If the character does not possess a necessary skill level but wishes to attempt the examination (relying on a lower skill level or even a default), proceed as follows: Roll a Quick Contest of Skill between the candidate and the exam, using the required skill level as the effective skill of the exam. If the applicant wins or ties, he passes the exam. If he loses, he fails and cannot take the exam again until either six months have passed or he has acquired additional expertise and a fresh perspective through study or adventuring.

For certifications with more than one skill requirement, all requirements must be met – either by having the requisite skill level or by winning a Quick Contest – before certification will be awarded. It is up to the GM to decide whether those who fail a portion of an exam need only retake that portion or the entire exam.

A quicker method (useful for certifications with many skill requirements, where multiple Quick Contests would be tedious) is to subtract the total of *all* required skill levels from the character's total levels in those skills. Apply the difference as a modifier to a single IQ roll (representing the candidate's native knowledge and test-taking ability). In this case, the candidate receives the certification if the IQ roll succeeds. This "all or nothing" method allows high skill in one area to compensate for low skill in another; it's up to the GM whether this is acceptable.

Example: LCdr Matrise, Imperial Navy (retired) has Astrogation-12, Electronics Operation (Comm)-12, Electronics Operation (Sensors)-12, Piloting-14, Shipbuilding (Starship)-12, Shiphandling-12 and Shipmaster-12. She wants to apply for her civilian Unlimited Mate's License. Checking the requirements, she sees that everything is in order except for skill in Freight Handling – not something that a line officer usually needs to worry about, but necessary on a merchant ship.

The required skill level is 12; Ms. Matrise has a default of 10, thanks to her Jack-of-All-Trades advantage. She rolls a 9; the GM rolls a 12. Ms. Matrise wins by 1 and is awarded her Unlimited Mate's License. She has much to learn before applying for her Master's, though, and resolves to study cargo-loading techniques. Alternatively, the GM could have allowed her to roll against IQ+2 (+2 for Piloting, +2 for Shipbuilding, -2 for Freight Handling).

Standard Licenses and Certificates

In ***GURPS Traveller,*** the terms "license" and "certificate" are mostly interchangeable.

Operator's Certificates

There are as many operator's certificates are there are types of equipment to operate. To be certified as an operator of a particular type of equipment, a character must have the appropriate "operation skill" at a minimum level of 12, or pass an exam at that level. Typical skills include Computer Operation, Driving, Electronics Operation, Gunner, Mechanic and Piloting.

Limited Mate's License (hull class less than 1,000)

Prerequisites: Communications Operator's Certificate, Sensor Operator's Certificate. *Skills:* Astrogation-12, Freight Handling-12, Piloting (Spacecraft)-12, Shipbuilding (Starship)-10, Shipmaster-12.

Sample Character: Corporate Lawyer

The notion of a Vargr as a corporate lawyer may seem a little unusual at first glance, and while they are rare, they do exist. Their chief advantage in negotiations is that humans tend to underestimate them.

Liksuksueng *(100 pts.)*

Vargr male; age 30; 5′7″, 140 lbs.; light-brown fur, brown eyes.

ST: 10 [10], **DX:** 11 [0], **IQ:** 14 [45], **HT:** 10/9 [0]

Basic Speed 5.25, Move 10, Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Acute Taste/Smell +3 [0]; Acute Vision +1 [0]; Claws [0]; Comfortable Wealth [10]; Enhanced Move 1 [0]; Fur (DR 1) [0]; Language Talent +2 [4]; Not Curious [5]; Reputation +2 (Reliable, 10 or less) [5]; Teeth [0]; Vargr [0]; Voice [10].

Disadvantages: Bully [-10]; Cannot Kick [0]; Compulsive Carousing [-5]; Easy to Read [0]; Gregarious [-5]; Honesty [-10]; Proud [0]; Reduced Fatigue -1 [0]; Reduced Hit Points -1 [0]; Reputation -2 (Vargr) [0]; Sense of Duty (Clients) [-5]; Stubbornness [-5].

Quirks: Impeccable Dresser; "Ladies Man"; Nosy; Talks in sports metaphors; Undiscriminating. [-5]

Skills: Accounting-13 [2]; Administration-13 [1]; Bard-17* [4]; Detect Lies-13 [2]; Diplomacy-17* [6]; Finance-13 [2]; Free Fall-12 [4]; Intimidation-15 [4]; Law (Contract)-21/15 [8]; Psychology-13 [2]; Research-15 [4]; Savoir-Faire-16* [1]; Sex Appeal-12* [2]; Vacc Suit-13 [1]; Writing-13 [1]; Xenology-15 [6].

Languages**: Anglic (native)-16 [0]; Gvegh (Vargr)-15 [1]; Icelandic (Sword Worlds)-15 [1]; Te-zlodh (Darrian)-15 [1]; Trokh (Aslan)-15 [1]; Vilani-15 [1]; Zhodani-15 [1].

* Includes +2 for Voice.
** Include +2 for Language Talent.

Liksuksueng was a merchant brat who grew up in and around starports. He was always good with languages, and spent his free time talking to and hanging out with everyone he met – especially aliens – learning about their different ways of thinking. As he grew up, he realized that there was a need for someone to act as a translator and go-between, smoothing over the differences.

Today, Liksuksueng belongs to a freelance team of crack corporate negotiators, specializing in inter-species contractual agreements. Although he is still very junior, he has both the knack of seeing the common ground between the parties at a negotiation and the drive to make them see this for themselves.

Sample Character: Skip Tracer

Irena Khemiris *(100 pts.)*

Human (mixed) female; age 26; 5′8″, 130 lbs.; brown skin, curly brown hair, gray eyes.

ST: 11 [10], **DX:** 12 [20], **IQ:** 12 [20], **HT:** 11 [10]

Basic Speed 5.75, Move 5, Dodge 6.
Thrust 1d-1, Swing 1d+1.

Advantages: Alertness +1 [5]; Attractive [5]; Combat Reflexes [15]; Legal Enforcement Powers (Title-holder's employee) [5]; Single-Minded [5].

Disadvantages: Bad Temper [-10]; Callous [-6]; Code of Honor (Repo man's) [-5]; Obsession (Become a ship owner) [-10]; Reputation -3 (Starport personnel, 10 or less) [-4]; Stubbornness [-5].

Quirks: Always talking about starships; Careful; Dreamer; Hates seafood; Collects exotic jewelry. [-5]

Skills: Administration-12 [2]; Area Knowledge (District 268)-15 [6]; Astrogation-11 [1]; Brawling-14 [4]; Carousing-12 [4]; Electronics Operation (Security Systems)-13 [4]; Fast-Draw (Shotgun)-14* [2]; Fast-Talk-13 [4]; Free Fall-12 [2]; Guns (Shotgun)-15** [2]; Holdout-12 [2]; Interrogation-12 [2]; Law-10 [1]; Piloting (Spacecraft)-12 [2]; Sex Appeal-11 [2]; Shadowing-12 [2]; Streetwise-13 [4]; Vacc Suit-12 [2]; Tactics-11 [2].

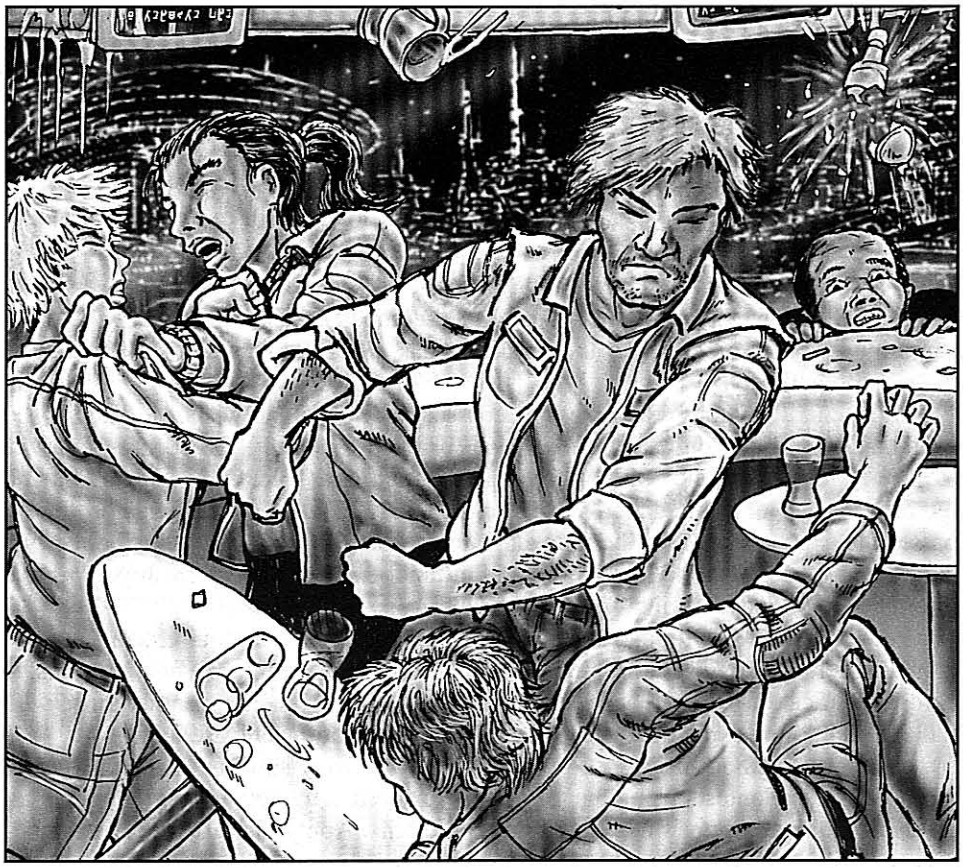
Languages: Anglic (native)-12 [0].

Licenses and Certificates: Concealed-Carry Permit; Pilot's License (spacecraft rating).

* Includes +1 for Combat Reflexes.
** Includes +2 for IQ.

There is nothing Irena wants more than her own starship. She doesn't want any half-measures or mortgages, though – it's all or nothing. She has made a deal with Hortalez et Cie of Mertactor: she repossesses ships for them on salary, and they put the finder's fees in an escrow account. When the account gets large enough, Hortalez uses it to buy Irena a ship, free and clear. She has amassed quite an impressive balance so far, albeit at the expense of irking just about every port master's office in the subsector with her demands at one time or another.

Irena's fixation on her own ship leads her to take chances that others might not, including a string of "black-listed" skips (those where the perpetrators have killed someone along the way). She uses her social skills to get on board a ship in port, then relies on her combat skills (and the sawed-off shotgun under her long duster coat) to hold the crew at bay until the authorities arrive.



Unlimited Mate's License

Prerequisites: Communications Operator's Certificate, Sensor Operator's Certificate. *Skills:* Astrogation-12, Freight Handling-12, Piloting (Spacecraft)-12, Shipbuilding (Starship)-10, Shiphandling-12, Shipmaster-12.

Limited Master's License* (hull class less than 1,000)

Prerequisite: Limited Mate's License. *Experience:* A net 8 points in Administration, Astrogation, Law, Piloting or Shipmaster. *Skills:* Leadership-12, Tactics-12.

Unlimited Master's License*

Prerequisite: Unlimited Mate's License. *Experience:* A net 8 points in Administration, Astrogation, Law, Piloting, Shiphandling or Shipmaster. *Skills:* Leadership-12, Tactics-12.

* Due to the responsibilities associated with captaining a starship, no one with a debilitating psychological disadvantage (Addiction in particular) is likely to hold a Master's License unless his problem is also a Secret. As always, the GM's judgement is final.

Assistant Engineer's License

Skills: Any *two* of Mechanic (Jump Drive, Maneuver Drive, Power Plant or Starship)-12, plus Shipbuilding (Starship)-10.

Chief Engineer's License

Prerequisite: Assistant Engineer's License. *Experience:* A net 8 points in Mechanic (Jump Drive, Maneuver Drive, Power Plant or Starship) or Shipbuilding (Starship). *Skills:* Engineer (Starship)-12, Shipbuilding (Starship)-12.

Certified Medical Technician (CMT)

Skills: Diagnosis-12, Electronics Operation (Medical)-12, First Aid-12.

Medical Doctor (M.D.)

Prerequisites: An M.D. degree requires attending an accredited medical school, regardless of skill. Other requirements (residency, internship) may be necessary in order to practice. *Skills:* Diagnosis-15, Electronics Operation (Medical)-15, Physician-15.

Surgeon's License

Prerequisite: Medical Doctor. *Skill:* Surgery-15.

Cargomaster's Certificate

Skills: Freight Handling-12, Merchant-12, Savoir-Faire-12.

Basic Hazardous Material Handler's Endorsement

Prerequisite: Cargomaster's Certificate. *Skills:* Hazardous Materials-12, NBC Warfare-12.

Advanced Hazardous Material Handler's Certificate

Prerequisite: Basic Hazardous Material Handler's Endorsement. *Skill:* Hazardous Materials-15.

Broker's License

Skills: Merchant-12, Law-10. Each license is specific to a single world. Both effective skill levels are reduced by -6 if the broker is unfamiliar with local laws and practice; see pp. 106-107.

Variant Character Templates

The merchant template on p. GT97 paints a broad picture; it describes merchants of all types – planetary and interstellar. Not all characters in a mercantile campaign will be merchants, however. Attorneys, bureaucrats, corsairs, diplomats, engineers, managers, mechanics/technicians, medical doctors, medical technicians and rogues can all be found aboard merchant ships or at the typical starport.

The templates below are based on those on pp. GT87-105, but have been altered to reflect specific occupations and roles. Some are best-suited for NPCs (like the skip tracer or black marketeer), but any of them could form the basis of an interesting character concept. The sidebars in this section contain sample NPCs created using these templates; other useful NPCs can be found in ***GURPS Supporting Cast.***

Attorney (p. GT87)

The term "attorney" is very general, and can cover a wide spectrum of activity. For merchant operations, a specialized legal expertise is needed.

Corporate Lawyer — 65 points

Business relationships are all about money and contracts – the two areas where the corporate lawyer excels. These are the "knights errant" of the corporate world, hammering out agreements between companies and doing battle in court when negotiation fails.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: Comfortable Wealth [10], and 10 points in Administrative Rank [varies], Charisma [5/level], Reputation [varies], Sanctity [5], Security Clearance (Corporate) [2/level], Single-Minded [5], Status 1 [5], Voice [10] and more Wealth [10].

Disadvantages: A total of -20 points in Bully [-10], Code of Honor (Professional Ethics) [-5], Compulsive Lying [-15], Greed [-15], Honesty [-10], Odious Personal Habits ("Pedantic," "Shameless," etc.) [-5 to -15], Overweight [-5], Secret (Dishonest) [-10], Sense of Duty (Clients or Company) [-5] and Workaholic [-5].

Sample Character: Free Trader

Alexander Lascelles Jamison (140 pts.)

Human (Solomani) male; age 44; 5′10″, 160 lbs.; tanned white skin, gray hair and beard, brown eyes.

ST: 10 [0], **DX:** 11 [10], **IQ:** 14 [45], **HT:** 10 [0]

Basic Speed 5.25, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Merchant Rank 5 (Free trader captain; upgrades Courtesy Rank) [10]; Reputation +2 [10]; Ship Owner (Far trader; gives Courtesy Rank 5, Status 1) [57]; Status 1 [0].

Disadvantages: Code of Honor (Free Trader's) [-5]; Intolerance (Zhodani) [-5]; Light Sleeper [-5]; Obsession (Ancients) [-10]; Overconfidence [-10]; Workaholic [-5].

Quirks: Broad-minded; Careful; Congenial; Imaginative; Nosy. [-5]

Skills: Administration-14 [2]; Area Knowledge (Spinward Main)-16 [4]; Astrogation-14 [2]; Brawling-12 [2]; Computer Operation-14 [1]; Electronics Operation (Comm)-14 [2]; Electronics Operation (Security Systems)-14 [2]; Electronics Operation (Sensors)-14 [2]; Fast-Talk-14 [2]; Free Fall-12 [4]; Freight Handling-13 [1]; Guns (Pistol)-15* [4]; History (Ancients)-17/11 [1]; Knife-11 [1]; Law (Trade)-17/11 [1]; Leadership-13 [1]; Merchant-15 [4]; Piloting (Contragravity)-10 [1]; Piloting (Spacecraft)-13 [8]; Savoir-Faire-14 [1]; Shipbuilding (Starship)-13 [1]; Shipmaster-14 [2]; Streetwise-13 [1]; Tactics-12 [1]; Vacc Suit-13 [1].

Languages: Anglic (native)-14 [0]; Gvegh (Vargr)-13 [1].

Licenses and Certificates: Cargomaster's License; Comm Operator's Certificate; Limited Master's License; Sensor Operator's Certificate.

Home World: Regina (Spinward Marches/Regina 1910) (p. T:BC81).

* Includes +2 for IQ.

Captain Jamison of Jamison Factors is well-known throughout the Spinward Main for his exploits, as is his ship, the *Empress Marava*-class far trader S.S. *Empress Nicholle* (Regina registry #1075-A-8456). Jamison bought the *Empress Nicholle* used (for half price) in 1105. After 15 years of steady payments, he now holds 33% ownership in her.

In 1106, Jamison and his crew came into the public eye by uncovering a secret advance base for Zhodani naval forces on Fulachin (SM/Rhylanor 2613) while following up rumors of an Ancients site there (see pp. T:BC9, 106 and p. T:AI33). Not being one to waste an opportunity, Captain Jamison has used his name recognition to good advantage when forming commercial relationships.

Sample Character: Shipper's Agent

Aakmir Iikush *[100 pts.]*

Human (Vilani) female; age 40; 6′0″, 200 lbs.; black skin, dark-brown hair, golden eyes.

ST: 11 [10], **DX:** 10 [0], **IQ:** 13 [30], **HT:** 10 [0].

Basic Speed 5.00, Move/Dodge 2.
Thrust 1d-1, Swing 1d+1.

Advantages: Administrative Rank 3 (Agent, sector-wide company) [15]; Charisma +1 [5]; Composed [5]; Contacts (Business, ×2; skill-18, 9 or less, somewhat reliable) [6]; High Pain Threshold [10]; Sanctity [5]; Security Clearance 2 [4]; Strong Will +3 [12].

Disadvantages: Chummy [-5]; Hidebound [-5]; Lame [-15]; Miserliness [-10]; Overweight [-5].

Quirks: Loud talker; Maternal; Mild hypochondriac; Wears bright caftans; Won't discuss injured leg. [-5]

Skills: Accounting-13 [4]; Administration-15 [6]; Area Knowledge (Mertactor)-14 [2]; Carousing-10 [2]; Computer Operation-13 [1]; Detect Lies-13 [4]; Diplomacy-13 [4]; Economics-12 [2]; Freight Handling-12 [1]; Law-12 [2]; Leadership-14* [2]; Merchant-13 [2]; Savoir-Faire-14 [2]; Streetwise-13 [2]; Teaching-14 [4]; Ventriloquism-12 [2].

Languages: Anglic-12 [1]; Vilani (native)-13 [0].

Licenses and Certificates: Broker's License; Cargomaster's Certificate.

* Includes +1 for Charisma.

Iikush was injured as a crew chief loading freight for Al Morai on Mertactor. She was taken on in the front office and was soon running the department. Her loyalty is unquestioned, but as yet also untested. She would like a higher position, but fears it is out of her reach.

Iikush is an amateur ventriloquist, and uses this skill to distract the unwary, to be "called away," to fake a conversation with an offstage "manager" or for entertainment. If questioned about it, she generally tries to laugh it off without actually admitting she can do it.

Primary Skills: Law (M/H) IQ+3 [10]-16, Research (M/A) IQ+2 [6]-15, and *one* of Bard (M/A) IQ+2 [6]-15, Diplomacy (M/H) IQ+1 [6]-14 or Fast-Talk (M/A) IQ+2 [6]-15.

Secondary Skills: Accounting (M/H) IQ-1 [2]-12, Administration (M/A) IQ [2]-13, Finance (M/H) IQ-1 [2]-12 and Writing (M/A) IQ-1 [1]-12.

Background Skills: A total of 6 points in Interrogation, Intimidation or Politics, all (M/A); Detect Lies or Psychology, both (M/H), and improved levels with any of the other skills on this template.

Customization Notes: Consider specializing (p. B43) your Law skill to get an effective +5 in one area (e.g., Contract, Tax or Tort); choose your other skills to reflect this. Some corporate lawyers are company men, with a steady job and a place in the corporate hierarchy. Others (often the very best) are "hired guns," working for anyone who can meet their fees. A successful attorney of any kind will spend some of his remaining points on Reputation and additional Wealth.

Bounty Hunter (p. GT89)

Skip Tracer *70 points*

A skip tracer is a specialized type of bounty hunter with just one sort of prey: merchant ships that have "skipped out" without making their monthly payments or giving the government that subsidizes them its cut.

Attributes: ST 11 [10], DX 12 [20], IQ 12 [20], HT 10 [0].

Advantages: Legal Enforcement Powers (Title-holder's employee) [5], plus 15 points chosen from Acute Senses (any) [2/level], Alertness [5/level], Combat Reflexes [15], Contacts (Starport security; skill-15, 9 or less, usually reliable) [4/contact], Intuition [15], Reputation [varies] and Single-Minded [5].

Disadvantages: A total of -20 points chosen from Bully [-10], Callous [-6], Enemy (Rival or escaped criminal, 6 or less) [-2] or (9 or less) [-5], Greed [-15], Honesty [-10], Intolerance (Skips) [-5], No Sense of Humor [-10], Reputation [varies] and Stubbornness [-5].

Primary Skills: Area Knowledge (any) (M/E) IQ [1]-12; Brawling (P/E) DX [1]-12; *one* of Beam Weapons (any) or Guns (any), both (P/E) DX+2 [1]-14*; any *two* of Administration, Research or Streetwise, all (M/A) IQ [2]-12, or Accounting (M/H) IQ-1 [2]-11.

*Includes +2 for IQ.

Secondary Skills: Electronics Operation (Security Systems) (M/A) IQ+1 [4]-13, Piloting (Spacecraft) (P/A) DX [2]-12; *one* of Detect Lies (M/H) IQ-1 [2]-11 or Interrogation (M/A) IQ [2]-12; *one* of Shadowing or Tracking, both (M/A) IQ [2]-12.

Background Skills: A total of 3 points in Criminology, Fast-Talk, Gambling or Holdout, all (M/A); Fast-Draw (any) (P/E), and Carousing (P/A; HT).

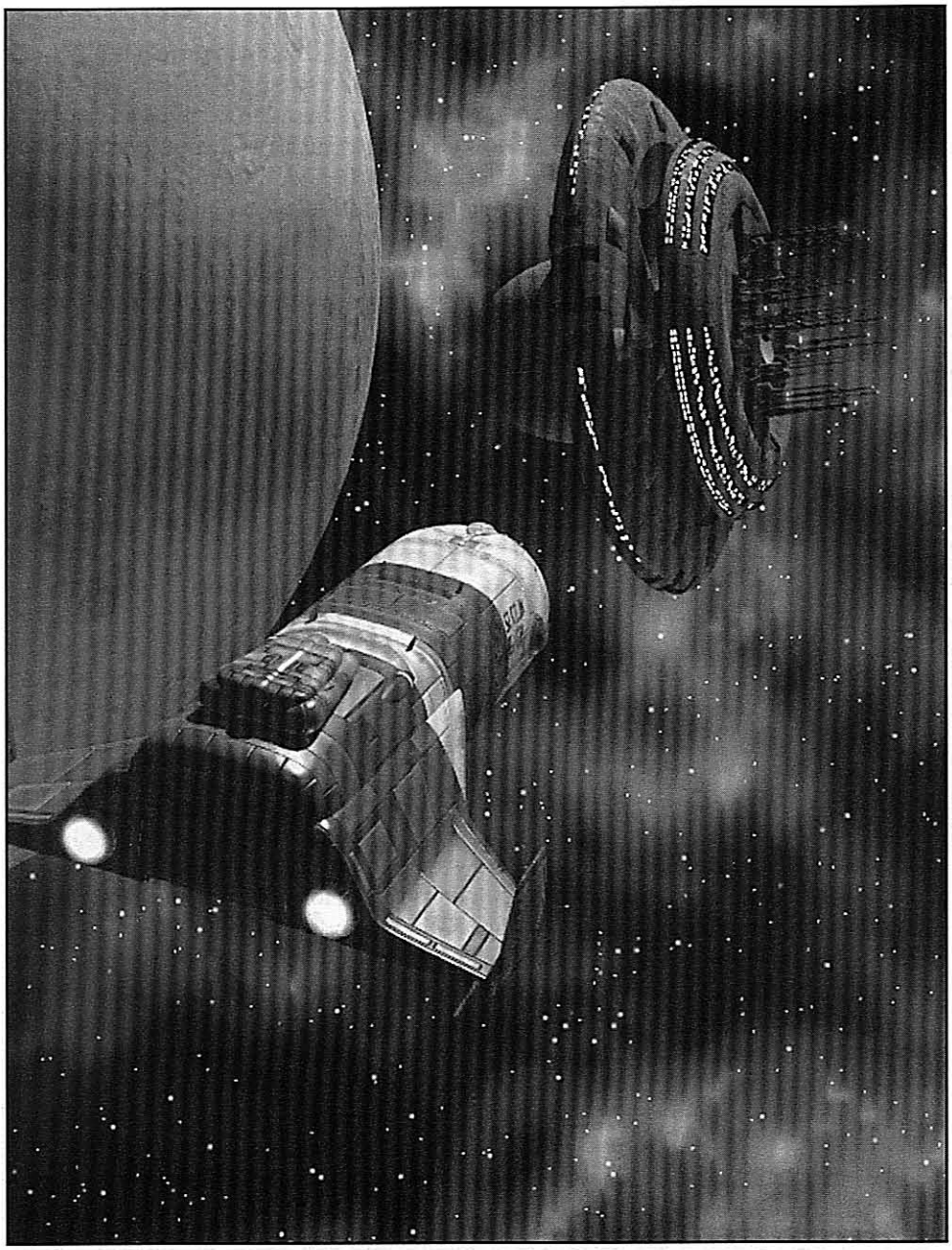
Customization Notes: A skip tracer can be an employee of the financial institution that holds the title to the skipped ship or an independent operator. Skip tracers vary in their approach, from analysts who track their prey on paper (perhaps never setting eyes on the quarry) to "repo men" whose methods greatly resemble those of hijackers. Whatever his methods, a skip tracer's only function is to take possession of the ship (if possible) and either alert the proper authorities or turn the ship over to them.

Merchant Starship Crew

There is a world of difference between being a crewman on one of the large freighters making regular runs in Core Sector and a small merchant starship such as the *Beowulf*-class free trader.

Free Trader *90 points*

A "free trader" is both a small, independent merchant vessel and someone who flies such a ship. Being a free trader takes a certain versatility – the ships are small



and often undermanned, so those aboard must be capable of performing more than one specialized task.

Attributes: ST 10 [0], DX 11 [10], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Alcohol Tolerance [5], Ally (100-point partner, 12 or less) [10], Ally Group (2-5 75-point crewmen, 9 or less) [10], Charisma [5/level], Claim to Hospitality (Trade guilds, etc.) [1 to 10], Combat Reflexes [15], Contacts (Business or Street; skill-18, 9 or less, somewhat reliable) [3/contact], Daredevil [15], Intuition [15], Jack-of-All-Trades [10 to 30], Language Talent [2/level], Luck [15 or 30], Rank [3/level], Ship Owner (Free Trader) [up to 30] or Ship Patron (Free Trader) [30], Strong Will [4/level] and Wealth [10 to 30].

Disadvantages: A total of -20 points in Alcoholism [-15], Bad Temper [-10], Code of Honor [-5], Compulsive Gambling [-5 to -15], Enemy (Rival or bounty hunter, 6 or less) [-5], Extravagance [-10], Greed [-15], Jealousy [-10], Laziness [-10], Miserliness [-10], Overweight or Fat [-5 to -20], Reputation [varies], Selfish [-5], Stubbornness [-5] and Workaholic [-5].

Sample Character: Advertiser/PR Agent

Tobias Galeazzo *(100 pts.)*

Human (Solomani) male; age 26; 6′5″, 170 lbs.; brown skin, prematurely gray hair, dark-blue eyes.

ST: 12 [20], **DX:** 10 [0], **IQ:** 13 [30], **HT:** 10 [0].

Basic Speed 5.00, Move/Dodge 5.

Thrust 1d-1, Swing 1d+2.

Advantages: Administrative Rank 1 (Junior account executive, subsector-wide company) [4]; Comfortable Wealth [10]; Empathy* [15]; Fashion Sense [5]; Secret Patron (*Tozjabr,* 6 or less) [15].

Disadvantages: Delusion ("I am not a psi") [-5]; Extravagance [-10]; Reputation -2 ("Joe"-friendly, 10 or less) [-5]; Secret (Psi)* [-20].

Quirks: Caffeine addict; Calls everyone "my friend"; Distractible; Dresses very conservatively; Talks constantly. [-5]

Skills: Advertising-15 [6]; Area Knowledge (Zhodani Consulate)-14 [2]; Bard-14 [4]; Computer Operation-13 [1]; Directing-13 [4]; Electronics Operation (Holographics)-12 [1]; Leadership-12 [1]; Market Analysis-14 [4]; Merchant-15 [6]; Performance (fr. Bard default)-13 [1]; Psychology-13 [4]; Savoir-Faire-15 [4]; Streetwise-12 [1]; Video Production-13 [2]; Writing-14 [4].

Languages: Anglic (native)-13 [0]; Vilani-11 [½]; Zhodani-11 [½].

* Empathy counts as untrained Telepathy, Power 3.

When Tobias Galeazzo was selected *by name* to be the man to put a better public face on the Zhodani Consulate, he was naturally suspicious. He discreetly called in a few favors, and after some minor adventures had himself tested for psionic ability. He was greatly relieved to discover that any talent he might have is too minor to train. Since then, he has worked diligently on the biggest account that his advertising agency has ever had. So far, it seems to be nothing more than an attempt to open Imperial markets to Zhodani goods, and Tobias has had moderate success at making Imperials more receptive to their former enemies.

Of course, the *Tozjabr* (Zhodani secret service) leaves nothing to chance: The institute that Tobias was "lucky" enough to find was carefully primed to say nothing about his natural empathic abilities. Someday, when the Zhodani need more than just good public relations, that information may come in handy.

Sample Character: Arms Dealer

Arishima Kadic *(100 pts.)*

Human (mixed) male; age 26; 6′0″, 165 lbs.; black skin, long brown hair, dark-green eyes.

ST: 10 [0], **DX:** 12 [20], **IQ:** 13 [30], **HT:** 12 [20].

Basic Speed 6.00, Move/Dodge 6.
Thrust 1d-2, Swing 1d.

Advantages: Administrative Rank 1 (Junior broker, multi-world company) [4]; Attractive [5]; Charisma +2 [10]; Contact (Business; skill-21, 6 or less, usually reliable) [4]; Language Talent +1 [2]; Reputation +2 (Only in arms business) [5].

Disadvantages: Code of Honor (Merchant's) [-5]; Enemy (Jealous husband, 6 or less) [-5]; Jealousy [-10]; Lecherousness [-15]; Stubbornness [-5].

Quirks: Bows a lot; Cracks knuckles; Prefers martial arts to personal weapons; Seldom smiles; Loves to talk about weapon specs, even off the job. [-5]

Skills: Accounting-13 [4]; Administration-13 [2]; Area Knowledge (Mertactor)-13 [1]; Armoury (Starship Weaponry)-13 [2]; Computer Operation-13 [1]; Fast-Talk-13 [2]; Finance-13 [4]; Free Fall-12 [2]; Gunner (Laser)-13* [1]; Judo-12 [4]; Karate-12 [4]; Law-12 [2]; Merchant (Weapons)-20/14 [6]; Savoir-Faire-13 [1]; Sex Appeal-12 [2]; Streetwise-13 [2]; Tactics-12 [2]; Vacc Suit-13 [2].

Languages**: Anglic (native)-14 [0]; Gvegh (Vargr)-12 [½]; Trokh (Aslan)-12 [½].

Licenses and Certificates: Broker's License.

* Includes +2 for IQ.
** Include +1 for Language Talent.

"Air" Kadic is selling a product, mostly shipboard laser weapons to ships outbound from Glisten to the wilds of District 268. He knows his stuff, and already enjoys a reputation as the man to see for such items. His superiors are grooming him for a higher position within the firm – *if* he can keep out of trouble.

Trouble seems to follow Air, however; he just can't seem to stay away from women, *especially* women he shouldn't even consider. His past misadventures have earned him the enmity of at least one powerful man, who will not hesitate to crush him if the opportunity presents itself.

Primary Skills: Merchant (M/A) IQ+1 [4]-14.

Secondary Skills: Fast-Talk (M/A) IQ [2]-13, Free Fall (P/A) DX+1 [4]-12, Shipbuilding (Starship) (M/A) IQ-1 [1]-12, Streetwise (M/A) IQ [2]-13 and Vacc Suit (M/A) IQ-1 [1]-12, plus 20 points from these 8 options:

1. *Sensor/Comm Operator* (2 points): Electronics Operation (Comm) *and* (Sensors), both (M/A) IQ-1 [1]-12.
2. *Cargomaster* (2 points): Freight Handling (M/A) IQ-1 [1]-12, Savoir-Faire (M/E) IQ [1]-13.
3. *Assistant Engineer* (2 points): Any *two* of Mechanic (J-Drive), (M-Drive), (Power Plant) or (Starship), all (M/A) IQ-1 [1]-12.
4. *Certified Medical Technician* (4 points): Diagnosis (M/H) IQ-1 [2]-12, Electronics Operation (Medical) (M/A) IQ-1 [1]-12, First Aid (M/E) IQ [1]-13.
5. *Limited Mate* (10 points): Includes #1 (Sensor/Comm Operator) and #2 (Cargomaster), plus Astrogation (M/A) IQ-1 [1]-12, Piloting (Spacecraft) (P/A) DX+1 [4]-12, Shipmaster (M/A) IQ-1 [1]-12.
6. *Chief Engineer* (12 points): Includes #3 (Assistant Engineer), plus Engineer (Starship) (M/H) IQ-1 [2]-12, and 8 more points in Mechanic (J-Drive, M-Drive, Power Plant or Starship) or Shipbuilding (Starship).
7. *Gunner* (18 points): Add +1 DX [10], making Free Fall (P/A) DX [2]-12 for -2 points, then add Armoury (Starship Weaponry) (M/A) IQ [1]-12, Gunner (Laser) (P/A) DX+3 [4]-15*, Gunner (Missile) (P/A) DX+3 [4]-15*, Gunner (Sandcaster) (P/A) DX+1 [1]-13*.
   *Includes +2 for IQ.
8. *Limited Master* (20 points): Includes #5 (Limited Mate), plus Leadership (M/A) IQ-1 [1]-12, Tactics (M/H) IQ-1 [2]-12, and 7 more points in Administration (M/A), Astrogation, Law (M/H), Piloting or Shipmaster.

Background Skills: A total of 6 points in Area Knowledge (any) or Gesture, both (M/E); Electronics Operation (Security Systems), Gambling, Hazardous Materials, Holdout or Language (any), all (M/A); Detect Lies, Forgery or Law, all (M/H); Appreciate Beauty (M/VH); Beam Weapons (any), Brawling, Fast-Draw (Pistol), Guns (any) or Knife, all (P/E); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Choose secondary skills to reflect the structure of your ship and crew. Make sure that all required certifications and positions are covered!

Manager (p. GT94)

All merchant starship companies, large and small, can benefit from a local representative who knows the ropes.

Shipper's Agent — *65 points*

The shipper's agent is in charge of all port and planetary operations for a shipping company. He takes care of ships and their crews while in port, and ensures that the business side of the company runs smoothly.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 25 points in Administrative Rank [varies], Common Sense [10], Contacts (Business; skill-18, 9 or less, somewhat reliable) [3/contact], Intuition [15], Security Clearance (Corporate) [2/level], Single-Minded [5], Status 1-2 [5/level], Strong Will [4/level] and Wealth [10 or 20].

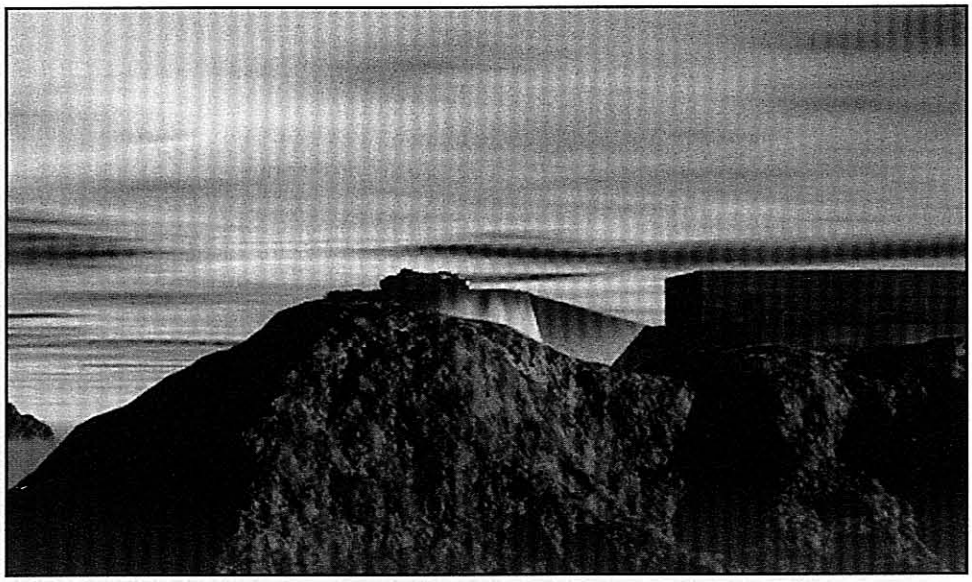
Disadvantages: A total of -20 points in Age [-3/year], Bully [-10], Compulsive Spending [-5 to -15], Extravagance [-10], Greed [-15], Hidebound [-5], Incurious or Obdurate [-5 or -10], Jealousy [-10], Laziness [-10] or Workaholic [-5], Migraine [-5 to -20], Miserliness [-10], Overweight [-5], Reputation [varies], Secret (Dishonest) [-10] and Stubbornness [-5].

Primary Skills: Administration (M/A) IQ+2 [6]-15, Leadership (M/A) IQ [2]-13, and any *two* of Bard, Fast-Talk, Intimidation or Teaching, all (M/A) IQ+1 [4]-14, or Detect Lies or Diplomacy, both (M/H) IQ [4]-13.

Secondary Skills: Accounting (M/H) IQ-1 [2]-12, Computer Operation (M/E) IQ [1]-13, Economics (M/H) IQ-1 [2]-12, Law (M/H) IQ-1 [2]-12, Merchant (M/A) IQ [2]-13.

Background Skills: A total of 5 points in Area Knowledge (any) or Savoir-Faire, both (M/E); Carousing (P/A; HT), and Sport (Golf) (P/A).

Customization Notes: Select skills that reflect your management style. A greasy manipulator might have Fast-Talk, Intimidation and Carousing, while a "fatherly" type is more likely to have Bard, Teaching and Savoir-Faire.



Merchant (p. GT97)

All companies need to advertise. Entrepreneurs who intend to carry passengers can especially benefit from a little well-placed promotional talent. Prospective travelers often need convincing to pick *our* starship over *someone else's*.

Advertiser/Promotional Agent — *75 points*

Advertisers are manipulators of public opinion. Their goal is to create a desire for their product or service in the minds of consumers, or to adjust or intensify that desire where it already exists. Promotional agents and public relations (PR) flacks are in the same business – it's just that their "product" is a person. Governments use people like this to create and disseminate propaganda; the military calls what they do "psychological warfare operations."

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Charisma [5/level], Contacts (Business or Government; skill-18, 9 or less, somewhat reliable) [3/contact], Cultural Adaptability [25], Empathy [15], Fashion Sense [5], Favor [varies], Intuition [15], Luck [15], Reputation [varies], Single-Minded [5], Strong Will [4/level] and Wealth [10 to 30].

Disadvantages: A total of -20 points in Alcoholism [-15], Bully [-10], Compulsive Carousing [-5], Compulsive Lying [-15], Dependent (50-point "talent," employer, 15 or less) [-9], Enemy (Rival, 6 or less) [-5], Extravagance [-10], Greed [-15], Lecherousness [-15], Miserliness [-10], Odious Personal Habits ("Flagrant," "Shameless," etc.) [-5 to -15], Overweight or Fat [-5 to -20], Selfish [-5], Stubbornness [-5] and Workaholic [-5].

Primary Skills: Advertising (M/A) IQ+2 [6]-15, Merchant (M/A) IQ+2 [6]-15.

Secondary Skills: Computer Operation (M/E) IQ [1]-13, Market Analysis (M/A) IQ [2]-13, Psychology (M/H) IQ [4]-13, and *either* Bard *or* Fast-Talk, both (M/A) IQ+1 [4]-14.

Sample Character: Black Marketeer/ Fixer

Myrna "Z-Rocks" McCaine (88 pts.)*

Human (Solomani) female; age 27; 4′10″, 70 lbs.; white skin with freckles, dirty-blonde hair (unevenly cropped), brown eyes, yellowed teeth and fingers.

ST: 10 [0], **DX:** 11 [10], **IQ:** 14 [45], **HT:** 11 [10]

Basic Speed 5.50, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Charisma +1 [5]; Contact (Government; skill-15, 12 or less, somewhat reliable) [4]; Contact (Street; skill-15, 12 or less, somewhat reliable) [4]; Reputation +2 (Reliable forger; on the street, 10 or less) [3].

Disadvantages: Addiction (Tobacco) [-5]; Code of Honor (Stays bought) [-5]; Enemy (Law-enforcement agencies, 6 or less) [-15]; Paranoia [-10]; Skinny [-5].

Quirks: Chain smoker; Hates to be called "Myrna"; Pretends to be unaware of her reputation; Enjoys dating very tall men; Swears in Gaelic. [-5]

Skills: Accounting-13 [2]; Administration-14 [2]; Area Knowledge (District 268 ports)-14 [1]; Artist-12 [1]; Beam Weapons (Laser)-14** [2]; Brawling-12 [2]; Computer Hacking-13 [4]; Computer Operation-14 [1]; Computer Programming-12 [1]; Diplomacy-13 [2]; Economics-13 [2]; Electronics Operation (Security Systems)-15 [4]; Fast-Draw (Pistol)-12 [2]; Fast-Talk-14 [2]; Forgery-17 [10]; Law-13 [2]; Merchant-15 [4]; Research-14 [2]; Savoir-Faire-14 [1]; Streetwise-14 [2]; Writing-13 [1].

Languages: Anglic (native)-14 [0]; Irish Gaelic-13 [1]; Vilani-13 [1].

* "Z-Rocks" is a 100-point character, but she has traded 2 points for equipment and 10 points for Temporary Wealth (Wealthy).

** Includes +2 for IQ.

Myrna "Z-Rocks" McCaine is an accomplished specialist in "creative administration": forging registries and identifications, and constructing and planting the computer records to go with them. She owns a special chip-burning laboratory under the guise of a small vanity press. She also has a contact within the Imperial Shipping Commissioner's office that keeps her up to date on the latest identification and security protocols.

Z-Rocks' Irish ancestry is real (as real as anyone's can be, 3,600 years and 200 parsecs from Terra), but she learned her Gaelic from a teaching chip. She took up smoking on a similar lark and hasn't been able to quit. Make no mistake: Z-Rocks is a geek – a very talented geek, but a geek nonetheless.

Sample Character: Broker

Ganidiirsi Meszaros (100 pts.)

Human (mixed) male; age 42; 6′0″, 170 lbs.; brown skin, gray hair, brown eyes.

ST: 9 [-10], **DX:** 10 [0], **IQ:** 13 [30], **HT:** 10 [0].

Basic Speed 5.00, Move/Dodge 5.
Thrust 1d-2, Swing 1d-1.

Advantages: Business Owner* (Owner of Whitchurch Factors; gives Courtesy Rank 5, Status 1) [10]; Contacts (Business, ×2; skill-18, 9 or less, somewhat reliable) [6]; Merchant Rank 5 (Owner; upgrades Courtesy Rank) [10]; Reputation +3 (To Mertactor downport merchants) [5]; Status 2 [5]; Wealthy [20].

Disadvantages: Code of Honor (Merchant's) [-5]; Greed [-15]; Loner [-5]; Selfish [-5]; Stubbornness [-5]; Workaholic [-5].

Quirks: Attentive; Careful; Chauvinistic; Staid; Genuinely loves primitive art. [-5]

Skills: Accounting-16** [2]; Administration-18** [2]; Appreciate Beauty-12 [4]; Area Knowledge (Mertactor downport)-16 [6]; Computer Operation-13 [1]; Detect Lies-14 [6]; Diplomacy-15 [8]; Economics-16** [4]; Finance-18** [8]; Law-13 [4]; Market Analysis-18** [6]; Merchant-20 [16]; Savoir-Faire-14 [2].

Languages: Anglic (native)-13 [0].

Licenses and Certificates: Broker's License.

* Uses the rules for Ship Owner (p. 101).

** Bought up from default from Merchant skill.

Gani Meszaros is the sole proprietor of Whitchurch Factors (named for an obscure pre-Contact Terran economist), the most successful independent brokerage house on Mertactor. He provides a substantial advantage (+7) to transactions in return for an equally substantial commission (20%). Parties engaging in speculative trade on Mertactor would do well to engage him to look after their business (if the competition has not already done so).

Gani has a sideline dealing in primitive and native art from the "wilds" of District 268. He picks the best pieces from amongst what the traders bring in, then sends them on to galleries in Glisten and ultimately the Imperial core.

Background Skills: A total of 12 points in Area Knowledge (any) or Savoir-Faire, both (M/E); Administration, Electronics Operation (Comm or Holographics), Language (any), Leadership, Performance, Streetwise, Video Production or Writing, all (M/A); Accounting, Directing, Economics or Law, all (M/H); Sex Appeal (M/A; HT); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Background skills should reflect your orientation and market. An advertising executive would have Accounting, Administration and Economics; while a PR flack would want Directing, Leadership, Performance and Video Production. Promotional agents often specialize both of their primary skills to managing "talent" (see p. B43 and p. B64).

Arms Dealer — *75 points*

Interstellar merchants favor goods with a high degree of portability, measured in both value density (Cr/lb.) and market potential. Weapons and high-tech military hardware and software fit this profile nicely. Arms dealerships may be long-established and as professional as any megacorporation (indeed, Instellarms began as an arms dealership) or they may be fly-by-night operations (like a mercenary company selling its spoils). Reputation is everything in this business.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Charisma [5/level], Contacts (Military or Government; skill-21, 6 or less, usually reliable) [4/contact], Cultural Adaptability [25], Empathy [15], Intuition [15], Language Talent [2/level], Lightning Calculator [5], Reputation [varies], Security Clearance (Any) [2 or 5/level], Strong Will [4/level] and Wealth [10 to 30].

Disadvantages: A total of -20 points in Code of Honor (Merchant's) [-5], Enemy (Rival or unhappy customer, 6 or less) [-5], Extravagance [-10], Flashbacks [-5 to -20], Greed [-15], Incurious [-5], Jealousy [-10], Miserliness [-10], Nightmares [-5], Post-Combat Shakes [-5], Reputation [varies], Selfish [-5], Stubbornness [-5] and Workaholic [-5].

Primary Skills: Merchant (M/A) IQ+2 [6]-15, specializing (p. B43) in weapons (Merchant-20 for weapons, Merchant-14 for all other goods).

Secondary Skills: Accounting (M/H) IQ [4]-13, Administration (M/A) IQ [2]-13, Computer Operation (M/E) IQ [1]-13, Economics (M/H) IQ [4]-13, Fast-Talk (M/A) IQ [2]-13 and Tactics (M/H) IQ-1 [2]-12; *one* of Armoury (any), Demolition or Electronics Operation (any), all (M/A) IQ [2]-13; *two* of Beam Weapons (any) or Guns (any), both (P/E) DX+2 [1]-12*, or Gunner (any) (P/A) DX+1 [1]-11*.

*Includes +2 for IQ.

Background Skills: A total of 10 points in Area Knowledge (any) or Gesture, both (M/E); Forward Observer, Hazardous Materials, Language (any) or Streetwise, all (M/A); Detect Lies, Diplomacy or Law, all (M/H); Brawling or Fast-Draw (Pistol), both (P/E); Piloting (Contragravity) (P/A); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Choose an area of expertise – a class of weapons, equipment or operations – then pick skills and specializations that reflect this; e.g., Armoury (Energy Small Arms) and Beam Weapons (Laser) and (Plasma) for an infantry weapons specialist, or Armoury (Starship Weaponry) and Gunner (Laser) and (Missile) for a starship arms merchant. Some dealers specialize in support equipment, logistics or electronics instead of weapons per se.

Black Marketeer/Fixer — *75 points*

Black marketeers deal in the shadow economy: the world of illegal and unrecorded business that exists beneath the surface of all but the most open of societies. Fixers are also part of that economy, but their stock-in-trade is information – they know where to find what's needed, and introduce the deal-makers to one another (for a fee, of course).

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Ally Group (2-5 75-point bodyguards, 9 or less) [10], Alternate Identity [15], Charisma [5/level], Contacts (Street; skill-15, 12 or less, somewhat reliable) [4/contact], Cultural Adaptability [25], Danger Sense [15], Empathy [15], Favor [varies], Intuition [15], Lightning Calculator [5], Luck [15], Reputation [varies], Strong Will [4/level], and Wealth [10 to 30] or Temporary Wealth [5 or 10].

Disadvantages: A total of -20 points in Code of Honor (Pirate's) [-5], Compulsive Spending [-5], Duty (Involuntary; crime boss, 9 or less) [-10], Enemy (Rivals or law-enforcement agency, 6 or less) [-15], Extravagance [-10], Greed [-15], Jealousy [-10], On the Edge [-15], Paranoid [-10], Reputation [varies], Selfish [-5] and Stubbornness [-5].

Primary Skills: Merchant (M/A) IQ+1 [4]-14, Streetwise (M/A) IQ+2 [6]-15.

Secondary Skills: Accounting (M/H) IQ-1 [2]-12, Administration (M/A) IQ [2]-13, Area Knowledge (any) (M/E) IQ [1]-13, Computer Operation (M/E) IQ [1]-13, Fast-Talk (M/A) IQ [2]-13, Finance (M/H) IQ [4]-13, Savoir-Faire (M/E) IQ [1]-13.

Background Skills: A total of 12 points in Electronics Operation (Security Systems), Freight Handling, Holdout, Language (any) or Leadership, all (M/A); Detect Lies, Diplomacy, Forgery or Law, all (M/H); Appreciate Beauty (M/VH); Beam Weapons (any), Brawling, Fast-Draw (Pistol) or Guns (any), all (P/E); Piloting (Contragravity) (P/A); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Background skills should reflect your market, goods and the size of your operation. Black marketeers and fixers often specialize in one class of goods or persons; e.g., pharmaceuticals or netrunners (see p. B43 and p. B64).

Sample Character: Entrepreneur

Amanda Blackwell *(100 pts.)*

Human (mixed) female; age 33; 5′4″, 130 lbs.; brown skin, long brown hair, big brown eyes; poised, classy.

ST: 10 [0], **DX:** 11 [10], **IQ:** 13 [30], **HT:** 12 [20]

Basic Speed 5.75, Move/Dodge 5.

Thrust 1d-2, Swing 1d.

Advantages: Charisma +1 [0]; Comfortable Wealth [10]; Cultural Adaptability [25]; Language Talent +2 [0]; Strong Will +3 [12].

Disadvantages: Acceleration Weakness [-5]; Duty (To corporate financier; 6 or less) [-2]; Extra Sleep (1 hour) [-3]; Overconfidence [-10]; Space Sickness [-10]; Stubbornness [-5]; Workaholic [-5].

Quirks: Always well-groomed; Congenial; Dislikes doctors; Proud; Puts off space flight for as long as possible. [-5]

Skills: Accounting (fr. Merchant default)-12 [1]; Administration (fr. Merchant default)-15* [2]; Area Knowledge (Imperium)-15* [2]; Beam Weapons (Laser)-14** [2]; Carousing-13* [2]; Computer Operation-14 [2]; Diplomacy-13* [2]; Economics-13 [4]; Fast-Talk-13* [1]; Finance-13 [4]; Holdout-12 [1]; Law-12 [2]; Leadership-15*# [2]; Merchant-17* [8]; Savoir-Faire-15* [2].

Languages†: Anglic (native)-15 [0]; Vilani-14 [1].

* Includes +1 for Cultural Adaptability.

** Includes +2 for IQ.

Includes +1 for Charisma.

† Include +2 for Language Talent.

Amanda has been very successful at starting small retail and mercantile businesses wherever the Imperium has opened new territories for development; the recent development of District 268 in the Spinward Marches has brought her there. She has been married and widowed, but refuses to discuss the circumstances.

Amanda loathes her physical intolerance of space travel and overcompensates for it: When she goes, she goes hard; when she stops, she stops harder. Her need for extra sleep and her mad drive to work conspire to leave her chronically sleep-deprived, but she seldom pauses to notice. She owes a big favor to the corporate financier who bailed her out of a less-than-successful scheme, but has no idea when or even if he'll collect.

Sample Character: Financier

Gredim Lishenii *(100 pts.)*

Human (Vilani) male; age 35; 5′10″, 160 lbs.; brown skin, curly brown hair, purple eyes; "bumpkin."

ST: 10 [0], **DX:** 10 [0], **IQ:** 14 [45], **HT:** 10 [0]

Basic Speed 5.00, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Contact (Business; skill-18, 9 or less, somewhat reliable) [3]; Mathematical Ability [10]; Merchant Rank 3 (Agent, multi-world company) [12]; Patron (Agworld Combine, 6 or less) [15].

Disadvantages: Code of Honor (Merchant's) [-5]; Duty (Agworld Combine, 9 or less) [-5]; Greed [-15]; No Sense of Humor [-10]; Truthfulness [-5].

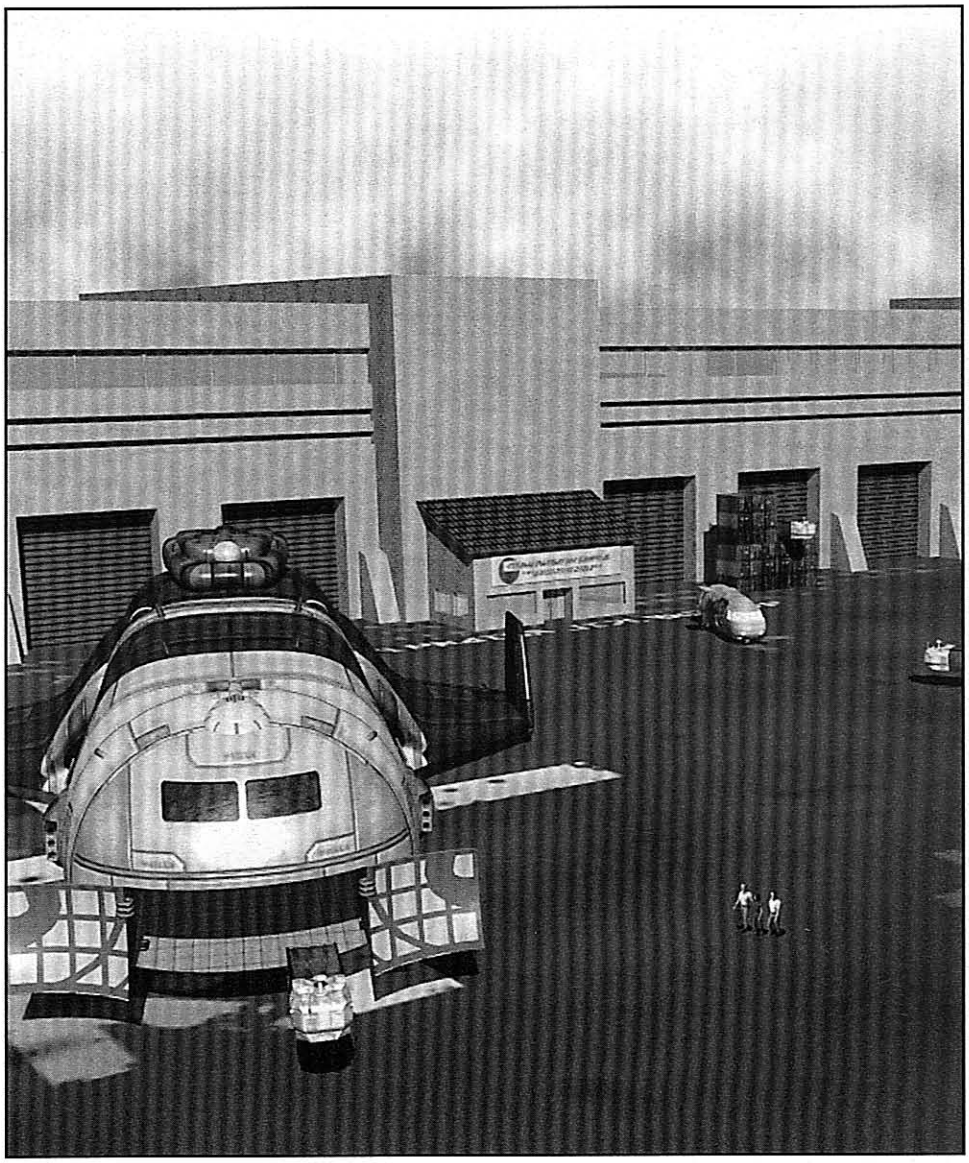
Quirks: "Clean freak"; Distractible; Nail-biter; Uncongenial; Will only date blondes. [-5]

Skills: Accounting-17* [1]; Administration (fr. Merchant default)-14 [1]; Agronomy-13 [1]; Area Knowledge (District 268)-14 [1]; Botany-13 [2]; Cooking-14 [1]; Computer Operation-14 [1]; Detect Lies-13 [2]; Diplomacy-13 [2]; Economics-14 [4]; Ecology-13 [2]; Finance-17* [4]; Free Fall-12 [8]; Freight Handling-13 [1]; Karate-10 [4]; Knife-12 [4]; Law-14 [4]; Market Analysis-17* [2]; Merchant (Finance)-22/16 [8]; Streetwise-13 [1]; Throwing-10 [4]; Vacc Suit-13 [1].

Languages: Anglic (native)-14 [0]; Gvegh (Vargr)-12 [½]; Vilani-12 [½].

* Includes bonus for Mathematical Ability.

Gredim was a plant scientist on a large agriplex on Motmos (SM/District 268 1340), and was content to stay there, managing crop rotation and looking at hybrids for improvements. In his spare time, however, he followed the financial goings-on of his agriplex. His direct supervisor realized his gift for numerical manipulation, and brought him to the attention of Agworld Combine. The corporation raised Gredim's standard of living to heights he never would have had access to back on the farm. He has never looked back.



Broker *75 points*

Brokers are merchants-for-hire; they negotiate deals on behalf of other parties in return for a fee or commission (see p. 40). Shipping companies keep brokers on the payrolls of their sales departments in order to get the best deals on the goods they carry. Other brokers are free agents, trading on their intimate knowledge of local market conditions.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Charisma [5/level], Composed [5], Contacts (Business; skill-18, 9 or less, somewhat reliable) [3/contact], Cultural Adaptability [25], Empathy [15], Intuition [15], Language Talent [2/level], Lightning Calculator [5], Merchant Rank [varies], Patron [varies], Reputation [varies], Strong Will [4/level] and Wealth [10 to 30].

Disadvantages: A total of -20 points in Code of Honor (Merchant's) [-5], Compulsive Behavior (Risk-taking) [-5 to -15], Extravagance [-10], Greed [-15], Impulsiveness [-10], Jealousy [-10], Overconfidence [-10], Overweight or Fat [-5 to -20], Selfish [-5], Stubbornness [-5] and Workaholic [-5].

Primary Skills: Area Knowledge (any) (M/E) IQ+1 [2]-14, Diplomacy (M/H) IQ [4]-13, Law (M/H) IQ [4]-13, Merchant (M/A) IQ+2 [6]-15.

Secondary Skills: Computer Operation (M/E) IQ [1]-13, Economics (M/H) IQ [4]-13, Finance (M/H) IQ [4]-13, Market Analysis IQ [2]-13.

Background Skills: A total of 8 points in Savoir-Faire (M/E); Administration, Fast-Talk, Freight Handling, Intimidation, Language (any) or Streetwise, all (M/A); Accounting or Detect Lies, both (M/H); Appreciate Beauty (M/VH); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: You should obtain a Broker's License (p. 85) on each world where you intend to trade. Brokers often specialize in a particular class of goods or services.

Entrepreneur — *80 points*

Entrepreneurs are the innovators of the business world, constantly creating and exploiting new opportunities. Once an enterprise has played out – for better or for worse – the entrepreneur sells out and moves on to the next venture. Successful examples conform to a fairly narrow psychological profile: determined, confident, restless and unwilling to work for others.

Attributes: ST 10 [0], DX 10 [0], IQ 12 [20], HT 10 [0].

Advantages: Strong Will 3 [12], and a total of 30 points in Charisma [5/level], Contacts (Business; skill-18, 9 or less, somewhat reliable) [3/contact], Cultural Adaptability [25], Empathy [15], Intuition [15], Jack-of-all-Trades [10 to 30], Luck [15 or 30], and Wealth [10 to 30] or Temporary Wealth [5 or 10].

Disadvantages: Stubbornness [-5], Workaholic [-5], and *either* Jealousy [-10] *or* Overconfidence [-10].

Primary Skills: Merchant (M/A) IQ+3 [8]-15.

Secondary Skills: Accounting (M/H) IQ-1 [2]-11, Administration (M/A) IQ [2]-12, Computer Operation (M/E) IQ+1 [2]-13, Economics (M/H) IQ [4]-12, Fast-Talk (M/A) IQ+1 [4]-13, Finance (M/H) IQ [4]-12 and Leadership (M/A) IQ [2]-12.

Background Skills: A total of 10 points in Area Knowledge (any) (M/E); Gambling, Language (any), Market Analysis or Streetwise, all (M/A); Detect Lies, Forgery or Law, all (M/H); Appreciate Beauty (M/VH); Beam Weapons (any), Brawling or Guns (any), all (P/E); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: For NPCs, pick a current business venture. For all entrepreneur characters, pick one or two previous ventures and decide whether they were successful or not (perhaps based on the character's current wealth level).

Financier — *75 points*

A financier is a merchant who specializes in monetary transactions: obtaining funds for projects and choosing investments with maximum potential. Bankers, fund managers, stockbrokers and venture capitalists all fall into this category. In the extremely tight Imperial economy, successful financial wizards are rare, and in tremendous demand when they appear.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Charisma [5/level], Composed [5], Contacts (Business; skill-18, 9 or less, somewhat reliable) [3/contact], Cultural Adaptability [25], Empathy [15], Intuition [15], Language Talent [2/level], Lightning Calculator [5], Merchant Rank [varies], Patron [varies], Reputation [varies], Strong Will [4/level] and Wealth [10 to 30].

Disadvantages: A total of -20 points in Code of Honor (Merchant's) [-5], Compulsive Behavior (Risk-taking) [-5 to -15], Extravagance [-10], Greed [-15], Impulsiveness [-10], Jealousy [-10], Overconfidence [-10], Overweight or Fat [-5 to -20], Selfish [-5], Stubbornness [-5] and Workaholic [-5].

Primary Skills: Finance (M/H) IQ+2 [8]-15; Merchant (M/A) IQ+2 [6]-15, specializing (p. B43) in finance (Merchant-20 for financial instruments like bonds, stocks or currency, but Merchant-14 for all other goods).

Secondary Skills: Area Knowledge (any) (M/E) IQ+1 [2]-14, Computer Operation (M/E) IQ [1]-13, Economics (M/H) IQ [4]-13, Law (M/H) IQ [4]-13, Market Analysis (M/A) IQ+1 [4]-14.

Sample Character: Purser/Cargomaster

Ljufa "Bishop" Rade (100 pts.)

Human (Sword Worlder) female; age 32; 6′1″, 180 lbs.; white skin, light-brown hair (crew-cut), ice-blue eyes.

ST: 10 [0], **DX:** 10 [0], **IQ:** 13 [30], **HT:** 10 [0]

Basic Speed 5.00, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Ally (100-point partner, Minko Blats, 12 or less) [10]; Charisma +1 [0]; Comfortable Wealth [10]; Courtesy Rank 5 (1st Mate/Owner) [0]; Cultural Adaptability [25]; Language Talent +2 [0]; Ship Owner (Free trader, gives Courtesy Rank 5, Status 1) [18]; Status 1 [0].

Disadvantages: Code of Honor (Merchant's) [-5]; Enemy (Imperial Customs, 6 or less) [-15]; Sense of Duty (Passengers) [-5]; Stubbornness [-5]; Workaholic [-5]; Xenophilia (Mild) [-5].

Quirks: Androgynous; Very curious about other cultures; Obnoxious Drunk; Proud; Staid. [-5]

Skills: Accounting-12 [2]; Acting-13* [1]; Administration-13* [1]; Area Knowledge (District 268)-14* [1]; Astrogation-12 [1]; Beam Weapons (Laser)-14** [4]; Computer Operation-13 [1]; Diplomacy-13* [2]; Electronics Operation (Comm)-12 [1]; Electronics Operation (Sensors)-12 [1]; Fast-Talk-14* [2]; Freight Handling-15 [6]; Hazardous Materials-12 [1]; Holdout-15 [6]; Merchant-15* [4]; NBC Warfare-12 [1]; Piloting (Spacecraft)-12 [8]; Savoir-Faire-14* [1]; Shipbuilding (Starship)-13 [2]; Shipmaster-12 [1]; Streetwise-14 [4].

Languages†: Anglic-13 [½]; Gvegh (Vargr)-13 [½]; Icelandic (Sword Worlds; native)-15 [0].

Licenses and Certificates: Cargomaster's Certificate with Basic HazMat Handler's Endorsement; Comm Operator's Certificate; Limited Mate's License; Sensor Operator's Certificate.

* Includes +1 for Cultural Adaptability.

** Includes +2 for IQ.

† Include +2 for Language Talent.

Ljufa "Bishop" Rade is partners with Minko Blats (p. 95) in ownership of a used *Beowulf*-class free trader, the S.S. *Smiling Moore* (Iderati registry #AQY7504-1113). Bishop handles the passengers and cargo; she leaves the flying to Minko (although she is also a qualified mate). She is a Sword Worlder female in a traditionally "male" profession; she considers herself "culturally male" as well, and acts accordingly. Her fascination with other cultures overrides her background in most other instances, however.

Sample Character: Shipmaster/Mate

Brunnhilde Shasharshi (100 pts.)

Human (mixed) female; age 33; 6′0″, 170 lbs.; brown skin, black curly hair (short-cropped), hazel eyes.

ST: 10 [0], **DX:** 12 [20], **IQ:** 13 [30], **HT:** 11 [10]

Basic Speed 5.75, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: 3D Spatial Sense [10]; Acute Vision +2 [4]; Ally Group (2-5 75-point crewmen, 9 or less) [10]; Merchant Rank 4 (First officer, Tukera Lines) [20].

Disadvantages: Code of Honor (Pirate's) [-5]; Enemy (Rival, 6 or less) [-5]; Hard of Hearing [-10]; Jealousy [-10]; Odious Personal Habit (Throws things) [-5]; Unattractive [-5].

Quirks: Careful; Chauvinistic; Sees herself as just and fair; Uncongenial; Won't admit that she can't hear. [-5]

Skills: Administration-13 [2]; Area Knowledge (District 268 ports)-13 [1]; Astrogation-14* [1]; Beam Weapons (Laser)-15** [2]; Electronics Operation (Comm)-12 [1]; Electronics Operation (Security Systems)-13 [2]; Electronics Operation (Sensors)-12 [1]; Fast-Talk-13 [2]; Free Fall-13* [1]; Freight Handling-12 [1]; Guns (Pistol)-15** [2]; Law-12 [2]; Leadership-12 [1]; Lip Reading-14† [1]; Merchant-14 [4]; Piloting (Spacecraft)-15* [8]; Savoir-Faire-13 [1]; Shipbuilding (Starship)-12 [1]; Shiphandling-12 [2]; Shipmaster-13 [2]; Tactics-12 [2]; Vacc Suit-12 [1].

Languages: Anglic (native)-13 [0].

Licenses and Certificates: Cargomaster's License; Comm Operator's Certificate; Sensor Operator's Certificate; Unlimited Master's License.

* Includes bonuses for 3D Spatial Sense.

** Includes +2 for IQ.

† Includes +2 for Acute Vision.

Mr. Shasharshi tolerates no undue familiarity among *her* crew. She's as good as any captain in Tukera's fleet, and she'll thank you to keep that in mind. What was that? Speak up, stop mumbling! No, of course she doesn't have trouble hearing, or wouldn't if everyone didn't mumble all the time. Now get out! [Thump!]

Mr. Shasharshi is a real piece of work, she is – just the sort of first mate that every spacer ends up serving under at some point in his career.

Background Skills: A total of 6 points in Savoir-Faire (M/E); Administration, Fast-Talk, Freight Handling, Intimidation, Language (any) or Streetwise, all (M/A); Accounting, Detect Lies or Diplomacy, all (M/H); Appreciate Beauty (M/VH); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Select the kinds of instruments you handle – stocks, bonds, loans, currency exchanges, etc. – then choose your background skills to match your market and clientele.

Purser/Cargomaster — *75 points*

Pursers and cargomasters arrange, obtain, load and care for the ship's payload, both passengers and cargo. They use their extensive social and organizational skills to ensure that everything goes smoothly – both on and off ship.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Ally Group (2-5 75-point crewmen, 9 or less) [10], Charisma [5/level], Claim to Hospitality (Trade guilds, etc.) [1 to 10], Contacts (Business; skill-18, 9 or less, somewhat reliable) [3/contact], Cultural Adaptability [25], Empathy [15], Intuition [15], Language Talent [2/level], Lightning Calculator [5], Mathematical Ability [10], Merchant Rank [varies], Reputation [varies] and Voice [10].

Disadvantages: A total of -20 points in Chummy or Gregarious [-5 or -10], Code of Honor (Merchant's) [-5], Compulsive Carousing [-5], Extravagance [-10], Greed [-15], Jealousy [-10], Laziness [-10] or Workaholic [-5], Miserliness [-10], Overweight or Fat [-5 to -20], Reputation [varies], Selfish [-5], Sense of Duty (Passengers) [-5] and Stubbornness [-5].

Primary Skills: Freight Handling (M/A) IQ+2 [6]-15, Merchant (M/A) IQ+2 [6]-15, Savoir-Faire (M/E) IQ+1 [2]-14.

Secondary Skills: Accounting (M/H) IQ-1 [2]-12, Administration (M/A) IQ [2]-13, Computer Operation (M/E) IQ [1]-13, Diplomacy (M/H) IQ [4]-13.

Background Skills: A total of 12 points in Area Knowledge (any), Cooking or Gesture, all (M/E); Bartender, Hazardous Materials, Holdout, Language (any), Shipbuilding (Starship) or Streetwise, all (M/A); Animal Handling, Economics or Law, all (M/H); Appreciate Beauty (M/VH); Beam Weapons (any), Brawling, Fast-Draw (Pistol) or Guns (any), all (P/E); Driving (Construction Equipment), Exoskeleton or Piloting (Contragravity or Small Spacecraft), all (P/A); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Choose background skills that suit the size of your ship and the scope of your responsibilities. A chief purser would have more Accounting and Administration (and several levels of Merchant Rank), while a lowly ship's cook might have Carousing and Cooking.

Shipmaster/Mate — *95 points*

Commanding a ship is one of the greatest pleasures and most awesome responsibilities known to man. The captain or shipmaster, who holds a Master's License (p. 94), has literal life-or-death power over those on board his ship; one wrong decision or moment of inattention could lead to disaster. Captains are assisted in their duties by the ship's mates. Senior mates also hold Master's Licenses, in case the captain becomes ill or is incapacitated.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: Merchant Rank 4 [16 or 20], plus 34 or 30 points (to a net 50 points in advantages) in 3D Spatial Sense [10], Ally Group (6-20 75-point crewmen, 6 or less) [10], Charisma [5/level], Common Sense [10], Contacts (Business; skill-18, 9 or less, somewhat reliable) [3/contact], Imperturbable [10], Intuition [15], Luck [15], Merchant Rank +1 (includes Status 1) [4 or 5], Reputation [varies], Ship Owner or Ship Patron [varies], Strong Will [4/level] and Wealth [10 to 30].

Disadvantages: A total of -20 points in Bully [-10], Code of Honor (Merchant's) [-5], Compulsive Gambling [-5], Enemy (Skip tracer, 6 or less) [-5], Extravagance

[-10], Greed [-15], Hidebound [-5], Jealousy [-10], Miserliness [-10], Overweight or Fat [-5 to -20], Reputation [varies], Secret (Alcoholism) [-10], Sense of Duty (Crew) [-5], Stubbornness [-5] and Workaholic [-5].

Primary Skills: Leadership (M/A) IQ [2]-13, Merchant (M/A) IQ+2 [6]-15, Tactics (M/H) IQ-1 [2]-12.

Secondary Skills: Administration (M/A) IQ [2]-13, Astrogation (M/A) IQ [2]-13, Electronics Operation (Comm) (M/A) IQ-1 [1]-12, Electronics Operation (Sensors) (M/A) IQ-1 [1]-12, Freight Handling (M/A) IQ-1 [1]-12, Law (M/H) IQ-2 [1]-11, Piloting (spacecraft type) (P/A) DX+2 [8]-12, Shipbuilding (Starship) (M/A) IQ-1 [1]-12, Shipmaster (M/A) IQ [2]-13.

Background Skills: A total of 6 points in Area Knowledge (any) (M/E); Fast-Talk, Gambling, Language (any), Streetwise or Vacc Suit, all (M/A); Accounting, Detect Lies, Economics or Shiphandling, all (M/H); Appreciate Beauty (M/VH); Beam Weapons (any), Brawling, Fast-Draw (Pistol) or Guns (any), all (P/E); Free fall (P/A); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Background skills should reflect the size of your ship and the scope of your responsibilities. The captain of a fledgling line's only merchant ship may want Free Fall-11 [4], Streetwise-12 [1] and Vacc Suit-12 [1]; the master of a corporate trading vessel is more likely to need Accounting-12 [2], Economics-12 [2] and Shiphandling-12 [2].

Smuggler — *75 points*

Wherever there are laws, there are those who see a profit in circumventing them. Smugglers are businessmen whose business lies in finding ways around legal requirements (customs duties and restrictions, immigration quotas, taxes) and charging extra for the risk. A smuggler may carry the goods himself or he may arrange for couriers ("mules") to carry them for him – not always knowingly. Many are either thrill-seekers or driven by greed.

Attributes: ST 10 [0], DX 10 [0], IQ 13 [30], HT 10 [0].

Advantages: A total of 30 points in Ally (100-point partner, 9 or less) [10], Alternate Identity [15], Charisma [5/level], Contacts (Street; skill-15, 9 or less, somewhat reliable) [2/contact], Danger Sense [15], Daredevil [15], Empathy [15], Fearlessness [2/level], Intuition [15], Lightning Calculator [5], Luck [15 or 30], Reputation [varies], Ship Owner [varies], Strong Will [4/level], and Wealth [10 to 30] or Temporary Wealth [5 or 10].

Disadvantages: A total of -20 points in Addiction [varies], Callous [-6], Compulsive Spending [-5], Duty (Involuntary; crime boss, 9 or less) [-10], Edgy or Paranoid [-5 or -10], Enemy (Rival or law-enforcement agency, 6 or less) [-15], Extravagance [-10], Greed [-15], Jealousy [-10], On the Edge [-15], Overconfidence [-10], Reputation [varies] and Stubbornness [-5].

Primary Skills: Holdout (M/A) IQ+2 [6]-15, Merchant (M/A) IQ+1 [4]-14, Streetwise (M/A) IQ+1 [4]-14.

Secondary Skills: Acting (M/A) IQ [2]-13, Administration (M/A) IQ [2]-13, Computer Operation (M/E) IQ [1]-13, Fast-Talk (M/A) IQ [2]-13, Freight Handling (M/A) IQ [2]-13.

Background Skills: A total of 12 points in Area Knowledge (any) (M/E); Astrogation, Disguise, Electronics Operation (Comm, Security Systems or Sensors), Hazardous Materials, Leadership, Shipbuilding (Starship) or Shipmaster, all (M/A); Detect Lies, Economics, Forgery, Law or Tactics, all (M/H); Beam Weapons (any), Brawling, Fast-Draw (Pistol) or Guns (any), all (P/E); Piloting (spacecraft type) (P/A); Carousing (P/A; HT), or any primary or secondary skill.

Customization Notes: Background skills should reflect your area of operations and the tactics you employ. A master of deception should concentrate on Social skills, while an independent blockade runner would have his Limited Master's License (p. 84). Smugglers often specialize in one class of goods: pharmaceuticals, weapons, etc.

Sample Character: Smuggler

Minko Blats — *(100 pts.)*

Human (Solomani) female; age 35; 5′9″, 160 lbs.; brown skin, dark-blonde hair (short, blunt-cut), brown eyes.

ST: 10 [0], **DX:** 12 [20], **IQ:** 13 [30], **HT:** 10 [0]

Basic Speed 5.50, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: 3D Spatial Sense [10]; Ally (100-point partner, "Bishop" Rade, 12 or less) [10]; Comfortable Wealth [10]; Courtesy Rank 5 (Captain/Owner) [0]; Ship Owner (Free trader, gives Courtesy Rank 5, Status 1) [18]; Status 1 [0].

Disadvantages: Chummy [-5]; Edgy [-5]; Enemy (Imperial Customs, 6 or less) [-15]; Overconfidence [-10]; Voices [-5].

Quirks: Always "on"; Hums and whistles constantly; Won't drink alcohol; Fidgety; Practical Joker. [-5]

Skills: Acting-13 [2]; Administration-13 [2]; Area Knowledge (District 268)-13 [1]; Astrogation-15* [2]; Beam Weapons (Laser)-14** [1]; Computer Operation-13 [1]; Electronics Operation (Comm)-12 [1]; Electronics Operation (Sensors)-12 [1]; Fast-Draw (Pistol)-12 [1]; Fast-Talk-13 [2]; Free Fall-13* [1]; Freight Handling-13 [2]; Holdout-15 [6]; Leadership-12 [1]; Merchant-14 [4]; Piloting (Spacecraft)-15* [8]; Shipbuilding (Starship)-12 [1]; Shipmaster-13 [2]; Streetwise-14 [4]; Tactics-12 [2]; Vacc Suit-12 [1].

Languages: Anglic (native)-13 [0]; Icelandic (Sword Worlds)-11 [½]; Tezlodh (Darrian)-11 [½].

Licenses and Certificates: Comm Operator's Certificate; Limited Master's License; Sensor Operator's Certificate.

* Includes bonus for 3D Spatial Sense.
** Includes +2 for IQ.

Minko and her partner "Bishop" Rade (p. 93) run a variety of goods in District 268 in their used *Beowulf*-class free trader, the S.S. *Smiling Moore* (Iderati registry #AQY7504-1113). They used to work between Iderati (SM/Five Sisters 0732) and Enos (SM/Sword Worlds 1130) until things got too hot there. Now they specialize in running contraband along the Collace Main from Trexalon (SM/District 268 1339) to Mille Falcs (SM/District 268 1637). Most of what they move is legal where they buy it; it becomes illegal when they bring it across the border without declaring it to Imperial Customs.

Minko is very active, in a nervous sort of way – so much so, that Customs inspectors have a hard time determining if she has a *reason* to be so edgy or not.

Sample Character: Confidence Man

Tadeusz Szekely (100 pts.)

Human (Solomani) male; age 30; 5'8", 165 lbs.; brown skin, red-brown hair, brown eyes.

ST: 10 [0], **DX:** 11 [10], **IQ:** 13 [30], **HT:** 12 [20]

Basic Speed 5.75, Move/Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Ally Group (6-20 75-point family members, 6 or less) [10]; Charisma +3 [15]; Luck [15].

Disadvantages: Compulsive Lying [-15]; Overconfidence [-10]; Selfish [-5]; Semi-Literate [-5]; Sense of Duty (Family) [-5].

Quirks: Careful; Chauvinistic; Imaginative; Makes sweeping gestures; Wears colorful bandannas. [-5]

Skills: Acting-13 [2]; Area Knowledge (District 268 ports)-14 [2]; Brawling-12 [2]; Fast-Talk-17 [10]; Gambling-13 [2]; Holdout-13 [2]; Intimidation-14 [4]; Knife-11 [1]; Merchant-14 [4]; Pickpocket-10 [2]; Stealth-12 [4]; Streetwise-14 [4].

Languages: Anglic-13 [2]; Icelandic (Sword Worlds)-12 [1]; Romany (native)-13 [0]; Te-zlodh (Darrian)-12 [1]; Vilani-12 [1]; Zhodani-12 [1].

Tadeusz is a tremendously good liar, mostly because he believes completely in each lie for just as long as it takes to tell. He is master of the short con, and never seems to be at a loss for schemes (no matter how well or poorly each one goes). He is also completely devoted to his extended family: he sends all of his loot to them in their travels, and catches up with them whenever he can; having the family in port is always cause for celebration!

Tadeusz is not really a bad sort; he simply doesn't believe in giving a straight answer or story to anyone (outside his family, that is). If that leads some fools to give him their money, so much the better.

Rogue (p. GT98)

At least Jesse James had a horse!
– Willie Sutton

Confidence Man — *85 points*

It takes a special talent to separate people from their money in such a way that they're glad to see it go. The con man is a businessman (of a sort): he makes his living selling dreams and fantasies. Too bad he always skips town before he delivers . . .

Attributes: ST 10 [0], DX 11 [10], IQ 13 [30], HT 12 [20].

Advantages: A total of 30 points chosen from Alcohol Tolerance [5], Alertness [5/level], Alternate Identity [15], Appearance [5 to 25], Charisma [5/level], Contacts (Street; skill-18, 9 or less, somewhat reliable) [3/contact], Cultural Adaptability [25], Danger Sense [15], Daredevil [15], Luck [15 or 30], Sanctity [5], Versatile [5], Voice [10], and Wealth [10 to 30] or Temporary Wealth [5 or 10].

Disadvantages: A total of -30 points chosen from Callous [-6], Compulsive Gambling [-5 to -15], Compulsive Lying [-15], Enemy (Law-enforcement agency, 6 or less) [-15], Extravagance [-10], Greed [-15], Kleptomania [-15], Laziness [-10], Light Sleeper [-5], Overconfidence [-10], Reputation (Crook) [varies], Secret (Almost anything!) [-5 to -20], Selfish [-5], Trademark [-1 to -15] and Trickster [-15].

Primary Skills: Area Knowledge (any) (M/E) IQ [1]-13, Fast Talk (M/A) IQ+2 [6]-15, Streetwise (M/A) IQ [2]-13.

Secondary Skills: Stealth (P/A) DX+1 [4]-12, and any *four* of: Savoir-Faire (M/E) IQ+1 [2]-14; Acting, Bard, Disguise, Gambling, Intimidation or Merchant, all (M/A) IQ [2]-13; Carousing (P/A; HT) HT [2]-12, or Sex Appeal (M/A; HT) HT [2]-12.

Background Skills: A total of 4 points in Gesture (M/E); Electronics Operation (Security Systems), Holdout, Lockpicking, Research or Traps, all (M/A); Finance, Forgery or Psychology, all (M/H); Computer Hacking (M/VH); Beam Weapons (any), Brawling, Fast-Draw (any), Guns (any) or Knife, all (P/E), or Escape, Pickpocket or Sleight of Hand, all (P/H).

Customization Notes: A con man may have a favorite technique, or he may change scams after every job. Pick skills that support your preferred style; any are possible, although influence skills will likely predominate. It's also important to choose skills that will facilitate your eventual getaway!

Undercover Agent (p. GT99)

At first glance, it might seem that the mercantile life offers little scope for covert activities. This is not completely true.

Courier — *90 points*

A courier has only one purpose in life: deliver a specified package or message safely to its destination. Anything that helps achieve this goal is commendable; anything else is wasteful. Couriers may work for a government (especially the military or diplomatic corps), a corporation or some extralegal organization, or they may be freelance operatives, selling their skills to the highest bidder.

Attributes: ST 10 [0], DX 13 [30], IQ 13 [30], HT 10 [0].

Advantages: A total of 25 points in Alertness [5/level], Alternate Identity [15], Appearance [5 or 15], Charisma [5/level], Collected or Imperturbable [5 or 10], Combat Reflexes [15], Contacts (Any; skill-18, 9 or less, somewhat reliable) [3/contact], Danger Sense [15], Diplomatic Immunity [20], Intuition [15], Jack-of-all-Trades [10 or 20], Language Talent [2/level], Luck [15], Sanctity [5], Security Clearance (Any) [2 or 5/level], Strong Will [4/level], Versatile [5] and Voice [10].

Disadvantages: A total of -25 points in Curious [-5 to -15], Delusion ("Enemy agents are after me!") [-5 to -15], Duty (Agency, 9 or less) [-5], Enemy (Enemy agents,

6 or less) [-15], Insomniac [-10 or -15], Light Sleeper [-5], Loner [-5], Mistaken Identity [-5], Nightmares [-5], Overconfidence [-10], Paranoia [-10], Secret [-5 to -20] and Sense of Duty (Agency) [-10].

Primary Skills: Area Knowledge (any) (M/E) IQ+1 [2]-14, Holdout (M/A) IQ+1 [4]-14, and *three* skills off *each* of these two lists (or just spend a net 12 points on them):

I. Savoir-Faire (M/E) IQ+1 [2]-14; Acting, Fast-Talk, Interrogation or Lip Reading, all (M/A) IQ [2]-13; Sex Appeal (M/A; HT) HT [2]-10; Body Language or Detect Lies (M/H) IQ-1 [2]-12, or Carousing (P/A; HT) HT [2]-10.

II. Electronics Operation (Comm, Security Systems or Sensors), Lockpicking or Traps, all (M/A) IQ [2]-13; Climbing or Stealth, both (P/A) DX [2]-13; Escape (P/H) DX-1 [2]-12, or Running (P/H; HT) HT-1 [2]-9.

Secondary Skills: Computer Operation (M/E) IQ-1 [½]-12, Disguise (M/A) IQ-1 [1]-12, Language (any) (M/A) IQ-1 [1]-12, and *either* Beam Weapons (any) *or* Guns (any), both (P/E) DX+1 [½]-14*.

* Includes +2 for IQ.

Background Skills: *One* of Driving (any) or Piloting (any), both (P/A) DX [2]-13, and a total of 7 points in Criminology or Streetwise, both (M/A); Forgery or Law, both (M/H); Brawling or Fast Draw (any) (P/E), or any primary or secondary skill.

Customization Notes: Your skills should reflect your *modus operandi* as a courier. A "social engineer" might have Body Language, Fast-Talk and Savoir-Faire; a "low profile" courier is more likely to want Electronics Operation (Security Systems) and (Sensors), and Stealth.

Sample Character: Courier

Ofie Nastrus *(100 pts.)*

Human (Solomani) male; age 22; 5′8″, 160 lbs.; white skin with freckles, flaming red hair (buzz-cut), green eyes.

ST: 10 [0], **DX:** 13 [30], **IQ:** 14 [45], **HT:** 10 [0]

Basic Speed 5.75, Move 7, Dodge 5.
Thrust 1d-2, Swing 1d.

Advantages: Alertness +3 [15]; Charisma +2 [10]; Collected [5]; Sanctity [5].

Disadvantages: Code of Honor (Stays bought) [-5]; Curious [-5]; Innumerate [-5]; Light Sleeper [-5]; Migraine (Frequent; Mitigator, weekly treatments, -65%) [-5]; Overconfidence [-10]; Stubbornness [-5].

Quirks: Attentive; Careful; Congenial; Sleeps around; Wanderlust. [-5]

Skills: Acting-14 [2]; Area Knowledge (District 268)-15 [2]; Beam Weapons (Laser)-14* [½]; Computer Operation-14 [1]; Detect Lies-13 [2]; Disguise-14 [2]; Electronics Operation (Security Systems)-14 [2]; Fast-Talk-13 [1]; Forgery-13 [2]; Free Fall-12 [1]; Guns (Pistol)-14* [½]; Holdout-15 [4]; Lip Reading-17** [2]; Lockpicking-14 [2]; Piloting (Contragravity)-13 [2]; Running-10 [4]; Savoir-Faire-14 [1]; Streetwise-14 [2]; Vacc Suit-13 [1].

Languages: Anglic (native)-14 [0]; Vilani-13 [1].

Licenses and Certificates: Pilot's License (Contragravity rating).

* Includes +2 for IQ.
** Includes +3 for Alertness.

Ofie Nastrus is extremely charming, witty and pleasant; he trades on his "kid brother" image to allay suspicion. He seems to be perpetually in motion – except when he gets one of his headaches. Then he can be laid up for hours. The doc prescribed a course of treatment that keeps his migraines under control most of the time, but if he misses his medication, he suffers for it.

Ofie got into smuggling as a "mule," carrying goods for others with better connections. Ofie doesn't care: he's in it for the chance to travel and see new horizons. Lately, he has made some decent money on legitimate assignments, and he is considering whether to turn legit full time.

Acquiring a Starship

It is certainly possible to run a ***GURPS Traveller*** campaign – even one focused on trade and commerce – without the PCs coming into possession of a starship, or indeed, without ever leaving a single system. They could pool their funds, buy goods on speculation and ship them as cargo on commercial freighters while they travel along as passengers. In extreme cases, they could even set up as brokers (or bartenders) in a specific starport and entice the world to beat a path to their door.

Most groups, however, will either enter play with a starship in hand or bend all of their efforts toward acquiring one in the early stages of a campaign. Certain types of campaigns will in fact revolve around getting (or just holding onto) a ship. Both GM and players would do well to consider just how a group of adventurers might obtain access to a ship.

There are essentially six methods for obtaining a starship: buy it (below), rent it (p. 99), steal it (p. 99), borrow it, find it or win it. These vary in difficulty, likelihood and legality. The last three options are not normally applicable to commercial ship operations, and will be covered instead in ***GURPS Traveller: Starships.***

Buy It

When most people think of acquiring a starship, the first option they consider is to buy it outright. A starship, however, is a huge capital investment: a standard *Beowulf*-class free trader costs 28.9 million credits new; even used, it would cost 12-15 million credits. This is more than any character or group of characters (other than Multimillionaires) could hope to earn legitimately in a lifetime. Ordinary traders do, however, manage to afford starships. How? By sharing the expenses and by spreading them out over time.

Three basic forms of property ownership have been developed over the centuries: proprietorship, partnership and corporation. Partnerships and corporations, especially, are methods of pooling wealth to make large purchases. All three methods apply as much to starships as to any other property; see *Business Organization* (pp. 41-42). Various financial arrangements – loans, mortgages and bonds – exist that permit ship owners to purchase their vessel incrementally, over a long period of time, in return for paying a higher total cost in the form of interest or dividends.

Proprietorship

A sufficiently wealthy individual (i.e., someone with the Multimillionaire advantage, p. CI27) could purchase a starship outright – possibly (but not necessarily) with the help of the Ship Owner advantage (p. 101).

Partnership

A partnership consists of two or more people who split the cost of purchasing a starship. *Each* partner must take the Ship Owner advantage (p. 101), but the partners can pool their investments to reach the necessary total. The ship belongs to the partnership as a group; division of labor, profits and expenses is up to partners.

Corporation

When individuals have insufficient wealth to start a new business, they pool their resources and form a corporation to make the necessary purchases. Ownership of the property is divided according to the fraction of total resources each provides. See *Corporations* (p. 42) for details.

Bank Financing

Bank (or other venture capital) financing is available to qualified individuals (Ship Owner, plus a "Very Good" reaction from the loan officer) for the purchase of commercial starships. A minimum of 20% of the purchase price is required as a down payment; the bank provides the remaining 80%. In return, the owners agree to a 40-year mortgage, which they must pay off in monthly installments of 1/240th of the purchase price (equivalent to a 5.57% annual rate). The mortgage payments include loss and liability coverage for the bank's investment, but the owners must arrange for insurance on their own.

The borrower's ownership in his ship increases over time, as the debt owed to the bank is paid off (see table, below). If the initial down payment was larger than 20% of the purchase price, the term of the loan is reduced by the number of years indicated (round down).

Years Owed	Debt	Ownership
0	80%	20%
8	75%	25%
15	67%	33%
20	60%	40%
25	50%	50%
30	40%	60%
35	20%	80%
40	0%	100%

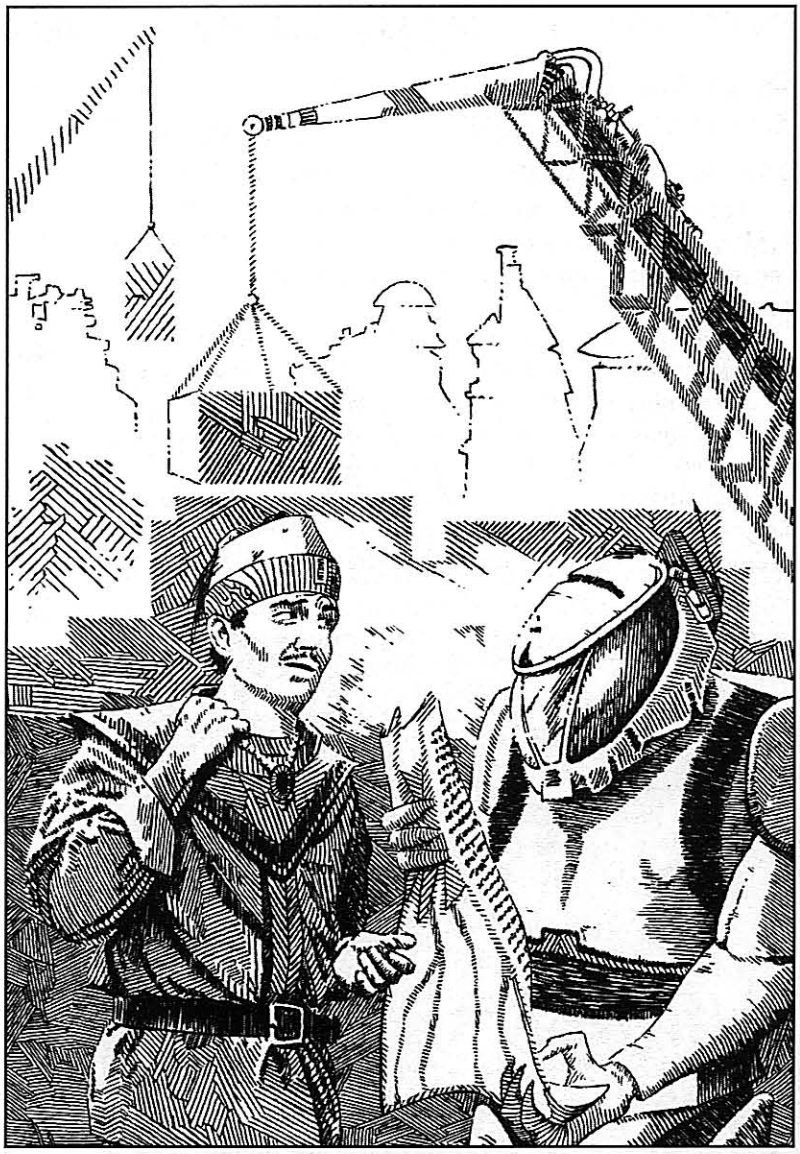
If the owners decide to sell their ship, they must repay the bank the debt owed as a fraction of the original purchase price of the ship, regardless of the actual sale price. Any remaining moneys can be divided among the owners as they see fit.

Bootstrap Capital

In order to explore new avenues of trade, large merchant lines may take the role of venture capitalists for their most talented and favored employees. The company provides the former employee with a ship (treat this as a Ship Patron, pp. GT84-85 and p. 100) – usually an older model that has been fully paid off and is surplus to current needs – and waives down payment in return for a standard 40-year mortgage. The company uses the terms of the mortgage to keep tabs on

the ship. If the new "owners" discover some heretofore hidden but lucrative market, the company can move in and exploit it, forcing the ship to move elsewhere under a non-competition clause in the mortgage.

The new "owners" start out with 0% ownership in their own vessel. As the mortgage is paid off over time, ownership accrues just as it does with a regular bank loan (see above), but the company retains its original 20% to protect its investment. For instance, after 20 years, the company and the owners each have 20% ownership in the vessel; after 30 years, the owners' share is now 40%, but the company still holds 20%.



Government Subsidies

A government (planetary or Imperial) can provide incentives and assistance in financing a starship. This is done either to ensure regular service to backwater worlds, in order to maintain contact with the Imperium, or as part of a program of deliberate development. A government subsidy takes the form of either a low-cost loan, with the government carrying the note itself (Ship Patron), or a partnership arrangement (Ship Owner), where the partners put up the down payment (20%) and the government provides the rest.

The government retains 50% ownership, but waives the remainder and any bank payments in return for a share of the profits. The ship must generally follow a designated route among 2-12 worlds, including some that would otherwise be ignored by merchant traffic. The captain must pay 50% of the ship's gross profits (after expenses, but before any dividends or other payments) to the government every month. In the event of war, the ship and its crew may be activated to serve as a fleet auxiliary. Treat these arrangements as Duty (Government, 15 or less), which takes 15 points off the cost of Ship Patron.

At the end of 40 years, full title reverts to the owners, but they are still liable for activation in wartime. A subsidized merchant or liner that has been paid off and released from its route becomes a *free merchant* or *free liner,* identical in characteristics to another ship of the same class, but probably less reliable mechanically due to age.

Certain types of vessels are favored for subsidy arrangements because of their size (a compromise between capacity and economy) and versatility; they are usually between 400 and 800 dtons displacement, with jump capacity sufficient for their projected route. The *Akkigish*-class subsidized merchant (p. GT146) and the *Stellar*-class subsidized liner (p. 138) are typical examples.

Rent It

It is possible for an individual (or a group) with the right mix of skills and Reputation to arrange a long-term rental contract for a starship, called a *charter* (technically a *charter party,* but that sounds like too much fun). As a rule of thumb, rent is 3% of the ship's purchase price per month, adjusted up or down according to the terms of the charter; this includes insurance. There is no point cost for chartering a ship – the arrangement is essentially self-limiting. See p. 109 for more on charters.

Steal It

Some people cannot resist the temptation to take the easy way out and obtain a starship through illegal means. The circumstances will vary by campaign, but the consequences of getting caught should be appropriately dire. Of course, stealing from thieves or from the enemies of one's government may not be considered stealing at all, but rather spoils of war (see *Letters of Marque,* p. GT86). The decision, as always, rests with the GM. Theft of a starship is covered in detail under *Outside the Law* (pp. 116-123).

Stolen or "hot" starships may also be offered on the black market or passed off as legitimate used vessels. Such ships bring only 1-5% of their original purchase price, and may be impossible to get rid of afterward (due to irregularities in their registry). Buyer beware!

Advantages, Disadvantages and Skills

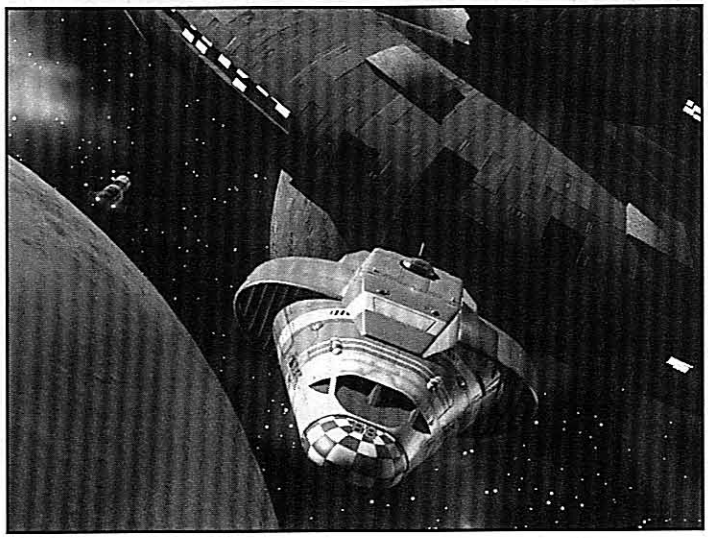
Advantages

Administrative Rank see p. CI19
and Merchant Rank see p. CI29

These advantages are discussed in detail under *Merchant Rank* (p. 81). All companies are not created equal, however. The smaller the company or shipping line, the less valuable the rank:

Megacorporation, sector-wide company: 5 points/level.
Subsector-wide or multi-world company: 4 points/level.
Free trader or single-world company: 3 points/level.
Working non-starship or smaller company: 2 points/level.
Courtesy Rank (p. 100): 1 point/level.

Captains (Merchant Rank 5) working for multi-world or larger companies, as well as the owners of such companies (Administrative Rank 5), receive one free level of Status.



Allies see p. B23
Contacts see p. CI22
Favor see p. CI25
Patrons see p. B24
Reputation see p. B17

Commercial interactions are above all *social* interactions. In the business world, *who* you know (or who knows *you*) is often vastly more important than *what* you know. Can you be trusted? Do you have what it takes to make a profit? Any of these advantages can affect the way you do business – often by opening doors that would otherwise remain shut.

Alternate Identity see p. CI20

This can be of vital importance to a smuggler or black marketeer who intends to stay in business for long. Alternate Identity can also be added to the cost of Ship Patron or Ship Owner to represent a ship that either has more than one seemingly legal registry or a military-grade programmable transponder.

Claim to Hospitality see p. CI21

Claim to Hospitality can represent retirement benefits or membership in any one of a number of different "merchant guilds" or "spacefaring brotherhoods." See *Pay and Benefits* (p. 81) for examples.

Courtesy Rank see p. CI23

Every shipmaster is called "captain," regardless of the size or importance of his vessel, and is treated with the respect that a captain deserves. An owner aboard is also accorded courtesy equal to a ship's captain (Courtesy Rank 5). Other positions (first officer, etc.) are handled similarly. On non-commercial ships or ships without a formal chain of command (like a private yacht or lab ship), this may be the *only* kind of Rank anyone has.

Ship Patron see pp. GT84-85

This represents a ship that the character may use but not sell or dispose of because it ultimately belongs to someone else: a corporation, a shipping company, investors, his family or the government. He is most likely borrowing the ship or employed by its owners in some fashion, but the ship could also be a stolen vessel that he can't get rid of!

In the strictest case, the crew draws salaries and receives business directives from its employers; this could even occur at times in an otherwise more open relationship. More often, the crew is left to generate a profit as best it can, which is then split with the owners.

The point cost of Ship Patron is based on how *useful* the ship is to the party. Assessing this cost is not an exact science (pp. GT84-85 notwithstanding); the GM has the option of adjusting point costs by up to 20% to fit the needs of the campaign. We suggest the following base costs for the most common commercial vessels in a mercantile campaign:

Beowulf-class free trader: 36 points.
Empress Marava-class far trader: 48 points.
Akkigish-class subsidized merchant: 72 points.
Stellar-class subsidized liner: 120 points.

Characters with this advantage receive *free* Merchant Rank at a level commensurate with their position aboard ship. This Rank is of a type appropriate to the wealth and reach of their Patron (which should be reflected by the size and type of ship; e.g., subsidized merchants would belong to multi-world companies or better). Promotions within the ship's crew are likewise gained at no cost. If Ship Patron is ever lost, though, this free Rank and all of its benefits are lost as well.

Player characters should not be allowed to form partnerships to split the cost of Ship Patron (unlike Ship *Owner*, p. 101). Technically, everyone who enjoys the full benefit of the advantage should pay for it separately, exactly as for a regular Patron (p. B24). See *Ship Disadvantages* (p. 102) for ways of reducing the cost of Ship Patron (such as for a stolen vessel).

Status *see p. B18*

In the status-conscious, semi-feudal Imperium, relative social standing can have an immense personal impact on commercial interactions. Standard bonuses and penalties for dealing with persons of higher or lower Status apply. The GM should remember, however, that this can work *against* the players as easily as for them.

Wealth *see p. B16*

Wealth answers the question "How much money and other goods do I have?" This can be broken down into two areas: starting wealth (how much you're worth at the start the campaign) and wealth level (which affects your social standing and determines what kinds of jobs you can hold). Starting wealth can be further broken down into *cash* and *goods*. "Goods" are anything that cannot be readily converted to cash without taking a loss (typically 50% or more). Anything else is cash, whatever form it takes.

The Wealth advantage (or Poverty disadvantage) – which includes Dead Broke, Poor, Struggling, Comfortable, Wealthy, Very Wealthy, and Filthy Rich (p. B16) and Multimillionaire (p. CI27) – affects both wealth level *and* starting wealth.

Temporary Wealth (p. CI18) and points traded for cash (p. B16) or equipment (p. CI17), on the other hand, only affect starting wealth. Note that the point costs for these things are not recorded on the character sheet; in effect, the character has fewer (more) points to spend in return for higher (lower) starting wealth.

For quick reference:

Wealth Level	Point Cost	Starting Wealth (per point)	Extra Cash Temporary Wealth	Extra Cash Money
Dead Broke	-25	-12	Cr0	N/A
Poor	-15	-7	Cr3,000	Cr300
Struggling	-10	-5	Cr7,500	Cr750
Average	0	0	Cr15,000	Cr1,500
Comfortable	10	5	Cr30,000	Cr3,000
Wealthy	20	10	Cr75,000	Cr7,500
Very Wealthy	30	N/A	MCr0.3	MCr0.03
Filthy Rich	50	N/A	MCr1.5	MCr0.15
Multimillionaire:				
Level 1	75*	N/A	MCr15	MCr1.5
Level 2	100*	N/A	MCr150	MCr15

* Includes the cost of Filthy Rich.

Trading points for equipment yields equipment worth a flat 50% of the campaign's starting wealth per point, which amounts to Cr7,500/point in the typical ***GURPS Traveller*** campaign. A maximum of 30 points (giving Cr225,000 in goods) may be spent this way. The Ship Owner advantage (below) is much more efficient for those who wish to start out with a starship.

All cash amounts must be adjusted for exchange rates (p. 48) before purchasing goods or services. Most characters' starting wealth is figured in Imperial credits (exchange rate 1.00). If this is not the case (e.g., for someone who has never left his home world), take Temporary Wealth worth -10 × (1-exchange rate) points, rounded up to the nearest point; e.g., an exchange rate of 0.75 would count as -2 points of Temporary Wealth.

New Advantage

Ship Owner *Variable*

Ship Owner is a variation on the theme of *Trading Points for Equipment* (p. CI17), used when a character wishes to start with a starship. Unlike points traded for equipment, Ship Owner is treated as an advantage that remains on the character sheet. It is also far more efficient, which is intended to reflect the fact that starships are large, hard to sell, expensive to maintain, risky to operate and subject to strict regulations.

This advantage differs from Ship Patron in that the characters *own* the ship outright: they may sell it at any time (assuming they can find a buyer), just like any other property, and recover their investment. If the GM permits, "Ship" Owner can be applied to other kinds of businesses – brokerage firms, mining operations, bars, etc. – in which case it is called "Business Owner"; the same rules apply.

The point cost of Ship Owner has two components: a base cost and a variable amount above and beyond this. Base cost depends on the character's Wealth level: 15 points at Average or below, 10 points at Comfortable, 5 points at Wealthy and 0 points at Very Wealthy or above. This gives him a basic Cr300,000 to put toward the purchase of a starship *in lieu of* – not in addition to – his normal starting wealth. A maximum of 20% of this amount (Cr60,000) can be taken in cash as ordinary starting wealth.

Once the base cost is paid, *each* additional point gives another Cr150,000 investment in the ship. Starting characters may spend no more than 30 points (giving an additional Cr4,500,000) in this way. More equity can be bought at the same rate in play, however.

Filthy Rich characters multiply their investment in the ship by 5; each level of Multimillionaire further multiplies this by 10. The amount that can be taken as cash is still limited to Cr60,000. For instance, Ship Owner costs a base 0 points for a Filthy Rich merchant, and gives a basic MCr1.5 investment; each additional point gives another Cr750,000 investment.

Characters *are* allowed to pool their investments in a partnership or corporate arrangement; the specifics are up to the players. Calculate the actual purchase price of the ship, including options, discounts for used vessels, exchange rates and premiums for custom designs, etc. Divide the party's total investment by this price to get the party's initial ownership, expressed as a percentage. The remaining amount must be financed somehow; see *Acquiring a Starship* (p. 98) for details.

Ship Owners receive a free level of Status, not cumulative with that gained from Merchant Rank 5 (Captain) or Wealth. They also receive free Courtesy Rank 5 (Captain) or (Owner aboard). If they want real Merchant Rank, they must pay for the difference, treating their free Rank as if it were worth 5 points; e.g., to upgrade Courtesy Rank 5 to Merchant Rank 5 (Captain, free trader) would cost 10 points.

Disadvantages

Enemies and Reputation *see pp. B17, B39*

When it comes to commercial transactions, everything stated under *Allies, Contacts, Favor, Patrons and Reputation* (p. 100) also holds for Enemies and bad Reputation. If you aren't trusted, or if you have enemies in high places, all the skill in the world won't help you to close a deal.

Poverty *see p. B16*

See *Wealth* (p. 101).

New Disadvantage

Ship Disadvantages (Optional) *Variable*

At the GM's option, the cost of Ship Owner or Ship Patron can be reduced (but never to less than 0 points) by giving the *ship* its own disadvantages.

Malfunctions: A list of possible malfunctions appears on pp. VE198-199. Minor malfunctions ("bugs") are annoying but not actively dangerous, and are worth -1 point (for Ship Patron) or -1% purchase price (for Ship Owner) each. Major malfunctions *are* potentially dangerous, or at least highly inconvenient, and range from -5 to -15 points (or percent purchase price) apiece, depending on severity.

GMs without ***GURPS Vehicles*** should invent their own malfunctions. One method is to adapt character disadvantages for the purpose: Primitive might represent an obsolete ship that requires a Scrounging roll to find parts for, Unluckiness could be used for a disaster-prone ship (spacefarers are a superstitious lot, after all), etc. Racial disadvantages should not normally be used. Point costs are read as percentage cost reductions in the case of Ship Owner.

Used vessels are worth a maximum of 50% of their original purchase price; this may be reduced to no lower than 10% by bugs (-40% or -40 points).

If malfunctions are removed (by repairs or a rebuild), any point cost associated with the malfunction must be "bought off."

Stolen Ships: Stolen vessels can be had for as little as 5% of original purchase price; the last -5% (-5 point) discount is automatically for Enemy (Skip tracer, 6 or less). Zeroed (-10 points/-10%) is a serious *flaw* in "hot" starships, although a common one.

Skills

Area Knowledge *see pp. B62-63, CI118*

Finding new goods to buy, deciding where to unload a particular cargo, knowing who to bribe and how much to offer – these are all applications of Area Knowledge skill. Merchants with the appropriate Area Knowledge can also avoid the penalty for dealing in an unfamiliar area (p. B64).

Use the following area classes: Port, Port City, Planet, Subsector and Sector (Area Knowledge of a Domain or even the Imperium as a whole is possible, but not particularly useful). Some knowledge of *all* the ports or port cities in a subsector (e.g., Area Knowledge (District 268 ports)) is also

fairly common. Distance penalties are assessed at each level along the shortest trade route, as follows (examples refer to the map on p. GT122):

Neighboring (e.g., Hefre from Regina): -4.
One removed (e.g., Forboldn from Regina): -7.
Two removed (e.g., Knorbes from Regina): -12.

Computer Operation/TL *see p. B58*

Computer Programming/TL *see p. B60*

At TL8+, most computers have voice-instruction capability. Computer Programming rolls are rarely required, and all Computer Operation rolls are made at +3.

Law *see p. B58*

Law skill in ***Traveller*** requires familiarity (see p. B43) with a particular jurisdiction: either Imperial law or a specific planetary legal system. Imperial law takes precedence over planetary law; questions of jurisdiction will be tried under Imperial law first, then turned over to the local authorities if unsuccessful. Lack of familiarity gives -6 to effective skill. Lawyers are considered unfamiliar if they have not practiced in a jurisdiction for a period equal to (60 months/CR). Familiarity (once held) can be regained through 8 hours of studying recent precedent and legislation.

Optional specialization can be used to cover specific kinds of law: contract, tax, astronautical, etc.

NBC Warfare/TL *see p. CI151*

This skill covers more than just the military applications of protective equipment and decontamination; it also includes using protective gear around hazardous materials (HazMat) and preventing the spread of HazMat contamination. Note that someone in a vacc suit or sealed combat armor is fully protected from the effects of (most) HazMat as long as he remains in his suit. If he ever wants to take it off, though, he will need this skill to decontaminate.

Shipbuilding (Starship)/TL *see p. CI137*

Starship crews routinely learn this skill as part of their damage-control training. Shipbuilding is also useful for smugglers (and customs agents!), as it covers knowledge of where small items can be hidden aboard ship and how to construct secret compartments.

Shiphandling/TL *see p. CI161*

This is the skill of *commanding* a large (1,000 dtons or more) starship. The person at the helm still needs Piloting skill. Naval officers on large vessels should add Shiphandling (and its prerequisites) to the templates on pp. GT104-105.

New Skills

Advertising/TL (Mental/Average) *Defaults to IQ-5, Psychology-4*

This is the skill of indirect persuasion through the media. Successful advertising can inform the target audience or even alter its perceptions; results require time and exposure. Advertising works on groups, not individuals. The GM should set the effective Will of the target group based on its size, composition and innate resistance to the desired outcome, then use the *Influence Rolls* (p. B93) rule to determine the outcome. This skill can also be used to create and disseminate propaganda, and for psychological warfare.

Finance (Mental/Hard) *Defaults to Accounting-5, Economics-3, Merchant-6*

The professional skill of raising and managing money, covering cash, stocks and bonds, banking, and exchange. Finance is a practical application of Economics (much as Engineer skill is a practical application of Physics). See Chapter 3 for a complete discussion. Modifiers: +3 for Mathematical Ability.

Hazardous Materials/TL (Mental/Average) *Defaults to IQ-5*

The professional skill of shipping, moving, loading and storing hazardous materials (HazMat). It includes preparing the forms and records that must accompany HazMat shipments, applying and identifying warning labels and markings, and knowledge of countermeasures, antidotes, and decontamination and containment procedures. When dealing with HazMat in any capacity, roll against the *lower* of the applicable skill (Diagnosis, Freight Handling, etc.) or Hazardous Materials skill. The operation of *personal* protective gear is covered by NBC Warfare skill (p. 102).

The IQ default represents any layman's knowledge of hazardous household chemicals and their effects. Some aspects of this skill (notably HazMat markings) are deliberately kept obscure by HazMat professionals to avoid alarming the general public; no default roll is permitted when dealing with such things.

Market Analysis (Mental/Average) *Defaults to IQ-5, Economics-5, Merchant-5*

The scientific skill of determining current market conditions and projecting future trends, using business statistics, news articles and interviews. Market Analysis is more specific than Economics, in that it predicts the outcome of individual business decisions rather than general trends. A successful Market Analysis roll will reveal whether a particular commercial variable is moving up, down or holding steady at the moment. A critical success will also indicate whether that trend will continue or reverse in the future, which can be used to answer hypothetical ("what if") questions. Failure results in no clear answer; critical failure means the answer is *wrong*. Modifiers: +3 for Mathematical Ability.

Shipmaster/TL (Mental/Average) *Defaults to IQ-5, Astrogation-3, Aviation-4*

The professional knowledge of spaceship operations and procedures, port protocols and ship's business. Shipmaster is an ultra-tech version of Sailor skill (p. CI154), and covers the information in Chapter 4. It is to spacecraft what Aviation skill (p. CI153) is to aircraft; these skills default either way at -4.

Chapter Six

Campaigns and Adventures

Pilot Talk – Chrome for the Campaign

Much of the action in a mercantile campaign will take place in and around starports – which means in the company of pilots. Pilots, like all professional specialists, have their own terminology and jargon. A few words of it sprinkled here or there can add flavor to a ***Far Trader*** campaign; see *Traffic Control Procedures* (p. 62) for more examples.

Pilot's License: Anyone with Piloting skill at level 12 or better is a qualified pilot and holds a *pilot's license* (a form of operator's certificate; see p. 83).

Continued on next page . . .

Bottom line up front: Merchants are in business to make money. This doesn't mean that a ***Far Trader*** campaign has to be an epic of unbridled greed – after all, adventure, travel, fun, revenge, escape and romance are all equally valid themes within a mercantile framework. But the GM should keep in mind that most merchants *are* in it for the bucks, and will act accordingly.

Mercantile Campaigns

In a mercantile campaign – as in *any* kind of campaign – some techniques will work better than others:

Don't take this advice too seriously. Everything that follows is a *suggestion,* not a rule. The GM should run the kind of campaign that he and his players enjoy. If this means breaking every one of these principles, that's fine! (In fact, a lot of great adventures could *start* with ignoring one of these suggestions.) This has been said often enough in the past, but it always bears repeating.

Create a world for the PCs to live in. ***Far Trader*** campaigns tend to be spread over a number of planets – more so than just about any other sort of ***Traveller*** campaign. Yet the characters still need places to eat, relax, find special goods and services, recuperate and make repairs; they need friends and family, lovers and rivals, patrons, contacts and enemies. It's the GM's job to design a viable "living space" for them.

One technique is to give the merchants a home port that they can return to, allowing them to rest between adventures, have homes and families, etc. Their adventures will take place on voyages away from home, and may even include the extra spur of finding a way home at journey's end. This is realistic, especially for the crew of a subsidized merchant liner on a set route.

What if the traders' home is aboard ship, though? The GM should develop the amenities mentioned, but spread them out across several planets. The PCs' bank may be on one world, their favorite resort on another, a shady dealer in "special" goods on a third, and the port where they make their annual maintenance on a yet a fourth. This doesn't have to be decided all at once; services and contacts can be placed as needed during the course of the campaign. Still, a certain amount of forethought can prevent a detour to some backwater world whenever the traders need some advice.

Make every port different. Think about the major (and not-so-major) ports of the real world: New York, Tokyo, Hong Kong, Singapore, Charleston, Houston, Port au Prince, Sydney, Mombasa. Each name conjures up a different image; the GM should strive to make each port in the campaign equally distinct. This doesn't have to be a lot of work, and goes well with the idea of spreading out services. Put one memorable location or NPC in each port and it will stick in the minds of the players.

Include some stable events and characters. Given the number of variables in a merchant's life – ports, cargoes, passengers, adventures – the GM should make an effort to preserve as much continuity as possible. Recurring friends and villains make good plot devices. Rival ships and genteel competitors can be used again and again (just not too often). A large, dispersed enemy or patron (like a megacorporation), with many parts that can be encountered under different circumstances, is also a good choice. It may be the *only* choice the GM has for handling certain disadvantages (like Enemies).

Running gags can be useful to tie adventures together, if used in moderation. They are also a good way to ensure that obscure quirks come into play. For instance, if one character has the quirk "hates seafood," it can be fun to include a hold full of frozen prawns in one adventure, a passenger who only eats fish and rice in another, etc.

Don't let the PCs burn too many bridges. Most merchants build their success on a knowledge of the markets and personalities that they have to deal with. This means that they must be allowed back onto the worlds that they have come to know.

There is a tendency on the part of players to take whatever action seems likely to solve their characters' immediate problems, without considering the consequences. GMs unwittingly contribute by demanding excitement and a climactic ending to each scenario. If the PCs are wanted on or have been kicked off of every decent planet in the subsector, they may have no choice but to move on. This may happen anyway, but GMs should try to limit the number of adventures where this outcome is almost unavoidable.

Avoid clichés. Look deep into my eyes and repeat after me: "No Ancients. No psionics. No Ancients. No artificial intelligences. No Ancients. No killer biotechnology. No Ancients . . ." Of course, some or all of these elements may eventually enter the campaign, but if used sparingly, they will keep their freshness and ability to hold interest for much longer.

Dare to be stupid. ***Far Trader*** campaigns tend to be small-scale affairs; they aren't about saving the world every morning before breakfast. This means that the problems – and payoffs – are small as well, and are as often the result of simple human nature and its flaws as of any grand plan or design. Plan scenarios around ordinary people in an extraordinary world and show the players the adventures in everyday life among the stars. That way, when the time *does* come for them to save the universe, it's a major climax and not just another day on the flight line.

Use every die roll as an excuse to roleplay. There isn't much roleplaying potential in shooting someone – either he's hit or he's not. The roleplaying comes before or after the battle. Most die rolls made in a mercantile campaign are about people, however: influencing them, understanding them, persuading them. The GM should make extensive use of situational modifiers. Don't let the players talk *about* what their characters are saying! Make them *say the words* in character. Most players don't really have Fast Talk-18 (we hope), so the skill roll still belongs to the character, but applying an appropriate modifier for the player's behavior or ideas can involve him in what his character is doing.

Of course, this implies that the GM is ready to do some serious theatrical improvisation as well, but we never said this would be easy . . .

Pilot Talk – Chrome for the Campaign

[Continued]

Hours: Pilots keep personal logbooks of the time they spend behind the controls. This is an objective measure of their level of experience, and is used to determine their qualifications for more advanced aerospace ratings.

To determine the "hour level" of a starting character, use the *Improvement Through Study* rules on pp. B82-83 (this is for "color"; it does not imply a one-to-one correlation between hours and character points). Assume that the first point of Piloting skill was gained through intensive study under a teacher, either on the job or at a formal flight school. That's 200 hours. Additional points were probably gained on the job, at 800 hours per point. For example, Mme. Matrise, who has 8 points in Piloting, could say that she has (200 + 7 × 800 = 5,800) about 6,000 hours at the controls of a starship. Any more than 2,000 hours per year would be highly unusual; 500-1,000 is more normal.

Ratings: Pilots are also concerned with the specific makes and models of vehicles they are qualified to fly. This is an application of the specialization and familiarity rules on p. B43. A pilot with Piloting (Contragravity) and Piloting (Spacecraft) would say he is *rated* or *qualified* in both. Each familiarity (for a starting character, one type of vehicle plus one additional type per skill level past 14) is a *type rating* in a particular make or model of craft. Mme. Matrise, with Piloting (Spacecraft)-15 holds type ratings in two types of starship – probably the destroyer she flew as an ensign in the Imperial Navy and the gig she learned in flight school.

Terminology like this isn't confined to the bridge. Engineers talk about the hours they've spent in the drive room and the types of drives they've seen, pursers count the number of voyages (one per 80 hours or so) instead, and *everyone* will know how many years of service they have.

Travelers in general will have their own slang. For instance, only a hopeless *groundhog* or *flatlander* would say that something was located *on* Glisten. Glisten is an asteroid belt: everything there (except a few antennae, perhaps) is located *in* Glisten.

Things to Do on Port Liberty

Previous chapters cover in great detail the work required while a ship is in port: meeting brokers, discharging and loading cargo, maintenance, paperwork, market research and analysis, etc. But what do starship crewmen do with their free time? Since they've been cooped up in a tiny ship for a week or more, top priority is usually to take a break. Fortunately, there's a whole new world to experience beyond the gate in every port.

Eat a decent meal. The steward tries hard (or perhaps you are the steward?), but the one of the first things that most spacers think about on making planetfall is *real food.* The standards (Astroburgers, etc.) are all available, but local cuisine can be an adventure in itself.

Sleep in a real bed. The second thing that a spacer looks for is some place – *any* place – that isn't the same six bulkheads he has been staring at for eight or nine days out of fourteen. Even if it's only for a night, it's nice to sleep between clean sheets that don't smell faintly of recycled water (even if the engineer *does* claim the smell is purely psychosomatic).

See the sights. Most planets, even the least populous, will have museums and tourist attractions. For example, Leedor, on Aramis (SM/Aramis 3110, not SM/Trin's Veil 2540), has an extensive Museum of Technology.

Take a tour. Individual sites or activities are sometimes popular enough to warrant established tours with regular guides. These are seldom expensive, and are good for crewmen with limited time ashore. After all, what human could visit Terra (Solomani Rim/Sol 1827) and not pay a visit to Olduvai Gorge?

Go shopping. Tired of stale uniforms and drab walls? Head down to the bazaar, or the *Marktplatz,* or the mall. Many startowns have a row of trinket-sellers outside the gate for the unwary or rushed; the best bargains and most interesting items will be found in town where the natives shop.

Go exploring. Most port cities share certain traits, yet they are as individual as fingerprints. The differences are worth discovering. Above a certain size and age, for example, they will usually have a "student" or *beaux arts* district of funky galleries, nightclubs and boutiques, distinct from the ruder attractions of startown. This is often found in either the former warehouse district surrounding the oldest part of the port or near the university.

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Fine Tuning

One benefit of playing ***GURPS Traveller*** is the availability of more than twenty years' accumulated background material, much of it online. The Third Imperium is one of the oldest and most fully developed roleplaying environments of any kind in existence. This doesn't mean that there's no difference between one ***Traveller*** campaign and the next, though. Some of the nuances are subtle, but every campaign is unique.

We have listed some classic "campaign issues" below for the Game Master's perusal. The different points of view presented here are more differences in interpretation than differences in fact. It is up to the GM to choose a point of view and determine which effects will be most evident in his universe – to set the stage by doing some "fine tuning." Each consideration is worded a question for the Game Master to answer. In most cases, the answers will fall somewhere between the extremes presented.

Imperial Cohesion and Strength

How monolithic is the Imperium? Is it a single, seamless whole, or is it nothing more than a patchwork, ready to fly apart at any moment? Are Imperial forces and agencies competently managed and led, with unlimited resources, or are they constantly beset with incompetence, internal strife and shortages?

A hugely powerful and well-run Imperium is a great place to live and do business – if you're one of the powerful. The bulk of its citizens may wish that it were slightly less competent. Of course, a loose and divided Imperium would offer more opportunities to take the initiative and rise through the ranks, but would also offer more opportunities for the individual abuse of what power it does command.

Interstellar trade and commerce tend to follow the same pattern. A strong Imperium will support extensive trade, but will also carefully regulate it to prevent disruption. A weak Imperium may have trouble building or maintaining starports on all member worlds (much less look out for free traders), but will likewise be less inclined to interfere with what trade there is.

Bureaucratic Red Tape

How common are bureaucratic controls on interstellar shipping? How carefully do Imperial and local officials check on shipping? How much information is available, and how quickly is it disseminated? Is it impossible to track the origin and destination of every vessel and shipment, or is that information routinely sent by Xboat from one subsector to the next? A related issue is whether a jump-6 Xboat network exists – replacing, supplementing or secretly running in parallel with the existing jump-4 network.

A "narrow" (limited) paper trail is easier to alter, avoid or erase than a "wide" (thorough) one. This affects smuggling, skipping, hijacking and piracy (by determining the difficulty of getting away with such crimes), and the prevalence of bribery and corruption (which depend on a lack of effective bureaucratic checks and balances). It also affects the ease and expense of ordinary shipping, which can choke to death on too much red tape.

Extralegal Activities

How common and how *successful* are piracy, hijacking, trade war, skipping and smuggling? Are transponders easy to tamper with or spoof, or are they infallible, screaming bloody murder at the least irregularity in a flight plan? Are system defenses slow, and spread too thin to adequately protect all the shipping that goes on, or does a Mayday bring a flotilla of defense boats in minutes? Does the Imperium turn a blind eye to these problems, or are pirates' and smugglers' havens routinely squashed by Imperial Navy task forces?

If piracy and trade war are rampant, interstellar trade becomes so expensive that it eventually ceases altogether – and the pirates starve. An Imperium with resources to spare for internal police duties, however, is one that may take exception many things besides outright piracy: democratic movements, drops in the tax base, challenges to the *status quo,* etc. This relates directly to the questions raised under *Bureaucratic Red Tape* and *Imperial Cohesion and Strength* (above).

Fluidity

How easy is it to make money? Does success come quickly to those who have the will to strike out on their own, or are all but the best and most carefully supported ventures doomed to perpetual misery and ultimate failure?

The figures given in Chapter 2 for freight rates and ticket prices are approximations; they could be adjusted by 10% either way without substantially changing the trade system. Needless to say, higher rates will make it much easier to succeed as a merchant shipper, all other factors being equal. This is an adjustment that the Game Master can make after the campaign is underway, to make shipping and trading either more or less profitable, in line with his goals for the campaign.

Things to Do on Port Liberty

[Continued]

See a show. At the tech levels in ***Traveller,*** electronic recordings are readily available and very sophisticated – paradoxically, this puts a premium on live entertainment. Most large port cities will have a "bright lights" district (usually adjacent to the central business district) where shows of all kinds, from comedy club to opera, can be found.

Pursue a hobby or sport. Some personal interests are difficult to indulge aboard ship. Port liberty offers the runner a chance to get off the treadmill and the amateur botanist an entire ecosystem to observe.

Take a class. It takes some rearranging of watch schedules, but crew members may be able to get a day or two free to learn about something that interests them. Language and local interest classes are especially popular. Individuals with peculiar skills might even be able to *teach* a class or give a lecture instead, with enough advance notice.

Visit friends. Characters do not develop in a vacuum. Even the most footloose traveler could have friends and acquaintances who have settled down. A reunion is just the right excuse to make a planetfall memorable.

Drink, dance, gamble and socialize. These are spacers' traditional favorites. Plenty of establishments in the port, in the startown and beyond are willing to accommodate them.

Sources of Information

So where do you find out about all the things to do in a new port? Try . . .

- Beggars or "guides" who often wait outside the gate.
- Broadcast advertisements.
- Chambers of commerce.
- Electronic news groups.
- Guidebooks.
- Information booths, kiosks or bulletin boards.
- Playbills and flyers.
- Public databases and directories.
- Shopkeepers.
- Student, independent or underground newspapers.
- Taxi drivers or other public transportation operators.

Adventure Seeds

Some of these adventure seeds are tied to specific worlds, but they can just as easily be adapted to whatever setting the GM is using for his campaign.

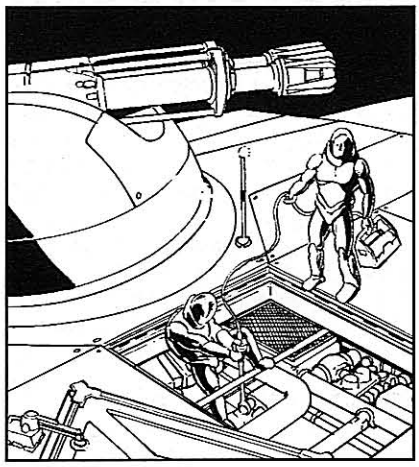
Bank Failures and Panics

Avast, ye scurvy dogs! The Bank of America is about to go belly-up!

– Oliver Wendell Jones, *Bloom County*

The sort of bank that is willing to lend to free traders is either extremely well-connected, powerful and stable, with the assets to recover its investment if the need arises – or exactly the opposite.

The bank holding the PCs' mortgage and all their ready funds just went under – the president skipped across the border into the Vargr Extents with all the liquid funds she could embezzle. Now the mortgage is up for sale. Will it be bought by another bank, with more stringent procedures and safeguards, or by the megacorp that has been plaguing the traders for months?



Beached on Tahiti

The PCs are employees of a large shipping line with trade routes throughout the subsector. After months of voyaging with only a day here or there for port liberty, they decide to take a break. They find a pleasant backwater world (low CR, friendly natives), and request and are granted discharge. For a few weeks, they make the most of their vacation, but then the itch to move on catches up with them again.

On inquiring, they discover that their line no longer calls here. Unknown to them, the company restructured its routes while they were enjoying the sights. Now, with their funds all but gone, they have to find their way back to the main shipping lanes (and hopefully their jobs) again.

Continued on next page . . .

Technical Issues

Two technical questions can also have an impact on commercial shipping:

The viability and utility of external drop tanks for jump fuel. External drop tanks let a ship burn most or all of its jump fuel and dispose of the bulky fuel tanks *prior to* a jump. Since fuel tanks take up a lot of space in conventional jump ships, this results in considerable savings in ship size. Drop tanks provide a way to extend the legs of jump-capable ships, but perhaps to the point where the campaign is no longer recognizably ***Traveller.*** Their impact should be carefully considered before they are widely implemented.

The competence of automatic pilots. "Autopilots" – be they robot brains or sophisticated software – could conceivably produce ships capable of landing and taking off by themselves, with only general directions from their living crew. This is a logical extension of real-life trends in automation, but it also has the potential to short-circuit many dramatic situations.

The Vagrant Gypsy Life – Free Trader and Tramp Campaigns

Free Trader campaigns are about overcoming obstacles and winning through adversity. This can be played very "narrow," with the day to day minutiae of a trader's life (customs, maintenance, cargo, competitors) providing the necessary hurdles, or very "broad," with pirates, disasters, weird aliens and Ancient artifacts breaking up an otherwise successful trading routine.

Free Traders go where they please. The freedom of the trader's life, of being your own boss, is its greatest appeal – even if it often amounts to the freedom to starve.

In many respects, the typical Free Trader campaign resembles air- and seaborne trade operations in the South Pacific of Earth in the 1920s and '30s. ***GURPS Cliffhangers*** can be a useful source of inspiration for Free Trader campaigns of the "broad" stripe.

Characters

Choosing characters for a Free Trader campaign is fairly simple: there are a certain number of crew positions and qualifications, and someone – PC or NPC – must fill each one. This doesn't mean that there aren't many ways of arriving at the same results; the structure offered in Chapter Five (p. 79) is only a guide. In particular, former military characters often have the right mix of skills to fill one or more roles. Unusual character choices, although outwardly ill-suited to their shipboard duties, may have just what it takes to assist the crew when the chips are down.

Adventures

Tramp merchants must always be thinking about where their next cargo will come from. The easy links and routes are already covered by the lines; tramps earn a living by picking up what's left. Like chess players, their success or failure depends on their ability to see the "board" many moves in advance, predict results and take advantage of opportunities. The GM should therefore determine some results in advance and do a certain amount of foreshadowing: nothing overt, just the hint that this merchant line is experiencing trouble on that planet, or that a new market is about to open up. Judiciously mixed with false leads, this sort of GM "cheating" gives the players the feeling that the universe makes sense, and they will act on their understanding.

Speculative trade is vital in this regard, both as a sideline to top off the hold and as a stopgap when regular cargoes are unavailable. The GM should have a list of generic cargoes ready to go and a few "special" items held in reserve. Speculative cargoes need not be large enough to fill the entire hold; a single *objet d'art* or case of fine wine may be all that is required. Letters and incidental packages also fall into this category.

Even though a tramp follows no set route, it is still in a free trader's best interest to work a relatively small group of systems – certainly no more than a subsector and perhaps considerably less, depending on astrography and jump routes. This allows the captain and crew to develop a familiarity with their market, make contacts on the planets they frequent and learn the pitfalls that await them.

The GM should choose a small but varied cluster of worlds, close to but perhaps poorly served by the regular trade routes. If needed, the GM can use the PCs' questions about markets to direct them to the stellar regions he has prepared for them, or plant leading rumors, or play the part of their loan officer, offering helpful (but biased) advice. Again, predictive analysis is the key to finding and exploiting opportunities, if not always the path to riches. For that, a trader needs equal parts luck and daring.

Passengers

A free trader in jumpspace is its own world – a *tiny* world. The crew and passenger living areas are collectively the size of a small bungalow, but there's nowhere else to go and nothing to see for at least a week. The crew shares this space week in and week out, possibly for years, with only one potential bright spot: the passengers.

Far from being the nuisance that they are often portrayed to be, passengers are one of the few sources of variety aboard ship, and a welcome distraction from the all-too-familiar faces of one's shipmates. Travelers who choose a tramp freighter as their mode of transportation are rarely dull or ordinary, and simple conversation is often all the entertainment that any crew requires. First-timers are always fascinated with the operation of a starship and will be delighted at any sort of tour the crew cares to arrange – something that would never be permitted on a large passenger liner. More experienced hands will have their own stories to tell, many of which are valuable sources of insight into events planetside. Any passenger may have hobbies or interests that coincide with those of the crew, and may be willing to teach or share information.

By long custom, the last formal meal before zero-hour (the anticipated breakout from jump) is taken by crew and passengers together at the captain's table – which may in fact only exist for this one meal. It is often a difficult parting, especially for passengers who have spent a long time on board.

Charters

Large merchant lines use charters as a means of making up temporary shortages in shipping capacity (e.g., due to short-term market factors, or while building new ships of their own). Player-character ship owners can be on the receiving end of a charter, renting their ship and crew for someone else's use. Charters come in three forms:

Bare-Hull Charter: Provides a ship, but no crew, fuel or provisions. This is cheaper for the charterer, but also risky – a party would have to have impeccable references and a flawless business plan. As a result, this arrangement applies mostly to corporation-to-corporation charters.

Voyage Charter: Provides a ship, complete with a crew and all provisions, for the duration of one voyage. This is common practice when the charterer has a specific goal in mind – setting up a mining colony, for instance.

Time Charter: Similar to a voyage charter, but for a specified period of time (usually six months) rather than a fixed destination. This is the most likely arrangement for PC charters.

Charters are an excellent mechanism for getting a group of traders involved in a different kind of adventure for a change (see *Crossover Campaigns,* p. 117), or for providing a framework for a related series of adventures. For example, if the traders' ship is chartered by a scientific researcher and his team, they could install a laboratory and holding cells in the cargo hold and embark on a voyage of exploration. If the charterer is a diplomat and his entourage, the trip could be one trade negotiation after another, with the crew providing moral support, acting as gofers (or spies) and (not coincidentally) adding the key insight that breaks the deadlock.

Adventure Seeds

[Continued]

Cargo Cults

When the company decided to run the blockade on Pscias (SM/Regina 2106), establish trade relations with the natives and present the Imperial Interstellar Scout Service blockade with a *fait accompli,* it sounded like a good idea. But now the second expedition is overdue, and the PCs have been sent in to find out why.

The ship is on the planet, all right, but the traders are nowhere to be seen. There's no sign that the IISS has discovered what's going on. Instead, it seems that the natives are there, waiting for them. Perhaps they've become accustomed to off-world goods – so much so that they *won't* wait for more . . .

Cash on Delivery

The Imperial Consul on Noctocol (SM/District 268 1433) mentions to the captain that he'd pay dearly to get his hands on the latest Bilstein Flier BF1120 grav bike from Glisten (SM/Glisten 2036). Not only is the Consul an avid and frustrated racer, but also an influential friend to have, with many contacts in the Imperial Diplomatic Corps.

China Tea Races

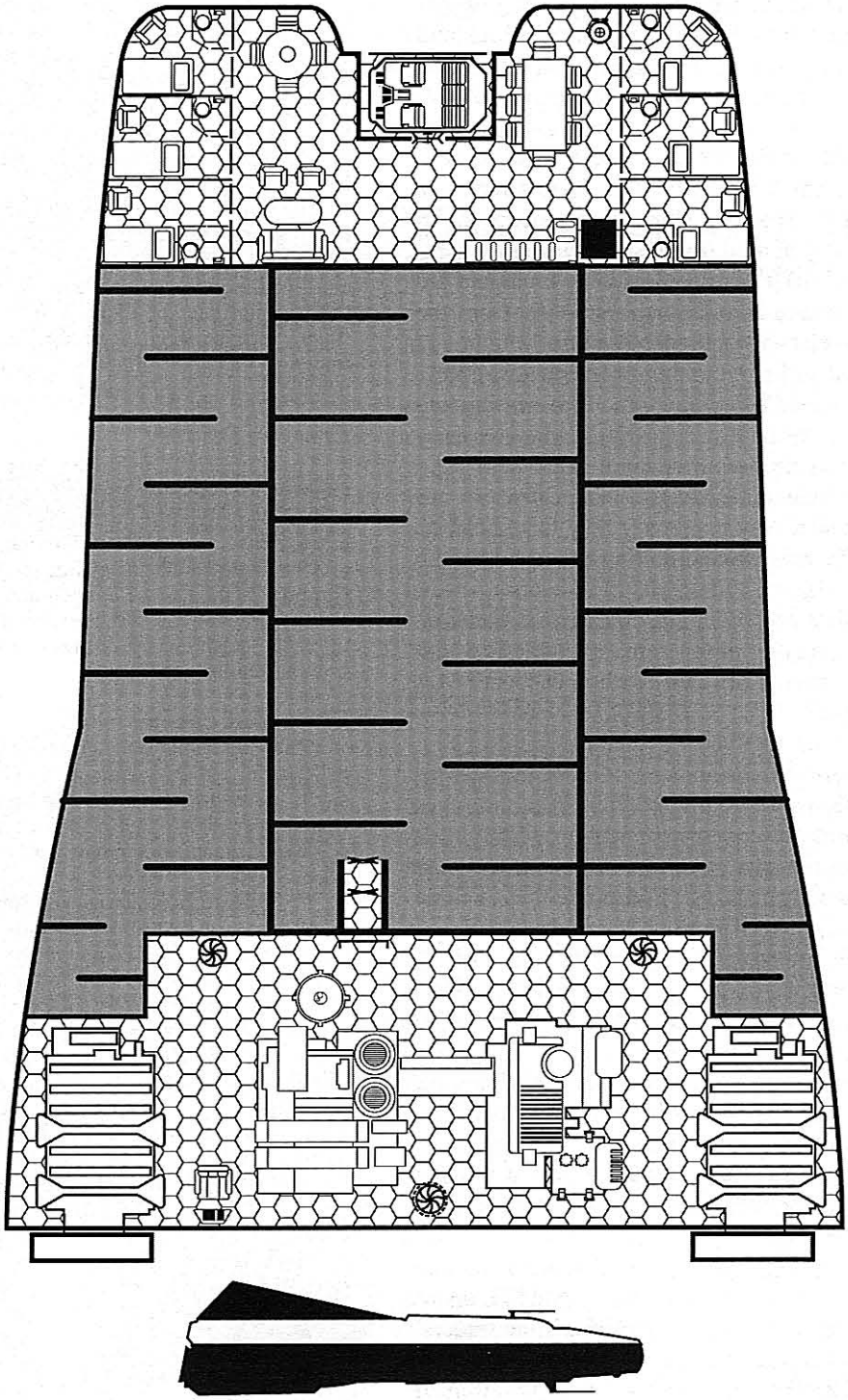
"Tea race" is the name given to a competition for trade in a luxury food item that is harvested seasonally. The first load of a new season to arrive at each major consumer planet commands a premium price.

The loamtruffle harvest on Squallia (SM/District 268 1133) comes only once every 3.6 standard years, due to the planet's long revolution around its primary. The fungus-like truffles are in high demand as far away as Mora (SM/Mora 3124) and Trin (SM/Trin's Veil 3235). The *Interminable Chatter,* flagship of the Mora Spice & Liquor Company, suffered a breakdown on Egypt (SM/Glisten 1737) en route to Trin, perhaps as the result of sabotage. Its sister ship, the *Blue Streak,* is waiting at the MS&LC trading base in Glisten (SM/Glisten 2036), and can carry the precious cargo the rest of the way – if the PCs accept a charter and get it there in time.

Continued on p. 112 . . .

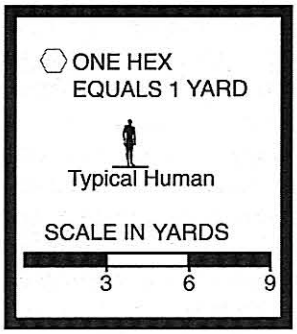
Empress Marava-Class Far Trader

Upper Deck

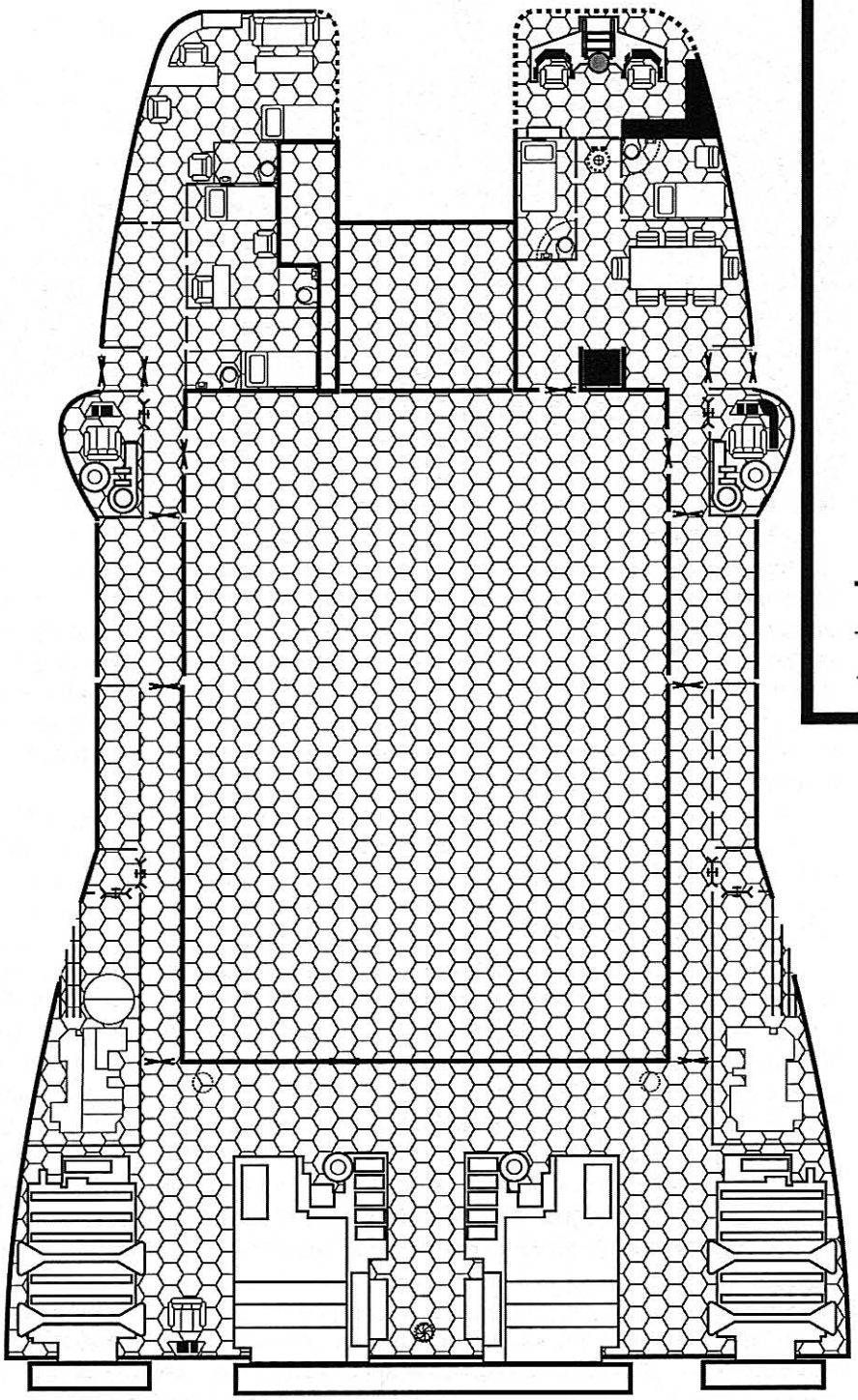


Far Traders get their name from their increased range over that of Free Traders. The larger drives and increased fuel consumption of jump-2 reduces the cargo and passenger capacity of the *Empress Marava*-class, but less cargo is better than no cargo on the routes they service. The design of the vessels is optimized for frontier cargo loading, with the large main hatch located close to the ground, between two bow projections, one typically housing the bridge, the other the captain's quarters and office. The *Empress Marava*-class is most commonly encountered in areas of a thinner stellar density, where the larger distances between stars are less of a barrier and jump-1 "mains" are less common. Far Traders are the second most common ship in tramp freght service, after the *Beowulf*-class.

No one knows why the class is named after Empress Marava (who ruled for a few months in 620), but it inspired many owners to choose similar names for their vessels, choosing from the list of empresses of the Third Imperium (Jaqueline, Nicholle, Arbellatra, Margaret, and so on). Vessels in the Solomani Sphere tend to pick names of female rulers from Terran history (Elizabeth, Hatshepsut, Maria Theresa, Wu etc.).



Lower Deck



Deck Plan Symbols

- Iris Valve
- Iris Valve, Overhead
- Iris Valve, Floor
- Iris Valve, Floor and Overhead
- Pressure Hatch
- Pressure Hatch, Floor
- Pressure Hatch, Overhead
- Pressure Hatch, Floor and Overhead
- Acceleration Couch
- Fresher
- Sliding Door
- Armored Partition
- Airtight Bulkhead
- Access Panel

ONE HEX EQUALS 1 YARD

Typical Human

SCALE IN YARDS

3 6 9

Adventure Seeds
[Continued]

False Flag

Baldomero Muehlegg, a stockbroker, hires the PCs to gather information on Irkirkhaamn Corp and do whatever it takes to trash the company's value. Delayed shipments, accusations in the local media, mixed up invoices . . . Exactly what is up to them; Muehlegg doesn't *want* to know. He promises a nominal sum up front and a piece of the profits he'll make from grabbing the company's stock on the cheap. Once committed, though, the group is unable to contact him again, whether or not they succeed at their mission.

Eventually, they may learn that Muehlegg was backed by Bay Thi Irkirkhaamn, the majority stockholder of Irkirkhaamn Corp. The operation was all a scam so that she could buy out the other owners at a discount. Exposing this fraud will score some points with the authorities – which the group may well need, depending upon what actions they took initially.

Fashion Statement

Last night at the Governor's Ball on Mille Falcs (SM/District 268 1637), the Governor's son – recently returned from finishing school in Glisten – wore a traditional folk costume from Sorel (SM/Glisten 2137). Suddenly, genuine Sorellian folk costumes are the only thing worth wearing to balls in this community of senior officers' families. Whoever gets to Sorel first could buy a load of costumes and sell them at a huge profit, especially if they got back before the next grand ball (in two months). Who knows? The fad could spread to the rest of the fleet – even to the subsector capital on Mertactor (SM/District 268 1537).

The Gratitude of Princes

Do not meddle in the affairs of wizards, for they are soggy, and hard to light.
– The National Lampoon, *Bored of the Rings*

Meet Jacques Couer, financier – the man who fronted the money for the Fifth Frontier War to Duke Norris of Regina and turned him into something other than just another backwater noble ignored by the Emperor. Well, the war has been won, the Duke made an Archduke and Jacques (whose fortunes have fallen to ruin in the mean time) would like his money back, please. All 1.5 trillion credits of it. He would like the PCs to help, but until he gets paid, he has nothing to offer them. Is he telling the truth, or the biggest Big Lie behind the Claw?

Continued on next page . . .

The Company Store – Corporate Campaigns

Corporate campaigns are about living the merchant's life without the hassles of going it alone. Merchant operations are the backdrop against which corporate campaigns are played, not the play itself. It's not just a job – it's an *adventure.*

Characters

Player characters won't usually make up the entire crew in a corporate campaign; indeed, they may only represent a small fraction of the crew on the largest merchant vessels. This can be handled in two ways:

Senior Staff: The PCs are the vessel's officers – the captain, purser, cargomaster, surgeon, deck officers and engineers – probably on a small subsidized merchant or liner, unless the group is quite large. This requires a significant investment in Rank and skills, but has the advantage that the PCs will be in control of a lot of what happens aboard ship. If some or all of the PCs take the Ship Patron advantage (p. 100), the ship is theirs to run as they please, subject to the restrictions that come with the advantage. Otherwise, they are simply employees, working at a job and carrying out instructions from the corporate office.

It is sometimes wise to make the ship's captain an NPC. This prevents hard feelings (many *players* can't bear taking orders from their peers) and lets the GM direct the course of the campaign in a natural fashion. The GM should create a detailed NPC for this role and for any other senior staff position not filled by a PC.

Ordinary Crew: The PCs are younger, less experienced in mercantile shipping (though they may have extensive backgrounds in other areas) or part of a large crew. On a small vessel, they can come from any department and still know one another. A good post for a PC to fill is that of communications or sensor operator, due to the amount of time spent on the bridge, privy to what goes on at the top. On a larger vessel, it may be appropriate for *all* of them to work in the same department or section. As well, the crew of the ship's boat is often drawn from many departments, providing a rationale for bringing together crew from all over the ship and sending them on frequent side trips.

This option brings with it less control for the PCs, but less responsibility and more freedom as well. They can take their liberty and get into as much trouble as desired, confident that the ship will still lift – if they can get back in time to meet it.

Working on Down the Line

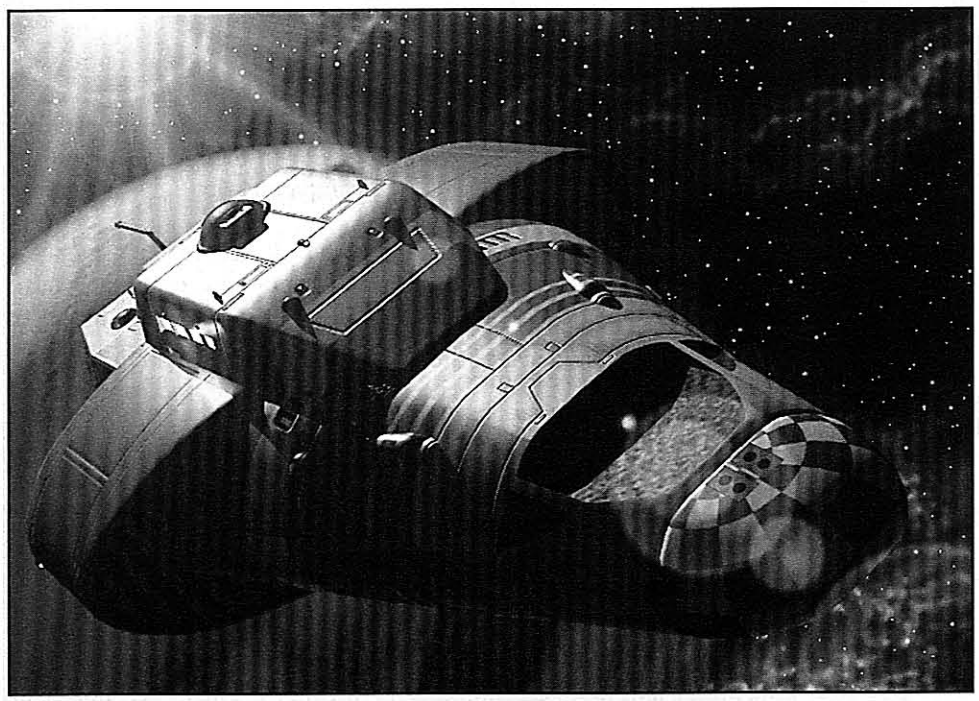
If the PCs are employees of a large or widespread shipping company, there is no reason to believe that they will spend their entire career (or even most of it) on one ship with the same crewmates. Crew members come and go with great frequency throughout a voyage, as new crewmen sign on and old ones are discharged. Even officers (captains, mates, engineers, pursers) will be transferred from ship to ship as suits the purposes of the line. If the PCs want to stop on a world longer than the ship that's carrying them, let them; there will be another liner along in a few weeks or so. Similarly, if the PCs are officers, it should not be unusual for an NPC to miss recall or ask to be discharged just before the ship lifts – leaving the first officer to scramble for a replacement or go short-handed.

Adventures

Corporate campaigns can revolve mostly around the ships themselves, or they can encompass office politics and financial affairs as well. The closer the PCs are to the top of the corporate pyramid, the more of this sort of activity they may be privy to.

Trade War

Trade war is any form of economic warfare between business entities – especially megacorporations – that extends beyond peaceful competition in the marketplace. It can even bring companies into direct physical conflict in the form of



destructive raids, industrial espionage and other violent acts (see *Trade Wars in Shipping,* p. 26).

Trade wars are tolerated by Imperial officials as as an outlet for corporate rivalries that would otherwise result in widespread economic dislocation. As long as the destruction is limited to the property and personnel of the corporate entities involved, and no one else is hurt, officials will allow things to run their course without intervening. If things get out of hand or the destruction threatens to spread too far, the local Duke or his representatives will step in; if necessary, the Imperial Navy will be summoned. Most Imperial corporations will resort to trade war only as a last resort, and always with certain assumed limits in force, similar to the Imperial Rules of War (pp. GT41-42):

First, customers and bystanders are considered "off limits" during a trade war. Violence cannot extend to them, they may not be injured or killed, and their property may not be damaged as an incidental effect of any trade war action. Employees, on the other hand, are considered soldiers in the war and are fair game. The equipment and installations of the companies involved are also considered fair targets.

Second, since the object of trade war is to disrupt the enemy company's operations, there are no restrictions on actions against the enemy's mercantile operations. The resultant effects of trade war on customers (lost shipments, delayed deliveries, etc.) are accepted – even intended – in the efforts to destroy the rival. This is an exception to the previous rule. In many cases, insurance will cover some or all of a customer's loss.

Third, the trade war must not become a cause unto itself, such that its original aims have been forgotten. Once a company begins to win a trade war, it must let its opponent withdraw and continue its operations elsewhere. Expenses must be watched, and the cost of totally destroying an enemy company is usually too great to justify the resulting gains.

Usual goals in trade war are to completely control a specific market or trade route, or to drive the rival company from a specific field (such as electronics or pharmaceuticals).

Merchant Prince

Sooner or later, even the most determined GM will have to concede that the PCs have succeeded at becoming rich. Now what? Not everyone who enjoys the *quest* for success is ready for, or even interested in, carrying on to the next level.

Adventure Seeds

[Continued]

Grav Tank, Only One Owner – Cheap!

The Fifth Frontier War is over; lots of military-surplus equipment is still going cheap. If the PCs can cover the payments, they could make good money shipping ex-Sword Worlder gear from the Border Worlds to the Vargr Extents. On a smaller scale, they could pick up some surplus if they happen to be nearby when a mercenary unit goes broke.

No Imperial Entanglements

The captain is approached by Andras Suryaman, who wants a ride out of the system. He is willing to pay *very* well, but does not want to be listed on the manifest as a passenger, or at all. No cargo – just himself, several friends who will go in cold sleep and no questions asked.

Pirates and Patterns

If there's one thing that pirates love, it's merchants who discover a successful niche and exploit it – over and over and over. Predictability is the first step toward vulnerability, and success should never go unpunished. In this case, "success" means holds full of valuable goods.

Obtaining this sort of information requires a semi-legitimate front operation (ship or fixed facility) that can troll for rumors, signs of unusual wealth, regular visits to the same world by tramp freighters, etc. Once they've gathered enough data to make a prediction, they pass it on to their pirate confederates. One day, when the merchant comes out of jump, the pirates are waiting to relieve him of his cargo.

The Red Line

Imperial Navy vessels sometimes call at ports that lack naval bases. Ships may have cause to land (if small enough) or dock at the commercial starport. The Imperial Marines or security police guarding the ship establish the "Red Line," marking the boundary of their responsibilities, and are notoriously unsympathetic to anyone that crosses. Flat on the ground with a plasma rifle pointed at your head is the *least* of what can happen.

Continued on next page . . .

Adventure Seeds
[Continued]

A Rock and a Hard Place

Between them, Agarwal Brokerage and Faravashi Traders have sewn up trade in the Singer system (SM/District 268 0940). They are hostile toward one another, to the point of trade war. Each company wants an exclusive contract with the PCs, to prevent them from dealing with the other side. The rivals are not opposed to shooting or sabotage if the opportunity presents itself. The traders are stuck in between and have to choose one side, the other or neither.

Salvage Operations

Coming out of jump in a backwater system, the crew picks up something nearby on radar: a drifting metallic object, possibly a ship. Given that this is a seldom-used approach, no one else may know about it.

Possibilities: It's only an asteroid – maybe valuable, but probably not. It *is* a ship, and the insurance company is looking for it. It's an old ship with no working engines, probably only good for scrap; how to get it back to port? It's some sort of weird ship burial for a rich warlord, left to drift in space. Of course, there may be something *else* on board!

Seven Suns Shipping

Seven Suns Shipping, a struggling trading and shipping company, hires the PCs to ship cargo. It can't afford to pay much: significantly below operating costs. The company will give the traders a piece of the profits, or even a share of the company, if they can help Seven Suns get back on its feet. Argyle Factors, a hostile and much larger company, has been driving Seven Suns out of the subsector. The traders will need to make shipments, defend them and perhaps investigate Argyle.

Argyle Factors has highly placed contacts in the Imperial Starport Authority. It also has some "pirates" working for it. If the PCs can expose Argyle, they will put the company out of business or at least deal it a serious setback. Of course, any equipment they successfully salvage from the "pirates" will be theirs, with a share going to Seven Suns. In the end, if the group is successful (or rather, if Seven Suns is), Seven Suns will offer to buy back their shares – at a significantly increased price, based on their new-found wealth.

Continued on p. 116 . . .

One possibility is to retire the characters as NPCs; the GM can assume that this is how many of the powerful figures that the PCs have dealt with as Patrons or Enemies got their start. Another alternative is to change the assumptions of the campaign; e.g., by plunging the Imperium into civil war or releasing a devastating plague. There is also a third option: Let the characters keep their wealth (and the players their characters), but change the basis of the campaign – let the PCs become merchant princes.

Once the PCs own an interest in more than one ship, it becomes more-or-less necessary for them to establish a home office or base of operations to run their business from. This may be the only way to get them all together in one place to run an adventure, given the communications and transportation lags inherent in the ***Traveller*** universe. At first, this base may simply be the faithful Far Trader that they've used on their climb to the top. Later on, however, their widespread commercial interests will need to be able to consult them for policy decisions on a routine basis, leading to a more settled lifestyle.

How the PCs conduct themselves beyond this point is up to the GM and the players – ***Far Trader*** is not intended to cover corporate operations on a multi-world scale. ***Pocket Empires*** (for ***Traveller***) and ***Corporate Shadowars*** (from FASA) may prove useful here.

Ships

Merchant princelings will need a different style of ship than their less-ambitious brethren. It is possible to run a merchant empire using small ships such as the *Beowulf*-class Free Trader, but larger vessels are better.

Freight Liners

Freighters are the workhorses of interstellar commerce: necessary, but not glamorous (see the LASH tender on p. 140, or the bulk freighter on p. 140). Adventures aboard a corporate freighter will resemble free-trader operations: problems with special handling, mechanical difficulties, dock-worker strikes, etc. Some freighters carry a few passengers as well (usually fewer than 12); their accommodations are similar to those on a free trader, as are their relationships with the crew.

Most freighters will have crews of less than 100; even the largest will have only 200 or so. Ports of call will be directly related to the size of the vessel: ships of 10,000 dtons or more will stick to Main Routes, those of 1,000 to 10,000 dtons to Feeder Routes, and only subsidized merchants of less than 1,000 dtons will ply the Minor Routes.

Passenger Liners

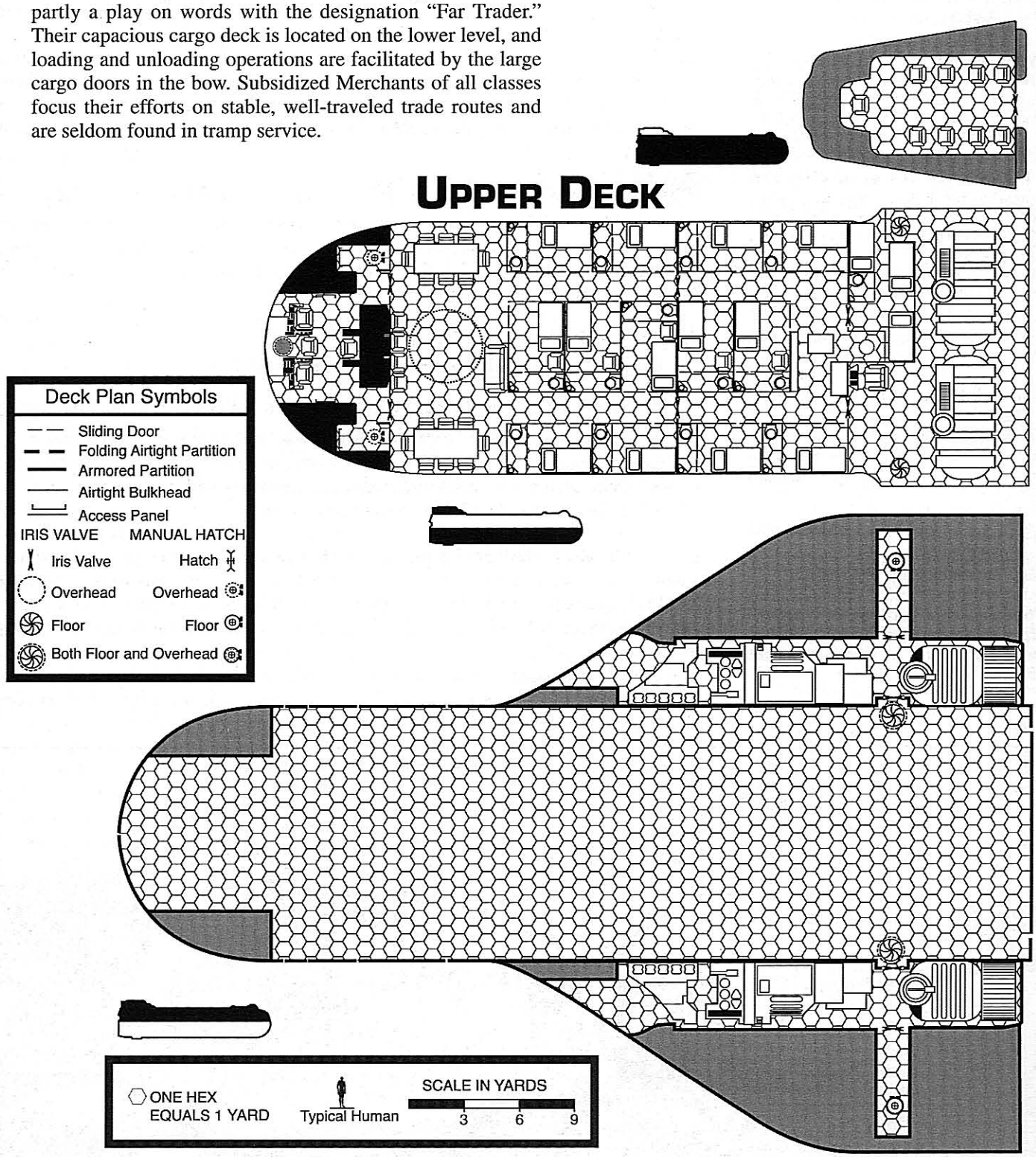
Passenger liners are the thoroughbreds of the shipping world. They are generally larger and have a higher jump capacity than the freighters on their routes. These vessels are essentially gigantic, mobile hotels with service staffs numbering in the hundreds, providing all the amenities for their guests. Given that they must provide sufficient entertainment to keep their passengers happy for a week at a time, it is no wonder that they are so large and diverse, with on-board theaters, swimming pools, restaurants and shopping arcades. Due to the huge investment they represent, these ships will remain confined to the Main Routes.

Player characters can serve on one of these monsters in many capacities, with entertainment and security being added to the usual gamut of shipboard positions. Adventures will likely center around passengers and fellow crew members: their idiosyncrasies, secrets, passions and deeds. Any sort of character-driven plot is possible; books, movies and plays can all be useful inspirations.

In a different class (in both the shipping and social sense) are the smaller ships that operate on the Feeder and Minor Routes, or provide express service on the Main Routes (like the Tukera Long-Liner, p. 139). These lack the specialized facilities of the big liners, but provide routine service to worlds off the Main Routes. Subsidized liners (like the *Stellar* class, p. 138) provide government-sponsored service to worlds too unprofitable to merit complete service of their own.

Akkigish-Class Subsidized Merchant

Akkigish-class Subsidized Merchants are nicknamed "Fat Traders," partly because their rotund appearance, and partly a play on words with the designation "Far Trader." Their capacious cargo deck is located on the lower level, and loading and unloading operations are facilitated by the large cargo doors in the bow. Subsidized Merchants of all classes focus their efforts on stable, well-traveled trade routes and are seldom found in tramp service.



Adventure Seeds
[Continued]

Startown Liberty, Part I

Ever wake up in the local lockdown and wonder just how you got there? Right, you guessed it.

Possibilities: Drunk, hypoxic (lack of oxygen), blow to the head, Mickey Finn, mistaken identity, public brawling, resisting arrest, sudden illness (*looks* like an alcoholic stupor).

Startown Liberty, Part II

Ever have one of your crew members go missing just before liftoff time, when your choices are to leave him behind or to stay and pay a big, fat penalty clause for not getting the goods in your hold delivered on time? Right, you guessed it.

Possibilities: amnesiac, drugged, drunk, hospitalized, ill, injured, jailed, jumped ship, kidnapped, lost, on the lam, overslept.

Viva La Revolución!

The PCs are sympathizers in a revolt. They need to earn big money to keep the fires of Revolution burning while maintaining their ship and avoiding the authorities.

We Have a Special Relationship

A world is hauling itself out of dependency on a megacorp – perhaps after a revolution or unification. They are willing to offer access and good deals to anyone prepared to deal with them. Of course, there's the minor issue of megacorporate goons . . .

Outside the Law – Pirate and Smuggler Campaigns

There isn't a merchant alive who hasn't been tempted by the Dark Side; stepping outside the law can often mean a quick credit. Of course, it can also mean an equally quick trip out the airlock without the benefit of a vacc suit. As a result, many merchants operate in a gray zone, taking advantage of shady opportunities as they arise, but walking the straight and narrow path when it looks like they might get caught.

Illegal activities can be used as an occasional sideline in *any* kind of ***Far Trader*** campaign. Alternatively, an entire campaign can be built around the excitement and danger of such activities; see ***GURPS Swashbucklers*** or ***Robin Hood*** for more suggestions.

Smugglers and Black Marketeers

The *black market* or *shadow economy* handles commerce in illegal goods and services. Smuggling is a subset of the black market: importing or exporting goods without paying the required duties and taxes, or without complying with a system's licenses, registration requirements or quotas.

Legal Goods vs. Contraband

Goods are *restricted* or *prohibited* on one of three bases:

1. The presence of an Amber Zone (p. GT19) or a Red Zone (p. GT56).
2. The goods' Legality Class (LC) as compared to the local Control Rating (CR).
3. Social factors like xenophobia and chauvinism – which often imply tariffs, as discussed under *Trade Barriers* (p. 16).

Goods may be further classed as *legal* or *illegal* (*contraband*), depending on circumstances. Running an Imperial Navy blockade to bring guns to an interdicted world is illegal; running supplies to Shinothy (SM/Regina 2306) is legal, but dangerous. Items restricted by LC are legal if permit requirements are met, prohibited items are always illegal, etc.

For more on restricted and prohibited goods, as well as on duties and tariffs, see *Customs Inspection* (p. 64).

Black Markets

Trading in illegal goods and services on the black market follows the economic principles outlined in Chapter Two, but with premiums on prices to cover the extra hazards and uncertainties involved. Roll under (9 - CR) on 3d for there to be a significant, organized black market on a given planet. This market may have a physical location, or illegal goods may be readily available through conventional contacts (use Streetwise skill).

Black-market transactions use the same rules as legitimate ones, with a few modifications. First, wherever Area Knowledge skill is called for, use Streetwise skill instead; the underworld on one planet is more like that on the next than like the local legitimate market. Critical failure on any Streetwise roll means running afoul of local criminals or law enforcers (GM's decision), with predictable consequences. Second, all illegal goods use the "High Risk" column on the *Trade Goods Reaction Table* (p. 39). Finally, both the trade goods reaction roll and rolls to find a buyer (see *Finding a Buyer,* p. 39) receive a penalty of (LC - CR). Streetwise skill can help offset this penalty, giving +1 at level 12 or better and +2 at level 20 or better, but can never give a net bonus.

Stolen goods can be fenced using the speculative trade rules (p. 36), but their "fair market value" is considerably reduced: take the price for used goods (10-50%) and divide it by 10, giving a typical value of 1-5%.

Smugglers compete for freight rates on a spot market, just like their legitimate counterparts (see *Placing the Bid,* p. 26), but it's a "black" spot market.

Moving the Goods – Smuggling Methods

Getting contraband onto a world or into a system is often the hardest part of smuggling. Most worlds have customs officials who inspect ships and cargoes to look for contraband and to ensure that all taxes are paid and necessary registrations and licenses are valid. The Imperial Navy, Imperial Interstellar Scout Service and Imperial Starport Authority will sometimes assist local authorities in these duties, and also act independently to enforce Imperial law – especially when it comes to such things as nuclear weapons and slaves.

What is contraband on one world may be perfectly legal on another nearby, however. Successful smugglers often base their operations on a more "permissive" world and carry their cargoes through to a more restrictive market planet. Interstellar borders are also prime areas for smuggling operations, due to the differing laws and restrictions that apply on either side.

There are several ways to smuggle goods. Contraband can be disguised as legitimate goods, or hidden aboard ship or among other goods. It can be passed directly to local distributors without customs being the wiser. Registrations and cargo manifests can be forged. Officials can be bribed to look the other way (see p. 121). The methods chosen will determine the skills required:

Camouflage skill is used to make contraband appear to be legitimate goods of a similar size and shape. If the contraband can be disassembled into innocuous-looking components, roll at +1 per component after the first. This increases the amount of time it takes to deliver the cargo to the buyer, since the goods must be reassembled before delivery unless different arrangements have been made.

Holdout skill is used to carry small items on one's person, and should be checked every time contraband is carried through a starport or local security checkpoint.

Both Shipbuilding skill and Holdout skill are needed to hide large items aboard ship, either in seldom-inspected compartments or in purpose-built smuggling holds.

Forgery skill is used to fake licenses and other documents for goods that require them.

To successfully get disguised or concealed contraband past an inspector, the smuggler must win a Quick Contest between his level with the skill listed and the higher of the inspector's Sense roll and level with that skill. To successfully pass forged documents, the smuggler must win a Quick Contest between his Forgery skill and the higher of the inspector's IQ or Administration skill.

Crossover Campaigns

A campaign may primarily revolve around merchants and money-making, but it is often useful to vary the pace a bit with themes or situations from other genres. ***GURPS*** provides a plethora of ideas and source books for campaign crossovers.

GURPS Space – *Colony Alpha*

A newly opened colony world can be a commercial venture rather than a government one. An ongoing campaign could revolve around efforts to establish, supply and maintain a corporate-backed colony and turn it into a money-making proposition. The PCs could crew a scheduled supply ship (perhaps owned by the sponsoring company), be free traders making frequent visits or even act as the leaders of the colony! Tavonni (SM/Vilis 1520) and Dawnworld (SM/Distric 268 1531) would make excellent settings for such campaigns, once they're opened for settlement. See GDW's ***World Tamer's Handbook*** for more ideas.

GURPS Traveller: Star Mercs

Mercenary or military crossovers are easy to arrange: just charter the PCs' ship to transport a merc unit to its next ticket, or call up their subsidized merchant to act as an auxiliary for a military expedition. Once involved, the merchants can be kept busy running supplies into the combat zone. If the mercs are not on the side of the planetary government, or if the military gets pinned on planet without space superiority, the merchants' mission may resemble gunrunning more than a traditional logistical operation.

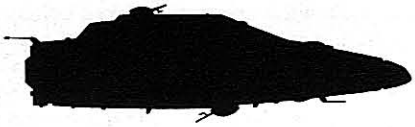
One interesting way to work combat-oriented PCs into an overall mercantile framework is as the master-at-arms and security detail of a large passenger liner. Most of their work will be bouncing drunks from the liner's restaurants and lounges, but the occasional terrorist or hijack attempt can keep them in practice.

Continued on next page . . .

Crossover Campaigns
[Continued]

GURPS Illuminati

Merchants, speculators and moneymen of all kinds are well-placed to stumble over the machinations of the Secret Masters, or be party to (or the *target* of) a conspiracy at the highest levels of the Imperial government. Paranoia has a tendency to be contagious and difficult to remove once started, though, and can easily take over a campaign; therefore, the GM should exercise caution unless this is his intended goal.



GURPS Cyberpunk

Cyberpunk is about more than just cyborgs with bad haircuts and worse attitudes. It is about the disintegration of society, technological progress and alienation. A visit to a high-tech, low-CR planet on the verge of social collapse can bring some of these themes home to the players, without departing too far from the traditional ***Traveller*** universe.

GURPS Espionage *and* Special Ops

A tramp freighter makes an ideal platform for an espionage mission (like the Russian "trawler" beloved of James Bond movies) – so ideal, in fact, that it may be regarded by some as *too* obvious. Such a vessel may be a legitimate trader pressed into service by some shadowy agency, or it may have a crew of trained operatives using "trader" as a cover story. In the latter case, the team should at least *try* to show a profit, meet expenses, etc., or their cover will quickly be blown. Individual free traders or larger vessels may also be hired or commandeered to transport special operations teams, assist in combat rescue operations, etc.

Continued on next page . . .

Fast-Talk or Streetwise skill can be used at any point before or after the goods are discovered, to attempt to bribe officials to overlook the smuggled goods – although *after* discovery, the price will usually go up significantly.

The following modifiers are cumulative, and apply to *any* skill roll made for smuggling:

Starport Class: The better a system's starport, the more closely ships and cargoes will be monitored. Roll at -3 for Class V, -1 for Class IV, no modifier for Class III, +1 for Class II, +2 for Class I and +4 for Class 0.

Military Bases: A military base in the system makes smuggling uniformly more difficult due to increased scrutiny and greater likelihood of inspection and scanning. Roll at -1 for a Scout base, -2 for a Navy base.

Travel Zone: Red and Amber Zones complicate matters for much the same reasons as military bases. Roll at -2 for an Amber Zone, -4 for a Red Zone.

Specific modifiers for Camouflage, Forgery and Holdout appear on pp. B65-66.

Pirates, Corsairs, Thieves, and Privateers

On occasion there may be someone
You have to execute,
But, when you're a Professional Pirate,
You don't have to wear a suit!
– Tim Curry as Long John Silver, *Muppet Treasure Island*

Piracy and Privateering

Technically, any theft of a starship is *piracy.* The term is used here to mean one vessel capturing another through force or intimidation. *Corsair* is another term for a pirate, usually reserved for Vargr raiding bands. *Privateering* is piracy that is legally sanctioned by a government in wartime (see *Letters of Marque,* p. GT86).

All forms of piracy are illegal within the Imperium: member worlds are forbidden to issue Letters of Marque and the act of piracy carries the death penalty. The Imperium *does* reserve the right to issue Letters of Marque against other interstellar states, but has not exercised it for centuries.

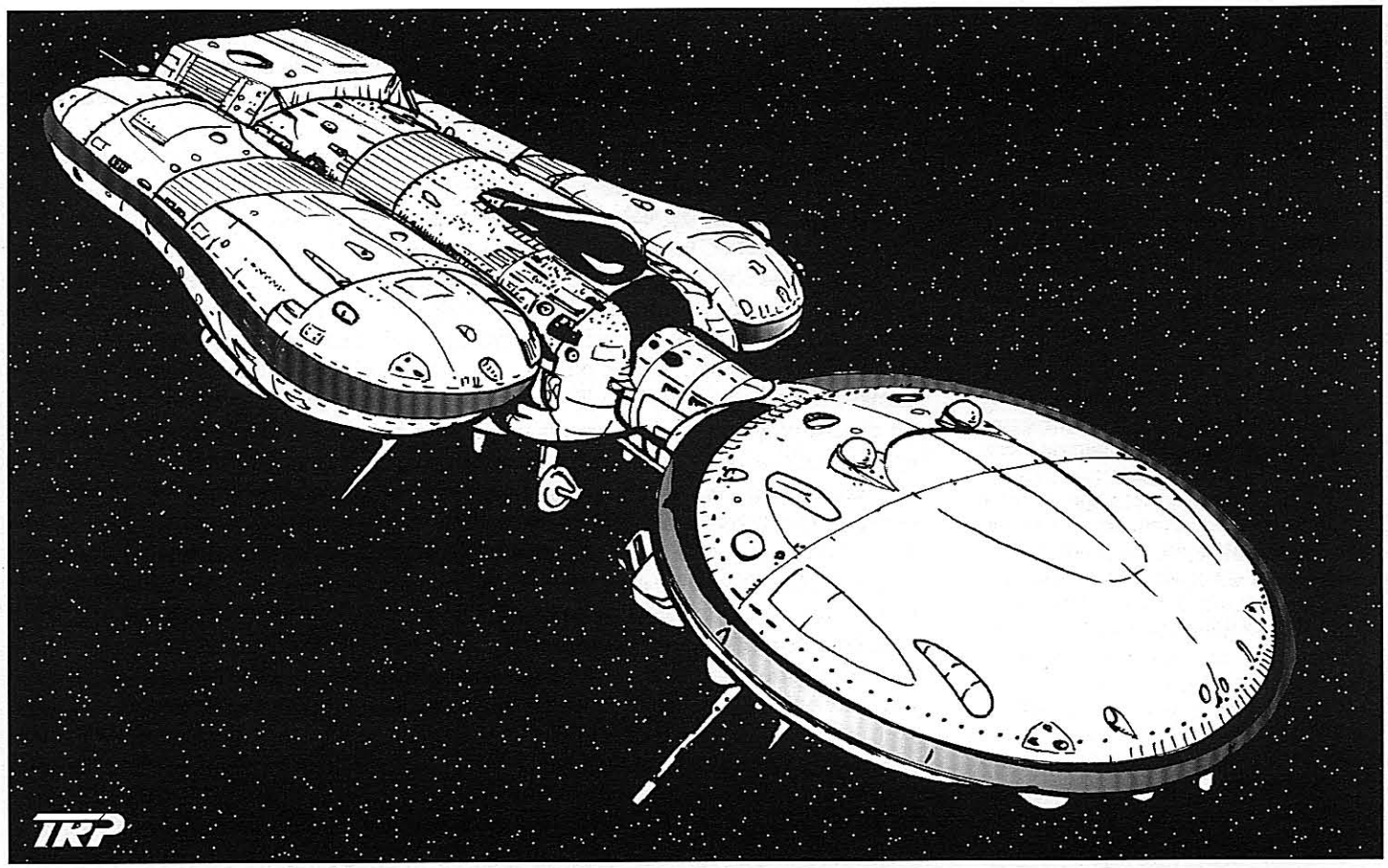
Star merc operations – escorts, raids and convoys – are not considered "privateering" except when the object of the mission is to seize a ship or its cargo. Of course, star mercs generally fight other armed combatants, not pure merchant vessels. Still, the distinction between a star merc contract and a Letter of Marque can sometimes be fuzzy at best. See ***GURPS Traveller: Star Mercs*** for more on mercenary operations.

Hijacking and Mutiny

Hijacking is seizing a ship by force from on board. If the hijackers are crew members bound to obey to the legitimate authority of the Captain, this is called *mutiny* instead.

Starships can be easy prey for hijackers; a week in jumpspace – with no outside contact – is all the opportunity anyone needs. As a result, ships are often equipped with internal sensors and sophisticated security systems, crews are constantly on guard against hijacking attempts, and the ship's computer can run an anti-hijacking program (p. 69) that analyzes patterns of suspicious behavior and denies potential hijackers access to critical areas. Passengers are required to check all weapons (except small blades and daggers, and the swords carried by some nobles), which are locked in the ship's locker (p. 69) and returned at the end of the voyage.

Despite all this, there are always individuals who are willing to risk the death penalty to hijack a multimillion-credit vessel – either to ransom it or steal it. To succeed, they must quickly seize control of key areas of the ship (bridge, engineering, small craft, communications) before loyal crewmen have time to react. If possible, the attempt should occur just prior to entering jumpspace (so that the ship can be redirected to a new, unknown destination) or just before breakout (so that the hijackers can pass themselves off as the legitimate owners).



Skipping

Most starships are purchased on credit, and the monthly payments required on a multimillion-credit debt are staggering. The owner or captain may decide to steal the ship himself instead of remaining under that load. There is a vast gray area between missing a few payments and taking off with a ship, so "skipping" – while technically piracy – is normally prosecuted as grand theft or fraud.

Ships stolen this way are subject to repossession attempts if detected by the authorities or freelance skip tracers. Methods can vary, from a formally served legal document, to impounding under seal, to armed boarding parties. To avoid these consequences, the thieves have two options: change their identities (and that of the ship) or outrun the news of their crime. The closer the ship is to an open border when the crew skips with it, the more viable these options become.

Grand Theft Starship

Of course, it is also possible to simply steal a starship. Ordinarily, a ship that is a candidate for outright theft won't be occupied at the time; if it is, see *Piracy and Privateering* and *Hijacking and Mutiny* (p. 118). The vessel could be a mothballed naval vessel, a freshly launched hull awaiting pickup, a ship that has just completed extensive maintenance, or a vessel whose owners are simply naive or inattentive.

Theft of something as large as a starship can be accomplished by one of three methods: the *long con,* the *short con* and *stealth.*

Long Con: In a long con (for "confidence game"), the thieves pass themselves off as something they are not in order to gain access to a ship. Success requires extensive research and preparation, as well as considerable skill in Acting, Disguise and Forgery. For example, con men might attempt to commission a trading yacht for their master, the Marquis of Carrabas. To succeed, they would have to create a fictional Marquis, or produce convincing evidence that they are his agents if he really exists, then fool, confuse or stall anyone who attempts to investigate their true connections until it is too late.

Crossover Campaigns

[Continued]

GURPS Horror

Horror doesn't need to revolve around fantastic monsters and the undead. What is important is the feeling of *tension,* of *suspense,* that is created by encounters with the unknown. The GM supplies the atmosphere and the enigma; the players' imaginations supply the horror.

Lonely outposts on strange alien worlds are a staple of the science-fiction genre, and fit well with ***Traveller*** motifs. As long as the GM's descriptions are both edgy and obscure, the mood of a horror scenario will prevail.

Or consider a starship: once in jumpspace, no power in the universe can return it to normal space in less than a week. If, by chance, someone on board is hiding a Dark Secret or a Thing Man Was Not Meant To Know (or even garden-variety sociopathy), the crew and passengers are stuck with it until the ship reaches its destination. In jumpspace, no one can hear you scream . . .

Science, Invention, and Gadgeteering

It can be fun to create your own goods instead of buying them from somebody else. People with the right skills can and do go into business as inventors and try to market their innovations. Many ***GURPS*** supplements are loaded with high-tech wizardry that can be mined for ideas, notably ***GURPS Bio-Tech, Psionics, Robots, Ultra-Tech, Ultra-Tech 2*** and ***Vehicles.***

Since an inventor who can churn out a new product a week will quickly unbalance a non-cinematic mercantile campaign, the GM may wish to impose limits on the Gadgeteer advantage (p. CI25). A fair compromise is to let a gadgeteer's inventions work as advertised, but assume that they aren't ready for commercial development – they are too advanced, use principles that aren't well understood or accepted, have dangerous side effects, etc.

Legality Class of Other Devices

Legality Classes for weapons are covered on p. S54. Items other than weapons may also have a Legality Class, based on how dangerous the authorities perceive them to be to public safety or to their monopoly of power. The ratings follow the same pattern:

Class 6: A very clever person might find a way to use this item for self-defense or crime. *Example:* A low-powered home computer.

Class 5: The device could conceivably be used for crime (or for defense against intrusive police or government agents), but it would be unlikely. *Example:* A mid-range home computer.

Class 4: While the device has many legitimate uses, it can also make some types of crime easier. *Examples:* A high-speed modem, a data-encryption program.

Class 3: The device is easy to misuse, or against government interests. *Example:* A computer security program.

Class 2: Government agents would recognize very few legitimate civilian purposes for this device. *Examples:* Most surveillance equipment, a chip-burning lab.

Class 1: Designed purely for illegal or covert purposes. *Examples:* Lockpicks, a Worm program (see p. CII14).

Class 0: Very powerful and dangerous. *Example:* Military-style intrusion software.

The long con is most viable if the con men stick to three simple rules:

1. Keep the con as short as possible. (Starships take a long time to build, so when commissioning a ship under false pretences, find a ship that is nearly finished.)

2. The broader and more sweeping the con, the more likely it is to be believed (a technique called "the Big Lie").

3. Schemes that appeal to the base emotions of the victims – greed, pride, lust – have the greatest odds of success.

Short Con: Short cons sacrifice in-depth preparation for speed and momentum. The principles outlined for the long con still apply, but the con men must also keep their victims constantly off balance, "railroading" them past any doubts or inconsistencies in their story. This requires some roleplaying; criminal PCs should *not* be allowed to make a single Fast-Talk roll and walk away with a ship!

The trickiest part of any con is usually the payoff – the builders, investors, military authorities, etc., will expect to receive their promised rewards *before* the con men take possession of the ship, and may become suspicious or even violent if these rewards are not forthcoming.

Stealth: Obtaining a ship by stealth can involve almost as much preparation as a long con, but this is focused on foiling *physical* security. The thieves will want to learn about guard rotations, sensors and alarms, key ship components that have been removed for safekeeping, personnel with access to critical areas, etc. Once they have this information, they must formulate a plan to exploit any weaknesses they uncover. Execution should be as swift and quiet as possible. Stealth can also be combined with a con; e.g., deception can be used to gain access to a ship in order to leave someone hidden aboard to act later.

Pirate Tactics and Operations

Piracy is constrained by economics, just like any other business. If the pirates can't make a reasonable return on their investment – considering the risks they run – then they will move into other, more lucrative lines of work. Decisions that the GM makes about how the Imperium functions in his campaign (see *Fine Tuning,* pp. 106-107) will have a profound influence on the viability of the pirate's trade, but there are some considerations that apply to all pirate operations.

A world with significant trade or a strong economy can and will defend its space out to its 100-diameter limit. These defenses will normally make piracy in and around such worlds unprofitable, but they do not extend to the entire system. Most career pirates will concentrate on backwater worlds or unsafe outsystems, or take advantage of unusual circumstances (like a jump point on the far side of a gas giant, or one that falls outside a world's defense envelope due to jump masking). Since shippers apply risk premiums to trade with unsafe systems or outsystems, outsystems tend to remain underdeveloped: they cannot develop until they are secure and they are not worth securing until they are developed.

Most pirates would prefer to avoid a fight. If a merchant will surrender its cargo on demand, they are content to take it and let the ship go – to be robbed another day. If the merchant resists, the pirates will concentrate on stealing the most expensive item available in order to make a profit: the starship itself. The fight to capture a ship often damages its drives beyond repair, however. If time is short and help is on the way, the next best option is to strip the victim of cargo and small craft.

What the pirates do with the crew and passengers of a captured ship is a matter of taste and strategy. Most will not hurt anyone who voluntarily gives up his wealth. In fact, private passengers and crewmen are not usually robbed of their personal possessions. This is good policy! Word gets around that if you simply surrender, you will lose nothing and not be hurt. Most crews care little for their cargo: it isn't theirs, it isn't worth risking their lives for, and insurance will make good the loss in any case.

Consequently, simply demanding surrender is often sufficient. This requires that the pirates carefully develop a Reputation for good treatment of prisoners, perhaps coupled with a Trademark of some kind to identify them. This was the origin of the

Jolly Roger: flying the skull-and-crossbones flag was a demand to surrender, and each pirate captain had a specific design.

If a ship resists, however, that's a different story. When it is boarded, the fighting is to the death and it is often too late to surrender. Valuable passengers (if they can be identified) may be kidnapped for ransom; others may be spaced, cast adrift in the disabled ship or marooned. Some pirates may keep their captives to sell as slaves. If piracy is uncommon and punishment for it swift and sure, there will be a greater tendency to kill everyone aboard, to eliminate witnesses.

The best markets for stolen starships and cargoes are across interstellar borders. Ironically, unsafe areas will also buy goods that they know are stolen – at heavily discounted rates – since this lets them avoid paying risk premiums.

Pirate Ships

Most pirate ships are converted merchants. Operations in unsafe areas are not profitable enough to justify custom-built warships, while safe areas – despite offering numerous, lightly armed targets – are so well patrolled that pirate warships cannot survive for long enough to justify their high costs. What pirate warships there are tend to be legitimate warships taken by mutinous or rebel crews, especially after a drawn-out trade war or a major military defeat. As for the victims, merchant ships trading in unsafe areas tend to be heavily armed (which makes them hard to distinguish from pirates); those trading in safe areas tend to be lightly armed or unarmed, depending on system defenses for protection.

Pirate Havens

Basic ship's stores can be extorted from casual traffic, purchased under a cover identity or ordered through a second ship. With the right supplies, even annual maintenance can be performed in a backwater port or on a clear patch of ground. But modifying a ship for pirate operations or repairing battle damage requires a lengthy stop in a Class IV or V port – something easier said than done. Explaining battle damage to port authorities is tricky; they can't all be bribed, and not everyone who can be bribed will stay bought. This makes secure maintenance a difficult and expensive proposition.

Access to secure bases with the facilities to maintain pirate vessels is the key to successful long-term piracy. Such bases will delimit the natural "ranges" of successful pirates. Without them, pirates will tend to lead a hand-to-mouth existence, extorting or conning their way through ground-side repairs, always one jump ahead of the fleet, often abandoning vessels or operating unreliable ships that are increasingly prone to dangerous malfunctions. Pirates with such handicaps will be no match for the authorities, armed merchantmen or jealous rivals. Personnel must be take into consideration as well. Few crewmen care to spend their entire lives aboard ship, slowly accumulating money. Crews must be given rest and recreation in port at frequent intervals, or they will soon desert or mutiny.

Pirates therefore seek out Class IV or V starports that lie beyond the borders of major states and which are controlled by authorities too weak or too immoral to bar suspected criminals from their facilities. The GM must bear in mind that the populations of these worlds will *not* openly condone piracy, and will help to exterminate it if it cuts too deeply into the circulation of trade in the region. A small, discreetly run operation will be the most successful in the long run.

Bribery

Bribery is built into the *NPC Reactions* rules (pp. B204-205). Bribes can modify most reaction rolls, and can also be used to improve the odds of an influence roll (p. B93) against a skill like Fast-Talk or Streetwise.

Modifiers: The reaction or skill bonus for a bribe is based on the earnings *of the person being bribed.* If he has a high Wealth level, the higher-level bribes could be exorbitant! Roll at +1 for a day's pay, +2 for a week's pay, +3 for a month's pay, +5 for a year's pay and +7 for five year's pay.

Bribery must be discreet to be effective, and appropriate to the circumstances (GM's decision). Too little may be insulting or not worth the risk; too much may frighten off a prospect or leave him feeling like he's being bought and sold. Bribes do not have to take the form of cash. Goods, benefits, discounts, "kickbacks" (a "discount" that the transactor keeps) and no-interest "loans" are all possible alternatives, as long as they are of comparable value, and may be more acceptable than cash in many cases.

Forgery

Forging electronic documents – like a ship's registry (p. 122) or Imperial Identity Documents (p. GT40) – requires Forgery, Electronics Operation (Security Systems) *and* Computer Hacking skills, and access to a specialized lab (Cr150,000, 500 lbs., 100 cf, LC 2 – there are some legal uses for it). *Buying* a forged registry from a specialist will cost at least Cr500,000, if one can be found at all, and should be an adventure in itself.

The forgery process includes the creation or alteration of supporting electronic records (at least on a local level) sufficient to pass a routine inspection. The longer a forged document is used, the better the supporting background becomes and the harder the original forgery is to detect.

"Temporary" forgeries require considerably less effort and expense; a successful Forgery roll, or a Streetwise roll to find an "artist," will suffice. Costs range from a few hundred credits for altering a cargo manifest to Cr25,000 to produce a full set of ship's papers. These documents are guaranteed to be good for at least a week – which is all the average merchant ship requires for one planetfall. If used for longer than that, the GM should roll 3d at the end of each week after the first. On 8 or less, the forgery has been discovered. This roll is made at a cumulative +1 per week after the first (e.g., discrepancies are discovered on 9 or less at the end of week two, on 10 or less at the end of week three, etc.).

Once the forgery is discovered, it is up to the GM whether a warning will be posted to other starports in the vicinity and if so, how fast it will arrive. As a rule of thumb, a warning will go out if the GM rolls under the CR of the planet where the forgery took place on 1d. What effect the report will have when it catches up to the ship is also up to the GM, but it will certainly cause the local officials to look over its papers *very* carefully, and it may result in a bad Reputation, if not criminal proceedings.

The Pirate's Life For Me!

In popular fiction, interstellar pirates are either crazed killers or happy-go-lucky Robin Hood rogues. And in fact, examples of both types exist . . . but they're rare. Space is very wide, and there are many different kinds of "pirates." In order of professionalism, they include:

Common criminals. They stole a ship; now they're going to see what else they can steal. They are likely to have about the same level of organization as the average street gang, and about the same turnover in membership. Unless they strike it lucky, they won't have the skill or money to maintain their ship; that makes them very likely to steal *your* ship when they capture it. Their internal discipline may be zero, or murderous . . . or both. They are very likely to mistreat captives, sometimes fatally.

Mutineers. A crew that took over their ship just to go pirating is probably no better than a gang of common criminals. But some crews mutiny against harsh treatment and then have nowhere to go. And sometimes a Free Trader, broke and hopeless, turns pirate. Such a band is likely to include many professional spacers; their ship is their only home, and they will maintain it well. They may try to recruit new crew from among their victims. They may treat captured crewmen with great restraint (and even try to recruit them), while being contemptuous of the property of "owners." They will claim that their goal is to find a way to make a clean start. Some of them are serious.

Failed mercenaries. A mercenary unit down on its luck may decide that its highest loyalty is to itself. They turn pirate because it's less repugnant to them than disbanding. Such pirate bands are often quite competent (if their bad luck wasn't of their own making), and usually highly disciplined. Depending on their military specialty, they may favor groundside raids over space attacks. They may operate with a strict code of honor . . . or not. A lot depends on the personality of their leader.

Some mercenary ships have the reputation of "working both sides" . . . supplementing their legitimate tickets with the occasional bit of piracy. Such a ship cannot afford to leave any witnesses, ever.

Privateers. These are privately-owned ships (hence the name) that have been issued "letters of marque and reprisal" by their governments. These are formal licenses to prey on enemy shipping, within certain limits. The stricter those limits, and the more carefully the privateer follows them, the less likely he is to be executed as a pirate if he survives capture. In some cultures (the Sword Worlds, for instance), minor nobles may go privateering on their own authority.

Commerce raiders. Actual military units, tasked to attack and disrupt commerce. They may or may not try to capture ships and cargo; they will almost always go to great lengths to spare the lives of the civilian crews they capture, if the crews don't resist with any really vicious tricks. As long as a commerce raider does not exceed the legitimate ruses of war, commits no atrocities, and is crewed by uniformed naval personnel, it will be treated as honorably as any other enemy ship if captured.

And, of course, not all pirates are Imperial or even Human. No Zhodani would ever turn pirate, though in time of war they raid commerce very efficiently. Droyne, K'kree and Hivers would likewise not become "real" pirates. On the other hand, there are two types of nonhuman pirates that are all too common on the borders of the Imperium:

Aslan ihatei. A band of young Aslan males, looking for their own territory, may attack shipping. Usually the ship itself is their target, either to serve the new colony they hope to establish, or to act as a Trojan Horse to get them down to the ground on the world they hope to steal. And, of course, the groundside raids of *ihatei* are often called "piracy" by members of other races who don't realize the Aslan intend to move in permanently.

Vargr corsairs. Piracy is a perfectly legitimate profession among Vargr, provided you can get away with it. A charismatic Vargr will often talk the crew of a merchantman . . . or even of a military vessel . . . into turning "corsair" with him. (And if they suffer reverses, the new leader may convince his pirates that they'd do better to go a-trading, or join someone's navy . . .) Vargr worlds, especially starports, may

even harbor corporations whose business plan is, quite openly, "Build a corsair and see what we can get." Needless to say, this can strain their relationships with their neighbors. But it's the Vargr way.

Hazards of the Business – Law-Enforcement Agencies

Even the wolves have wolfhounds – the force that keeps the predators from overpopulating their environment.

Imperial Navy

The Imperial Navy is charged with the task of suppressing piracy within the Imperium and its client states. Since most piracy occurs on the borders of the Imperium – not in the interior – this overlaps with the Navy's normal patrol duties. Pirate ships are rarely a match for even a small Navy warship or task force; the only time the Navy needs to mount specific anti-piracy operations is against a major pirate haven or stronghold.

Imperial Naval Intelligence is always interested in reports of pirate activity, especially on or just beyond the border, but does not actively target pirates as part of its intelligence-gathering duties. Most Navy anti-piracy operations begin with a tip or request for assistance from some other agency.

Planetary Navy

The Imperial Navy cannot be everywhere, so it falls to the planetary ("colonial") navies to protect their own worlds and merchant traffic from pirate depredations. These are the forces of first response in a pirate attack, and can range from ground-based space defenses (deep meson sites, etc.), to fighters, to system defense boats, to full-scale naval warships (only slightly less well-equipped than their Imperial Navy counterparts, but not as well trained). Systems with even a modest economy will be able to afford these defenses – and the sensors and communications to back them up – even if they have to import them; this is why pirates generally stick to sparsely inhabited outsystems and backwaters.

Customs Service

The Imperial Starport Authority Customs/Security Service and the customs services of the various member worlds concentrate primarily on anti-smuggling operations by keeping tabs on potential buyers and through contacts and informants on common source worlds. Evidence of pirate operations can appear in the form of market anomalies caused by the sale of captured trade goods, so the customs services keep tabs on this sort of activity as well.

Imperial Ministry of Justice

The Imperial Ministry of Justice (MoJ) is responsible for enforcing Imperial laws and capturing their violators – including pirates and hijackers. The MoJ collects and analyzes intelligence and conducts undercover operations to identify pirate havens, strongholds, markets and patterns of operation. Individual agents sometimes travel aboard ships they believe are vulnerable to piracy or hijacking. Ministry of Justice agents are generally spread too thin to take effective unilateral action against pirates, so they normally pass their information on to local authorities or the Imperial Navy, along with a warrant from the local noble or Imperial Legate and a request for action.

Skip Tracers

Ship owners skipping out on their mortgage payments is common, difficult to prove conclusively and rarely prosecuted by the Imperium directly. Banks have a vested interest in recovering their assets, however, and are willing to pay "finder's fees" to specialized bounty hunters called *skip tracers,* who identify and return their ships to them. At 2-5% (of tens of millions of credits in investment), it is well worth the skip tracer's time and effort.

Pirate Havens in the Spinward Marches

Several minor governments in the Spinward Marches are suspected of harboring (or at least turning a blind eye to) extralegal activities. The pirates usually have a tacit agreement with the authorities to leave local trade and visitors unmolested, regardless of activities elsewhere.

Border Worlds

Although an Imperial client state, the Border Worlds are anything but homogeneous and well integrated. All have Class IV starports, high TLs and relatively low CRs. Pirates may have little trouble finding someone willing to trade for what they offer – especially on Hofud (SM/Sword Worlds 1524), with its small population, cluttered space traffic region and continuing internal difficulties.

Federation of Arden

The Federation of Arden has a notoriously "flexible" attitude to anything that maintains its independence and increases the strength of its position in the region. The Federation holds two potential havens: Tremous Dex (SM/Vilis 1311) is on the Spinward Main, just beyond the Imperial border at Phlume; Quare (SM/Vilis 0915) is less likely, as it is only two parsecs away from the Imperial Navy base at Frenzie (SM/Vilis 1116).

Continued on next page . . .

Special Campaigns and Adventures

There's a Legion that never was 'listed
That carries no colours or crest,
But, split in a thousand detachments,
Is breaking the road for the rest.
– Rudyard Kipling, *The Lost Legion*

Exploratory Trade and Contact

One of the most profitable, dangerous and interesting sides of the business world is opening new trade routes and contacts. This is where exploration and diplomacy meet hard commercial sense. "New" territory need not be totally unexplored territory (although merchant explorers often have an incentive to go farther than anyone else) – it may merely be neglected by less perceptive mercantile interests.

An exploratory campaign could proceed from planet to planet, with the PCs learning about each world and discovering unique trading opportunities in the process. Alternatively, the explorers could be part of a long-term expedition, charged with developing trade relations with a single world or alien species. Obstacles in such campaigns include the normal hazards of exploration, plus all the fits and starts, misunderstandings and conflicts inherent in opening contact with new cultures. Potential benefits include exclusive access to all sorts of exotic, never-before-seen trade goods and processes in exchange for bringing the fruits of interstellar trade to a new market.

The classic examples of this type of adventure are the Polesotechnic League (Nicholas van Rijn) stories of Poul Anderson.

Starports – Brokers, Shipper's Agents, and Bartenders

Life in a starport is properly the subject of ***GURPS Traveller: Starports,*** but there are some purely mercantile campaign options within the starport environment.

Speculating Without a Starship

Engaging in speculative trade can be lucrative for a merchant with the right skills and enough capital. Players who enjoy merchant campaigns but not the constant change of scenery of a starship-based scenario may enjoy playing planet-based brokers and traders. The Ship Owner advantage (p. 101) can be adapted to *any* sort of business, while Ship Patron (p. 100) can be used to represent a franchise arrangement.

Characters in such a campaign can use their extensive contacts and local knowledge to obtain freight for shippers at a discount, or to buy speculative goods from passing traders and sell them to carefully chosen local customers. They can even engage in interstellar trade from their base of operations, negotiating passage for their cargo and perhaps accompanying it to its destination.

Service to the Line

Line employees who tire of the wandering life can still rise within their companies as part of the shore establishment. Port captains are often retired from active service aboard ship, and put their extensive experience to work, troubleshooting for the ships that call at their port. Successful pursers may find more rewarding careers as brokers, locating and arranging for cargoes to fill the holds of their line – for a fat commission, of course.

Other Businesses in Port

Other types of port-side establishments are also possible: shipyards, hotels, bars, chandlers, agencies . . . wherever there is a need, there will be someone to fill it – for a price.

Pirate Havens in the Spinward Marches

[Continued]

Republic of Garoo

Garoo (SM/Darrian 0130) lies at the extreme spinward end of the Spinward Main. At first a seemingly odd choice due to its high CR, the existence of a steady stream of salvage parts from the iceball world Graveyard in the Garoo outsystem may have a more prosaic explanation than mysterious Ancient influences. If true, the Republican government can be expected to give its implied approval to chop-ship operations, in return for a share of the spoils (a "salvage fee"). In 1119, the Republic publicly stated its willingness to issue Letters of Marque (p. GT86) to privateers in response to any aggression from the Darrian Confederation.

Tarsus

As an Imperial client state, Tarsus (SM/District 268 1138) officially condemns piracy, smuggling and privateering. With paperwork and legal obstacles to trade practically non-existent, however, Tarsus makes an excellent location to fence stolen goods in exchange for needed supplies.

Trexalon

With its high TL and low CR, Trexalon (SM/District 268 1339) is the best candidate for a pirate haven in the sector. Positioned at the rimward end of the Spinward Main, it has ready access to the unincorporated worlds of District 268 and on into the Imperium in the Glisten subsector. Trexalon's strong anti-Imperial leanings and ongoing economic struggle with Collace (SM/District 268 1237) make it unlikely that the governing Trexalon Technical Consortium would cooperate with outside attempts to suppress piratical activity.

Chapter Seven

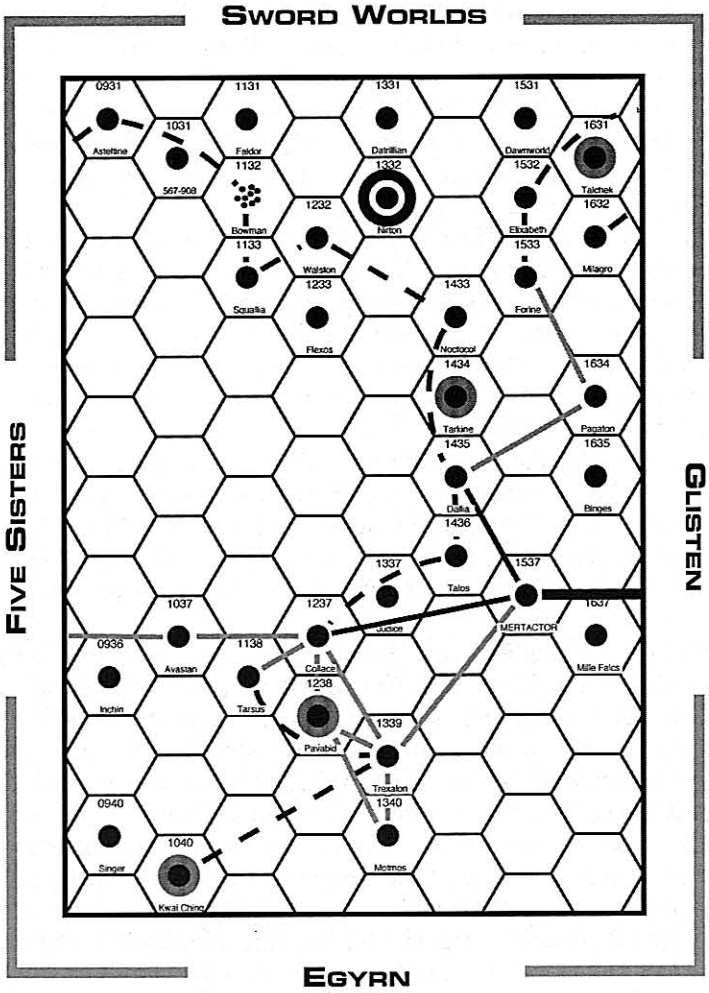
District 268

Trading on the Edge of the Imperium

District 268 is an underdeveloped region of the Spinward Marches made up mostly of Imperial client states and independent worlds. The only full-fledged members of the Imperium in the subsector are Mille Falcs and Mertactor, the subsector capital.

The economic heart of District 268 (or "The District," as it is known colloquially) is Collace, an industrial world. It not only has the largest economy, but also lies along the Major Route connecting the Five Sisters and Glisten subsectors. It is not the most important economy in the region, however. That honor belongs to Glisten, whose industries are the subsector's closest source of high-tech goods and thus its most important trading partners.

District 268 Subsector Map



Designing Worlds

The gravity trade model (pp. 20-21) shows how much a typical world of a particular population and TL would trade, on average, with another world of a given population and TL. Obviously, not all worlds are typical and not all trade relationships are average, but part of the strength of the model is that it puts worlds into broad enough categories that it can accommodate modest deviations from the average. The trade figures use a semi-logarithmic scale: adding 0.5 to BTN represents a doubling in trade; adding 1.0 is equivalent to a *tenfold* increase. Few things can influence trade on this scale; most factors are handled adequately by the variability built into the ranges on the table on p. 16.

One variable that it *may* make sense to change on the scale of BTN is the port modifier (see p. 11). This is intended to represent all factors influencing interstellar trade that could conceivably be correlated with the world's starport quality. Since it is a stand-in for many other factors, the GM may wish to alter it slightly to reflect local realities. The standard caution about how small changes in WTN translate into big changes in trade still applies.

The poor quality of a starport doesn't necessarily reflect local animosity toward off-worlders, at the GM's option. It could represent a new colony with only rudimentary facilities, which would justify a less severe penalty and an increase in WTN. Another option is a damaged starport. For example, Entrope (SM/Querion 0720) is teeming with over 11 billion people at TL10, yet has only a Class II starport and hence a substantial negative port modifier. Its poor port facilities are the result of damage sustained during the Darrian reconquest of the system, not local attitudes, so the GM might choose to reduce the penalty. A third possibility is that a *physical* bottleneck at the port is reducing trade, not more systemic factors.

Continued on next page . . .

Designing Worlds
[Continued]

Similarly, the GM can reduce positive port modifiers that he feels are unmerited. A positive modifier indicates that a world is particularly open to or dependent on off-world trade, but the mere existence of a good port does not *create* trade. Good ports are expensive and generally only built if they will be put to use, but may no longer reflect the reality on the ground.

Economic ties rarely respect political borders – especially in The District, which has recently benefited from an Imperial effort to improve trade ties. The Imperial Ministry of Commerce has authorized member worlds to lower trade barriers to District client states to the levels offered other member worlds. This action has opened new trade routes and led to closer economic integration. Whether it was taken in anticipation of or in response to the heightened aggressiveness of the Trexalon Technical Consortium is unclear, but either way, the continued political tension between Collace and Trexalon mars what could otherwise be a lucrative trade relationship.

Judice sits within two parsecs of six of the busiest systems in the subsector. As such, it would be an excellent base for bold pirates willing to take on large liners

District 268 Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
0931	Asteltine	4	9	IV	3.5	Fl Ni	Cs	1	0
0938	Inchin	3	9	II	2.5	De Eo Ni Po	Cs	2	3
0940	Singer*	6	6	II	3.5	Ni Po	Na	0	1
1031	567-908	5	5	I	2.5	Ni Po	Na	1	0
1037	Avastan	5	9	III	3.5	Ni Po	Cs	2	4
1040	Kwai Ching*	7	9	III	4.5	Ic Na In Va	Na	2	0
1131	Faldor	6	5	I	2.5	Ni Po	Na	2	0
1132	Bowman	3	9	II	2.5	As Eo Ni	Cs	0	1
1133	Squallia	6	9	III	4.0	Na	Cs	2	0
1138	Tarsus	6	9	IV	4.0	Ag Ni	Cs	0	2
1232	Walston	3	8	III	2.5	Eo Ni	Cs	0	2
1233	Flexos	4	6	I	2.5	Fl Ni	Na	1	0
1237	Collace	9	10	IV	5.5	Hi In	Cs	0	1
1238	Pavabid*	8	6	III	4.5	Ri	Na	0	1
1331	Datrillian	6	8	I	3.0	Ni	Na	0	1
1332	Nirton**	0	0	0	Nil	Ba	Na	1	1
1337	Judice	0	8	I	Nil	Ba Fl	Cs	2	1
1339	Trexalon	8	10	IV	5.0	In	Na	2	3
1340	Motmos	6	6	IV	4.0	Ag Ni Ri	Cs	1	0
1433	Noctocol	7	6	I	3.0	Fl	Na	0	2
1434	Tarkine*	6	7	III	3.5	Ag Ni Ri	Cs	1	0
1435	Dallia	8	9	IV	5.0	Fl In	Cs	1	0
1436	Talos	5	9	I	3.0	Ni Po	Na	2	0
1531	Dawnworld	0	0	I	Nil	Ba	Im	2	5
1532	Elixabeth	4	8	IV	3.0	Ni	Cs	0	1
1533	Forine	9	9	II	4.5	Ic In Na	Na	1	0
1537	Mertactor	7	9	IV	4.5	Cp	Im	1	0
1631	Talchek*	4	6	III	3.0	Fl Ni	Cs	1	0
1632	Milagro	7	7	I	3.0	Ic Na	Cs	2	0
1634	Pagaton	8	5	III	4.0	Ri	Na	1	3
1635	Binges	2	9	V	3.0	Eo Ni Va	Na	2	0
1637	Mille Falcs	4	10	IV	3.5	Fl Ni	Im	0	1

Regina Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
1705	Efate	9	10	V	5.5	Hi In	Im	1	0
1706	Alell	8	9	IV	5.0		Im	1	0
1802	Yres*	9	7	IV	5.0	Hi In	Im	3	5
1803	Menorb	9	7	III	4.5	Hi Po	Im	1	0
1805	Uakye	5	9	IV	4.0	Ni	Im	2	0
1806	Whanga	1	7	I	1.0	Eo Ni	Im	2	4
1807	Knorbes	7	4	I	3.0	Ag Ni	Im	3	4
1808	Forboldn	6	5	I	2.5	Ni Ri	Im	1	2
1809	Ruie*	9	7	III	4.5	Hi In	Im	0	1
1810	Jenghe	6	9	III	4.0	Ni	Im	2	3
1903	Pixie	1	10	V	2.5	Eo Ni Va	Im	0	1
1904	Boughene	5	10	V	4.0	Fl Ni	Im	0	1
1909	Hefry	4	7	III	3.0	Ni Va	Im	2	0
1910	Regina	8	10	V	5.0	Cp Ri	Im	0	3
2005	Feri*	8	9	IV	5.0	Ri	Im	2	0
2007	Roup*	9	7	III	4.5	Hi In Wa	Im	2	3
2106	Pscias**	4	4	0	-0.5	Ni	Im	0	1
2110	Yori	7	9	III	4.5	De Ri	Im	1	3
2201	Dentus**	5	9	III	3.5	Ni	Im	2	0
2202	Kinorb	6	8	V	4.0	Ni Ri	Im	2	2

Regina Subsector (continued)

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2204	Beck's World4	5	II	2.0	Ni	Im	0	1	
2205	Enope	9	6	III	4.5	Hi Ic In	Im	0	0
2207	Wochiers	8	9	I	3.5		Im	0	3
2303	Yorbund	5	7	III	3.0	Fl Ni	Im	2	0
2306	Shionthy**	7	8	0	0.5	As Va	Im	1	4
2308	Algine**	9	5	0	1.0	Hi	Im	2	3
2309	Yurst	6	5	I	2.5	Ag Ni	Im	2	4
2402	Heya	7	6	IV	4.0	Ag Ri	Im	3	4
2405	Keng	8	5	I	3.0		Im	1	2
2406	Mourghes	5	9	III	3.5	Ni Wa	Im	0	1
2408	Rethe	10	6	II	4.5	De Hi In	Im	2	3
2410	Inthe	7	9	IV	4.5	Ag	Im	2	3

Lanth Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
1711	Extolay	8	9	IV	5.0		Im	1	0
1719	Lanth	5	9	V	4.5	Cp Ni	Im	1	0
1811	Dinom	5	9	II	3.5	Ni Va	Im	0	1
1815	Ghandi	4	6	IV	3.0	Ic Ni	Im	0	3
1817	Victoria**	7	5	0	0.5		Im	1	2
1912	Dinomn	6	5	IV	3.5	Ag Ni	Im	0	4
1916	Ylaven**	5	5	0	0.0	Ag Ni	Im	2	2
1918	Sonthert**	6	5	0	0.0	Na Ni	Im	1	4
1920	D'Ganzio	4	10	IV	3.5	Ni Po	Im	1	2
2011	Wypoc*	5	10	I	3.0	Fl Ni	Im	2	2
2111	Djinni**	0	0	I	Nil	Ba Eo Ni	Im	2	2
2112	Rech	7	6	II	3.5	Ag	Im	0	1
2212	Kkirka	3	8	III	2.5	Eo Ni	Im	0	2
2215	Quopist**	6	9	IV	4.0	Na Po	Im	2	1
2311	Treece	5	8	II	3.0	Na Po	Im	1	0
2313	Echiste	3	9	III	3.0	Eo Ni Wa	Im	2	0
2314	Pirema	1	6	II	1.5	Eo Ni	Im	2	0
2317	Rhise*	5	9	III	3.5	Ni Va	Im	1	0
2319	Ivendo	6	9	IV	4.0	Ag Ni	Im	1	2
2411	Keanou	3	7	III	2.5	De Eo Ni	Im	1	3
2414	Turedad*	5	9	IV	4.0	Ag Ni	Im	1	4
2415	Vreibefger	5	5	I	2.5	Ni	Im	0	1
2516	La'Belle	1	5	III	1.5	Ni	Im	0	1
2517	Equus	8	8	IV	4.5	Wa	Im	0	2
2518	Icetina*	5	7	IV	3.5	Ni	Im	0	1
2519	Cogri	6	9	III	4.0	Ni Wa	Im	3	2
2520	Skull	6	9	III	4.0	Na Ni Po	Im	0	1

Lunion Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
1721	Arba	2	9	III	3.5	Eo Ni Va	Im	1	0
1727	Wardn*	4	10	IV	4	Ni	Na	0	2
1728	Olympia	3	7	III	3	Eo Ni	Im	2	0
1279	Smoug	7	8	III	4	De Po	Im	0	2
1822	Rabwhar	7	7	II	3.5		Im	1	3
1824	Adabicci	8	9	V	5.5		Im	0	1
1825	Zaibon	5	10	IV	4.5	As Ni	Im	1	2
1826	Tenalphi	1	4	V	2	Eo Ni	Im	1	0
1924	Ianic	6	6	I	3	De Ni Ri	Im	2	4
1927	Spirelle	8	7	III	4.5	Ri	Im	1	5

Lunion Subsector (continued)

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2124	Lunion	9	10	V	6	Cp Hi In	Im	1	0
2125	Shirene*	5	10	IV	4.5	Ag Ni	Im	2	3
2128	Penkwhar**	3	4	0	1.5	Eo Ni	Im	2	0
2129	Harvosette	8	9	III	4.5	De Na Po	Im	1	0
2224	Carse	3	9	III	3.5	Eo Ni	Im	0	1
2228	Persephone	8	9	IV	5		Im	2	2
2321	Quiru	3	8	IV	3.5	Eo Ni	Im	2	3
2322	Gorram**	2	2	0	0.5	Eo Ni	Im	0	1
2323	Resten	1	9	IV	3	De Eo Ni	Im	0	1
2324	Capon	7	9	IV	5	Ag	Im	1	0
2325	Sharrip	1	9	III	3	Eo Ni	Im	0	3
2327	Strouden	9	12	V	6	Hi In	Im	2	0
2425	Gandr	3	8	I	2	Eo Ni Va	Im	1	3
2426	Drolraw	2	6	I	2	Fl Eo Ni	Im	0	4

Glisten Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
1731	Grote	3	9	V	3.5	Eo Ni Va	Im	2	4
1733	Lydia	3	6	I	2.0	De Eo Ni	Im	0	2
1736	Melior*	4	7	II	2.5	De Ni	Im	2	4
1737	Egypt	4	7	IV	3.0	Fl Ni	Im	2	1
1739	Aster	4	9	III	3.0	Ni Wa	Im	0	1
1836	Callia	5	6	I	2.5	De Ni	Im	1	0
1932	Mithras	5	6	III	3.0	Fl Ni	Im	0	2
1934	Weiss	3	9	IV	3.0	Eo Ni	Im	0	3
1935	Windsor	1	9	III	2.0	Eo Ni	Im	1	0
1937	Overnale	6	9	IV	4.0	Ag Ni	Im	2	3
1938	New Rome	8	9	IV	5.0		Im	0	4
1939	Craw	6	5	III	3.0	Ni	Im	2	3
2035	Aki	9	9	IV	5.5	Hi In Po	Im	1	4
2036	Glisten	9	12	V	6.0	As Hi In Na Cp	Im	2	1
2038	Trane	4	10	III	3.0	Ni	Im	0	4
2132	Centry	4	6	I	2.5	Ni Po	Im	2	0
2134	Caledonia	6	6	III	3.5	Ni Po	Im	1	0
2137	Sorel	6	5	I	2.5	Ag Ni Ri	Im	2	1
2138	Horosho	8	9	III	4.5		Im	2	0
2140	Romar	4	8	IV	3.0	De Ni	Im	1	2
2231	Marastan	7	6	II	3.5	Ag Ri	Im	2	4
2232	Crout	9	7	I	3.5	Hi	Im	1	4
2233	Tirem	9	9	III	5.0	Fl Hi In	Im	2	1
2234	Inthe	4	9	III	3.0	Ni Va	Im	2	4
2236	Tsarina	6	6	I	3.0	De Na Ni	Im	0	1
2237	Wurzburg	3	8	III	2.5	Eo Ni	Im	1	0
2331	Bicornn	4	5	I	2.0	Ni	Im	1	0
2334	Ffudn	8	8	V	5.0	Ic	Im	0	4
2336	Bendor	6	6	V	4.0	Ag Ni	Im	2	0

Aramis Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2509	Paya	2	9	V	3.0	Eo Ni	Im	0	3
2510	Dhian	6	5	III	3.0	Ag Ni	Im	0	2
2602	Corfu*	6	5	I	2.5	Ag Ni Ri	Im	2	2
2607	Focaline	5	9	I	3.0	Ag Ni	Im	2	4
2701	Lablon	5	9	IV	4.0	Ag Ni	Im	0	3
2706	Heguz	2	10	I	2.0	Eo Ni Wa	Im	1	0

Aramis Subsector (continued)

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2708	Violante	4	9	III	3.0	Ni	Im	2	0
2905	Pavanne	0	0	I	Nil	Ba Eo Ni	Im	2	5
2906	Carsten	4	9	III	3.0	Ni	Im	0	4
2908	Zila*	7	7	I	3.0	Ag	Im	0	1
3001	Jesedipere	3	7	III	2.5	Ni	Im	1	1
3002	Yebab	8	7	III	4.5	Fl	Im	1	2
3003	Nasemin	4	9	IV	3.5	Ni Wa	Im	1	2
3004	Zykoca**	5	6	I	2.5	Ag Ni	Im	2	0
3005	Aramanx*	9	6	IV	5.0	Hi	Im	1	0
3008	Pysadi	6	5	III	3.0	Ag Ni Ri	Im	0	1
3010	L'ouel d'Dieu	5	9	IV	4.0	Ni Wa	Im	0	2
3102	Rugbird*	6	9	IV	4.0	Fl Ni	Im	1	1
3103	Towers*	4	9	IV	3.5	Ni	Im	3	5
3104	Feneteman	2	10	III	2.5	Eo Ni Po	Im	1	0
3107	Lewis	4	10	II	2.5	Ni	Im	0	1
3110	Aramis	5	9	V	4.0	Cp Ni	Im	1	0
3202	Junidy*	10	9	IV	5.5	Hi Na	Im	1	0
3207	Patinir	6	9	III	4.0	As Na Ni Va	Im	2	3
3209	Natoko	2	8	IV	2.5	Eo Ni	Im	0	1
3210	Reacher*	5	8	III	3.0	Fl Ni	Im	3	3

Rhylanor Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2512	Kinorb	4	9	III	3.0	Ni	Im	0	2
2514	Gileden	1	6	III	1.5	Eo Ni	Im	0	3
2519	Pannet	6	7	I	3.0	Fl Ni	Im	2	4
2520	Garrincski	5	7	IV	3.5	Ni Po	Im	1	0
2612	Depot/Marcene	310	III	3.0	As Eo Ni Va	Im	1	1	
2613	Fulacin	3	9	V	3.5	Ni	Im	1	0
2620	Natoko	9	9	III	5.0	Hi	Im	1	0
2712	Risek	4	9	V	3.5	Ni	Im	0	1
2715	Porozlo	10	9	V	6.0	Hi	Im	0	1
2716	Rhylanor	9	12	V	6.0	Cp Hi Na	Im	0	1
2720	Lonesada	2	7	III	2.0	Eo Ni Wa	Im	0	5
2811	Valhalla	4	6	I	2.5	Ni	Im	2	2
2812	Zivije	9	9	III	5.0	Fl Hi	Im	2	1
2814	Jae Tellona 5	8	V	4.0	De Ni Ri	Im	1	3	
2818	Gerome**	0	0	0	Nil	Ba Eo Ni	Im	0	1
2912	Henoz	4	9	V	3.5	Ni	Im	2	4
2913	Celepina	4	8	IV	3.0	Ni	Im	0	1
2918	Gitosy	6	9	IV	4.0	As Na Ni Va	Im	2	0
3015	Belizo	6	6	IV	4.0	Ag Ni	Im	2	3
3016	Kegena	4	5	I	2.0	Ni	Im	2	4
3017	Heroni	6	6	I	3.0	De Ni	Im	2	0
3019	457-973**	2	5	0	1.0	Eo Ni	Im	3	4
3020	Somem	3	10	III	3.0	Ic Eo Ni Va	Im	0	1
3111	Vinorian	6	9	IV	4.0	Ni	Im	1	0
3112	Nutema	3	8	IV	2.5	Eo Ni	Im	2	2
3114	Hudera**	0	0	0	Nil	Ba Eo Ni	Im	2	0
3118	Cipatwe	9	6	IV	5.0	Hi	Im	2	3
3119	Vanejen	8	5	III	4.0	Ag Ri	Im	2	0
3212	Margesi	2	10	V	3.0	Eo Ni	Im	2	0
3217	Bevy	9	8	II	4.0	De Hi In Po	Im	2	4
3218	Tacaxeb	4	9	III	3.0	De Ni Po	Im	0	1
3220	Powaza	4	6	III	3.0	Ni	Im	3	2

Mora Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2521	Heroni	9	8	IV	5.0	Hi In	Im	2	1
2523	Byret	6	6	IV	4.0	Ag Ni Ri	Im	1	2
2527	Pimane	3	5	I	1.5	Eo Ni Va	Im	0	3
2621	Fosey	6	9	V	4.5	Na Ni Po	Im	2	0
2624	Mercury	6	8	IV	4.0	Ag Ni	Im	0	4
2627	Tivid	4	8	III	3.0	Ni	Im	0	1
2726	Carey	2	9	III	2.5	Eo Ni	Im	1	0
2728	Duale	7	9	V	5.0	Po	Im	0	1
2824	Catuz	4	9	III	3.0	De Ni Po	Im	1	0
2827	Meleto	1	5	III	1.5	Eo Ni	Im	2	4
2828	Hexos	4	8	IV	3.0	Ni	Im	2	3
2830	Pedase	4	5	III	2.5	Ic Eo Ni	Im	0	1
2924	Moran	4	8	III	3.0	Eo Ni	Im	0	1
2827	Maitz	5	10	V	4.0	Ic Ni Va	Im	2	2
2930	Mainz	3	9	III	3.0	Eo Ni Po	Im	0	3
3021	Brodie	4	7	III	3.0	Ni	Im	1	4
3022	Rorise	1	9	III	2.0	Eo Ni	Im	0	2
3025	Fornice	7	10	V	5.0		Im	0	2
3029	Pallique*	9	11	V	5.5	Hi Ic In Na	Im	2	0
3030	Nexine	3	8	III	2.5	Eo Ni Wa	Im	0	1
3123	Nadrin	2	6	II	2.0	De Eo Ni Po	Im	2	0
3124	Mora	10	12	V	6.5	Cx Hi In	Im	1	2
3228	Fenl's Gren	3	9	III	3.0	Eo Ni	Im	2	3

Trin's Veil Subsector

Hex	World	PR	TL	Port	WTN	Trade Classes	Alg	Planetoid Belts	Gas Giants
2534	Burston	6	8	III	3.5	Ni Ri	Im	0	2
2536	Squanine	5	9	V	4.0	Ni Va	Im	0	3
2537	Dobham	3	9	V	3.5	De Eo Ni Po	Im	2	3
2538	Pyramus	3	5	I	1.5	Eo Ni	Im	1	4
2539	Thisbe	5	6	I	2.5	De Ni Po	Im	2	2
2540	Aramis	7	5-6	IV	4.5		Im	2	4
2637	Robin	4	10	III	3.0	As Ni	Im	1	2
2638	D'Mara	7	6	I	3.0	Wa	Im	1	0
2639	Keltcher	4	9	III	3.0	Ni	Im	0	2
2731	Tussinian	2	7	IV	2.5	Eo Ni	Im	2	0
2733	Edenelt	8	10	V	5.0	Ri	Im	3	4
2735	Conway	4	7	IV	3.0	Ni	Im	1	1
2739	Dodds	9	7	III	4.5	Hi In Po	Im	2	3
2832	Leander	2	6	I	1.5	Eo Ni	Im	0	1
2833	Pepernium	4	5	II	2.0	Ni	Im	0	3
2834	Tralitha	6	6	IV	4.0	De Ni Po	Im	1	0
2839	Farquahar	4	7	III	3.0	Ni	Im	0	1
2933	Raydrad	6	6	I	3.0	Ag Ni	Im	0	3
2934	Zyra	4	7	IV	3.0	Ni	Im	0	1
2935	Murchison	4	6	IV	3.0	Ni	Im	0	5
2936	Hammermium	4	10	V	3.5	Ni Po	Im	3	5
2940	Thornnastor	4	8	II	2.5	Ni	Im	0	4
3032	Katarula	6	10	IV	4.0	Ni Po	Im	0	1
3035	Prilissa	4	6	IV	3.0	Ni	Im	1	0
3038	Tee-Tee-Tee	4	9	III	3.0	De Ni	Im	0	2
3039	Youghal	3	9	V	3.5	Eo Ni	Im	0	1
3040	Tenelphi	4	8-9	II	3.0	Ni Wa	Im	0	1
3138	Zephyr	4	5	0	-0.5	Ni	Im	0	4
3139	Chamois	6	5	IV	3.5	Ag Ni	Im	2	3
3233	Ramiva	7	8	IV	4.0	De Na	Im	1	3

Appendices

Statistics for the *Beowulf*-class Free Trader can be found on p. GT132, with deck plans on pp. GT133-134. Details of other spacecraft are presented here. The following additional components were used in these designs:

New Component Modules

Collapsible Tank: 1.0 dton, 10.0 stons, MCr0.4. A collapsible, self-sealing tank made from light, folding polymers. Expands into any empty cargo hold or spacedock. Capacity: 400,000 gal (60,000 cf); holds 120 dtons (120 stons) of jump fuel when full. Can be installed in 0.5-dton increments. A full tank will rupture during maneuvers above 1.5 Gs, spilling its contents.

External Cradle: 1.0 dton, 12.5 stons, MCr0.25. Holds 125 stons (250,000 lbs.) of vehicle on the outside of the ship's hull. Can be installed in 0.5-dton increments. Vehicles carried this way aren't counted against the ship's internal spaces, but must still be included in jump-drive requirements. They are not protected by the ship's armor.

Hall, Bar or Conference Room: 10.0 dtons, 0.2 ston, MCr0.003. A large room with tables. Can be used as a restaurant, bar, conference room, etc. Each module can comfortably accommodate 100 people (smaller lounges and conference rooms are included in stateroom volume). Weight and cost include furnishings.

Life Support: 0.5 dton, 1.0 ston, MCr0.008. Extended accommodations for craft equipped with bridges but no staterooms. Includes full life support for five people, two bunks, associated fusion-power components and 9.5 cf of storage for personal gear.

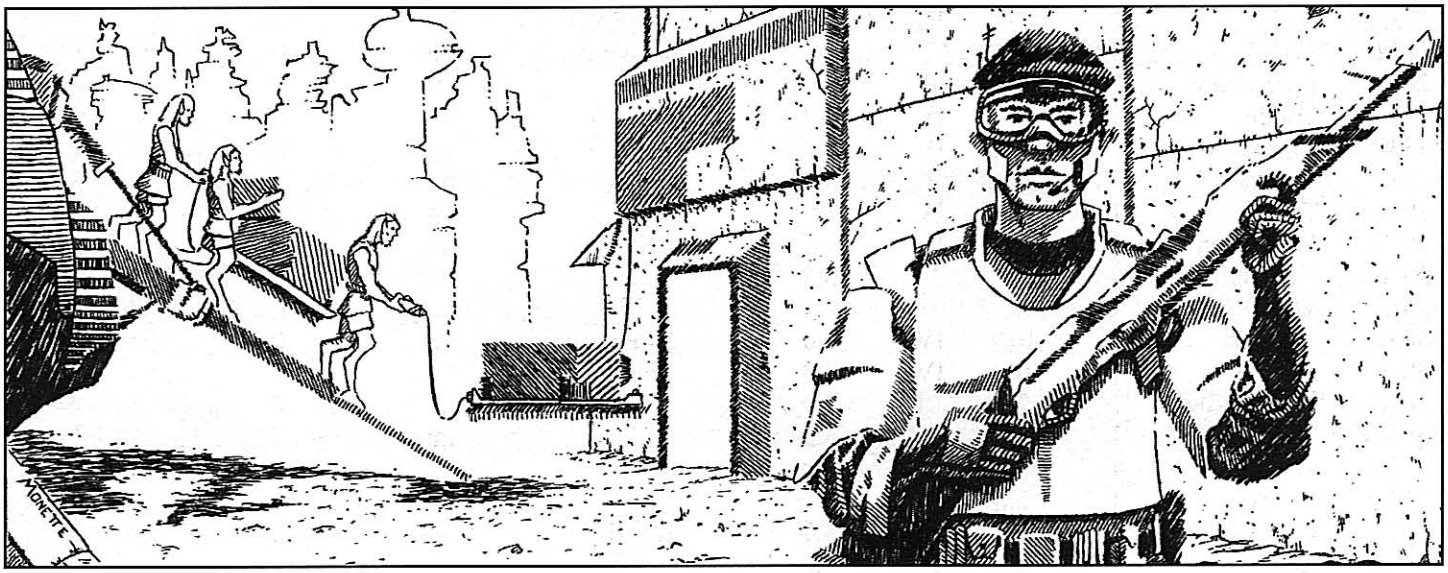
Small-Craft Bridge Add-On: This module can be used *instead* of an engineering module on craft equipped with a basic bridge. Includes fusion-power startup, full life support for five and a two-man airlock. The TL12 version also includes one bunk.

TL	Spaces	Mass	Cost (MCr)
TL10	0.5	1.96	0.32
TL12	0.5	1.40	0.16

Stage: 16.0 dtons, 0.5 ston, MCr0.004. A 20' × 20' stage area with high ceilings. Can be used for dancing, plays, nightclub acts, etc. Includes sophisticated light and sound systems. Normally attached to a hall (above) or theater (below) containing the audience.

Swimming Pool: 6.0 dtons, 27.0 stons full/1.5 stons empty, MCr0.031. Large passenger liners often have swimming pools. Includes 100 sf of pool (10' deep), 100 sf of deck area and overhead clearance. Multiple modules can be combined to make larger pools. Finished design should add one spacedock module (1.0 ston, MCr0.005) per complete pool to contain the water in case of loss of artificial gravity.

Theater: 20.0 dtons, 2.1 stons, MCr0.015. A small auditorium with 100 roomy seats for the audience, a large holoprojector and an operator's workstation. Seating is sharply raked to improve view. Can be used for entertainment or presentations, or as a briefing or situation room. The projector can be stowed, if desired. A Stage is *not* included.



Sample Merchant Vessels

The specific appearance and layout of these vessels varies from place to place (and over time), but the following designs are representative of their type:

Small Craft

Several specialized craft are designs are found in the merchant service. They tend to stick fairly close to starports, but can occasionally be found near bases, mining camps, and similar installations.

10-ton Short-Duration Lifeboat (TL10)

The standard 10-ton lifeboat (p. GT139) is a compromise design: low berths for long-duration contingencies, plus passenger couches for additional capacity and utility operations. It is suitable for any vessel that may encounter unforeseen difficulties in an uninhabited system far from help. The short-duration lifeboat is designed for well-traveled routes. It is intended to evacuate as many passengers as possible in as little time as possible and land them safely on the nearest world, if necessary.

Stewards, gunners and drive hands are often certified lifeboat operators, with Pilot (Small Spacecraft)-12.

Crew: Pilot, Co-Pilot (from ship's crew).
Design: 10-ton SL Hull, DR 100, Cockpit/Systems, 1 Maneuver, 6 Passenger Couches (capacity 72).
Statistics: Mass 23.6, Cost: MCr3.5, HP 3,000. Hull Size Modifier: +6. HT 12, maintenance interval 10.7 hrs.
Performance: Accel 1.69 Gs, Air Speed 1,225 mph.

50-ton Modular Cutter with Cargo Module

The generic modular cutter module – a streamlined 30-ton cylinder (capacity: 24 dtons cargo) – attached to a 20-ton modular cutter hull section (p. GT142). Cargo modules are sometimes carried on freight tenders as large cargo containers.

Crew: Pilot, Co-Pilot, Engineer.
Design: 50-ton SL Hull, DR 100, Basic Bridge, Small-Craft Bridge Add-On, 12 Maneuver, External Cradle, 24 Cargo.
Statistics: EMass 102.7 (*Module alone:* 23.4), LMass 204.3 (*Module alone:* 125.0), Cost: MCr7.7 (*Module alone:* 0.7), HP 9,750 (*Module alone:* 5,850). Hull Size Modifier: +7. HT 12, maintenance interval 7.2 hrs.
Performance: Accel 2.35 Gs (loaded)/4.67 Gs (empty), Air Speed 2,353 mph.

Non-Starships

These vessels are typical of Class IV and V starports, and may be found at lesser ports along heavily trafficked routes or at corporate terminals.

Lighters are cargo shuttles larger than 100 tons, routinely used for insystem freight hauling. Their large size and small crew make them cheaper and faster to operate than small craft where there is a sufficient volume of freight. *Oilers* are the fuel-carrying equivalent of lighters. *Tugs* are used to move large, unpowered cargo barges, to rescue ships in distress and for salvage operations.

800-ton Cargo Lighter (TL10)

The basic large, cargo-carrying non-starship. The spacedock/cargo hold can be pressurized and depressurized as desired during cargo operations, or can be used to hold and launch up to 275 dtons of small craft and vehicles.

Crew: Captain/Pilot, Navigator/Pilot, Sensors/Comm Operator/Cargomaster, Engineer, Mechanic.
Design: 800-ton SL Hull, DR 100, Basic Bridge, Life Support, Engineering, 83 Maneuver, 553 Spacedock/ Cargo.
Statistics: EMass 559.1, LMass 3,301.6, Cost: MCr25.2, Rental Cost: Cr1,088/hr (includes Cr37.8/hr salaries), HP 60,000. Hull Size Modifier: +10. HT 8 (max. load)/12 (normal), maintenance 24.1 man-hr/day (0.1 hr deficit).
Performance: Accel 0.23 G (max. load)/1.01 Gs (normal)/5.94 Gs (empty), Air Speed 2,495 mph.

800-ton General-Purpose Lighter (TL10)

This ship can be used for either fuel or cargo. Its collapsible tanks, while providing flexibility, make it slightly less efficient in either role than a dedicated cargo lighter or oiler, and restrict its acceleration to 1.5 Gs when full.

Crew: Captain/Pilot, Navigator/Pilot, Sensors/Comm Operator/Cargomaster, Engineer, Mechanic.
Design: 800-ton SL Hull, DR 100, Basic Bridge, Life Support, Engineering, 83 Maneuver, 4.5 Collapsible Tanks, 548.5 Spacedock/Cargo.
Statistics: EMass 604.1, LMass 3,346.6, Cost: MCr27.0, Rental Cost: Cr1,163/hr (includes Cr37.8/hr salaries), HP 60,000. Hull Size Modifier: +10. HT 8 (max. load)/12 (normal), maintenance 24.9 man-hr/day (0.9 hr deficit).
Performance: Accel 0.23 G (max. load)/1.00 G (normal)/2.90 Gs (fuel load)/5.49 Gs (empty), Air speed 2,495 mph.

800-ton Oiler (TL10)

The basic bulk fuel carrier, used to refuel large, unstreamlined starships in orbit. Oilers are more costly than general-purpose lighters (due to the expense of the fuel tanks), but safer. They are sometimes seen in military operations, but are too expensive to use commercially for hauling fuel on legs longer than about one million miles (0.01 AU).

Crew: Captain/Pilot, Navigator/Pilot, Sensors/Comm Operator/Cargomaster, Engineer, Mechanic.
Design: 800-ton SL Hull, DR 100, Basic Bridge, Life Support, Engineering, 30 Maneuver, 606 Fuel.
Statistics: EMass 559.7, LMass 1,165.7, Cost: MCr113.7, Rental Cost: Cr4,775/hr (includes Cr37.8/hr salaries), HP 60,000. Hull Size Modifier: +10. HT 12, maintenance 51.2 man-hr/day (27.2 hr deficit).
Performance: Accel 1.03 Gs (loaded)/2.14 Gs (empty), Air Speed 1,500 mph.

800-ton Tug (TL10)

Tugs use their heavily reinforced and hydraulic-equipped prow (equivalent to landing gear) to push directly on objects in space and move them from one orbit or location to another. These objects can be cargo barges (spacecraft hulls containing nothing but cargo modules), underpowered bulk freighters, or spacecraft suffering from drive failure or other emergencies. The tug crew is responsible for rigging and piloting the combined vessels.

In the search and rescue role, members of the tug's large engine room gang can form a rescue party. Up to three medics can be added to the crew if required, but evacuation and life support for the occupants of vessels in distress will have to come from another source.

Crew: Captain/Pilot, Navigator/Pilot, Sensors/Comm Operator, Engineer, 13 Mechanics.

Design: 800-ton USL Hull, DR 100, Basic Bridge, 4 Life Support, Engineering, 792 Maneuver, 2 Utility, 0.5 Cargo.

Statistics: Mass 2,994.7, Cost: MCr136.5, Rental Cost: Cr6,336/hr (includes Cr83.1/hr salaries), HP 60,000. Hull Size Modifier: +10. HT 12, maintenance 56.0 man-hr/day (56.0 hr surplus).

Performance: Accel 10.6 Gs (unloaded). Thrust 31,680 stons; can push 28,685-ston load at 1.00 G.

Small Merchant Starships

Stellar-Class 600-ton Subsidized Liner (TL10)

A *subsidized liner* is a standard merchant vessel, carrying both passengers and freight, intended for commercial activity in a region that demands a minimum of jump-2. Many ships fit this description; the *Stellar* class is an example. It is available throughout the Imperium. As the class name indicates, these ships are named for stars or star-connected items.

The *Stellar* class has an excellent jump-drive rating (jump-3), with standard 1-G maneuver drives. It offers staterooms on a passenger deck: rows of cabins along the port and starboard edges of the hull. For social and entertainment purposes, the passengers have access to a passenger lounge: a saucer-shaped gallery occupying the entire forward portion of the ship. This is alternately a dining area, dance floor, exercise area, holographic or live entertainment stage, and games room. These ships are equipped with fuel scoops and processors, and can refuel by skimming a gas giant.

Crew: Captain, 1st Officer/Pilot, 2nd Officer/Navigator, Sensor Operator, Comm Operator, Purser/Cargomaster, 5 Stewards, Medic, Engineer, 2 Drive Hands.

Design: 600-ton USL Hull, DR 100, Basic Bridge, Engineering, 50 Maneuver, 24 Jump, 180 Fuel, 5 Low Berths (capacity 20), 30 Staterooms, Sickbay, Utility, Vehicle Bay (20-ton Gig), 6 Turrets, 190 Cargo (+18 in turrets), 4 Spacedock/Hangar (included in cargo hold), Fuel Processor.

Statistics: EMass 1,084.0, LMass 2,039.0, Cost: MCr133.5, HP 45,000. Hull Size Modifier: +9. HT 12, maintenance 55.5 man-hr/day (4.5 hr surplus).

Performance: Accel 0.34 G (max. load)/0.98 G (normal)/1.84 Gs (empty), Jump 3.

Oberlindes 1,000-ton Cargo Liner (TL10)

Oberlindes Lines maintains a fleet ranging in tonnage from 100-ton couriers to the 60,000-ton ex-*Lighting*-class frontier cruiser *Emissary*. Typical of its fleet is the 1,000-ton cargo liner. This is a design commissioned by Oberlindes, and reflects the standards of its fleet. Originally, Oberlindes outfitted his fleet using naval-surplus vessels; when this liner was designed, it reflected Oberlindes' preference for extensive armament. Oberlindes ships show no consistent system of naming.

Crew: Captain, 1st Officer/Pilot, 2nd Officer/Navigator, 3rd Officer/Pilot, 2 Sensor Operators, 2 Comm Operators, 2 Deckhands, Purser/Cargomaster, Medic, Chief Engineer, 2 Assistant Engineers, 2 Drive Hands, Chief Gunner, 9 Gunners.

Design: 1,000-ton SL Hull, DR 100, Command Bridge, Engineering, 78 Maneuver, 40 Jump, 300 Fuel, 3 Low Berths (capacity 12), 15 Staterooms, Sickbay, 2 Utility, 10 Turrets (with three TL10 turret lasers each), 301.5 Cargo, 6 Spacedock/Hangar (included in cargo hold).

Statistics: EMass 1,460.2, LMass 2,967.7, Cost: MCr229.9, HP 67,500. Hull Size Modifier: +10. HT 12, maintenance 72.8 man-hr/day (35.2 hr surplus).

Performance: Accel 0.35 G (max. load)/1.05 Gs (normal)/2.14 Gs (empty), Jump 3, Air Speed 2,100 mph.

Imperiallines 2,000-ton Frontier Transport (TL10)

Imperiallines serves numerous worlds in the Imperium, most of them off the main trade routes. The frontier transport provides the basic shipping needs to serve such worlds. Its high cargo capacity and elementary performance specs make it well suited for its job. These ships are equipped with fuel scoops and processors, and can refuel by skimming a gas giant. Imperiallines ships are numbered, not named.

Crew: Captain, 1st Officer/Pilot, 2nd Officer/Navigator, 3rd Officer/Pilot, 2 Sensor Operators, 2 Comm Operators, 2 Deckhands, Purser/Cargomaster, Medic, Chief Engineer, 2 Assistant Engineers, 5 Drive Hands, Chief Gunner, 9 Gunners.

Design: 2,000-ton SL Hull, DR 100, Command Bridge, Engineering, 320 Maneuver, 60 Jump, 400 Fuel, 3 Low Berths (capacity 12), 21 Staterooms, Sickbay, 2 Utility, Vehicle Bay (100-ton Shuttle), 10 Turrets (with three TL10 turret lasers each), 605.5 Cargo, 6 Spacedock/Hangar (included in cargo hold), 3 Fuel Processor.

Statistics: EMass 3,000.0, LMass 6,027.5, Cost: MCr364.6, HP 90,000. Hull Size Modifier: +10. HT 12, maintenance 91.7 man-hr/day (4.3 hr surplus).

Performance: Accel 0.71 G (max. load)/2.12 Gs (normal)/4.27 Gs (empty), Jump 2, Air Speed 3,760 mph.

Tukera Ships

Tukera Lines is a megacorporation with shipping interests in every corner of the Imperium. Its fleet is equipped to TL12 standards, for greater jump capacity and added durability. There is a tradeoff in convenience, but with entire worlds under Tukera's sway, finding one to perform annual maintenance on its ships is seldom a problem. The following ships are typical of its fleet.

Tukera 1,000-ton Long-Liner (TL12)

The Tukera long-liner is a proprietary Tukera Lines design that operates on many of Tukera's routes as a standard passenger liner. Built sturdily and intended to last in service for decades, the long-liner maintains a standard of quality that other lines try to match. Tukera's long-liners are named to recall the worlds they serve – e.g., *Pride of Vland, Deneb Express* and *Spirit of Rhylanor.*

Crew: Captain, 1st Officer/Pilot, 2nd Officer/Navigator, 3rd Officer/Pilot, 2 Sensor Operators, 2 Comm Operators, 2 Deckhands, Chief Engineer, 2 Assistant Engineers.

Service Staff: Chief Purser/Cargomaster, 2 Pursers, Medic, 2 Chefs, 2 Cooks, 6 Galley Stewards, 3 Bartenders, 2 Bar Stewards, 3 Cabin Stewards, 3 Housekeepers.

Design: 1,000-ton SL Hull, DR 100, Command Bridge, Engineering, 18 Maneuver, 50 Jump, 400 Fuel, 6 Low Berths (capacity 24), 60 Staterooms, Sickbay, 2 Utility, Vehicle Bay (30-ton Ship's Boat), 5 Turrets (*one* armed with one TL10 turret laser, one missile rack and one sandcaster), 43.5 Cargo (+12 in turrets), 1 Spacedock/Hangar (included in cargo hold).

Statistics: EMass 1,335.0, LMass 1,552.5, Cost: MCr256.3, HP 67,500. Hull Size Modifier: +10. HT 12, maintenance 76.8 man-hr/day (7.2 hr surplus).

Performance: Accel 0.74 G (max. load)/1.16 Gs (normal)/1.35 Gs (empty), Jump 4, Air Speed 1,660 mph.

Tukera 3,000-ton Freighter (TL12)

The Tukera freighter is a standard Tukera transport ship design, and provides freight-hauling service along the many Tukera routes within the Imperium. Tukera's freighters sport a variety of names, often vaguely reminiscent of advertising slogans; e.g., *Golden Harvest, Safety First* and *Star Lines.*

Crew: Captain, 1st Officer/Pilot, 2nd Officer/Navigator, 3rd Officer/Pilot, 2 Sensor Operators, 2 Comm Operators, 2 Deckhands, 2 Gunners, Purser/Cargomaster, Medic, Chief Engineer, 2 Assistant Engineers, 4 Drive Hands.

Design: 3,000-ton USL Hull, DR 100, Command Bridge, Engineering, 100 Maneuver, 150 Jump, 1,200 Fuel, 5 Low Berths (capacity 20), 25 Stateroom[illegible]

Performance: Accel 0.27 G (max. load)/0.98 G (normal)/2.78 Gs (empty), Jump 4.

Akerut Hercules-class 5,000-ton Heavy Merchant (TL10)

Akerut is a wholly owned subsidiary of Tukera Lines, organized to establish trade and shipping operations in the Aramis subsector.

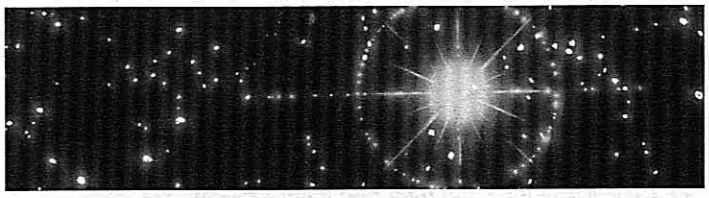
The *Hercules* class is a heavy-duty carrier used for both bulk cargo and containerized shipments. It is in service primarily in the Aramis subsector of the Spinward Marches, but several examples are in service elsewhere with Tukera. Its jump-1 drives make long distances difficult, so Akerut keeps a supply of 600-ton collapsible fuel tanks at its starport locations within the subsector. *Hercules* ships can be fitted with one, two or even three sets of tanks in their cargo holds, at the cost of cargo capacity. They are lightly armed for a frontier subsector because Akerut maintains a fleet of heavily armed "merchant escorts" for their protection. Ships in the *Hercules* class carry names suggesting immense size or strength; e.g., *Hercules, Mammoth, Gigant, Titan, Samson, Brobdingnag* and *Goliath.*

Crew: Captain, 1st Officer/Pilot, 2nd Officer/Navigator, 3rd Officer/Pilot, 2 Sensor Operators, 2 Comm Operators, 2 Deckhands, 4 Gunners, Cargomaster, Medic, Chief Engineer, 2 Assistant Engineers, 9 Drive Hands.

Design: 5,000-ton SL Hull, DR 100, Command Bridge, Engineering, 450 Maneuver, 100 Jump, 500 Fuel, 15 Staterooms, Sickbay, 10 Utility, Vehicle Bay (40-ton Pinnace), 4 Turrets (with three TL10 turret lasers each), 2,827 Cargo, 50 Spacedock/Hangar (included in cargo hold).

Statistics: EMass 3,745.3, LMass 17,865.3, Cost: MCr514.4, HP 165,000. Hull Size Modifier: +11. HT 10 (max. load)/12 (normal), maintenance 108.9 man-hr/day (19.1 hr surplus).

Performance: Accel 0.24 G (max. load)/1.01 Gs (normal)/4.80 Gs (empty), Jump 1, Air Speed 3,450 mph.



Large Merchant Starships

Ton for ton, most of the commerce of the Imperium is [illegible] 10,000 tons

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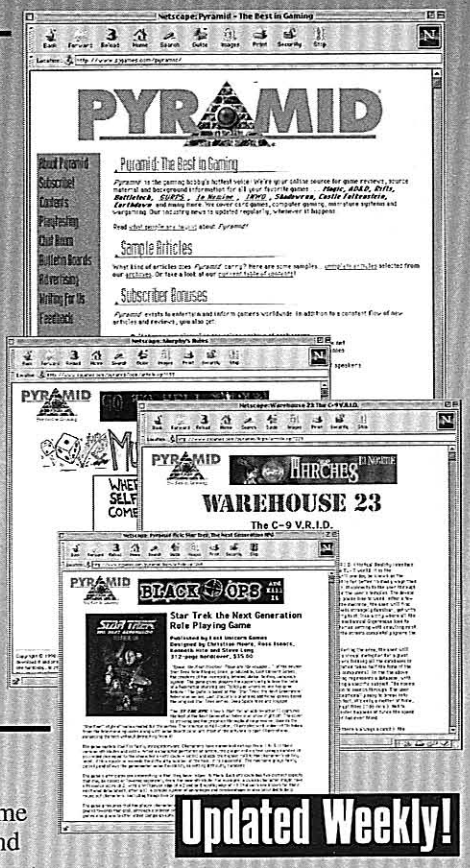

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"Regina Departure, this is S.S. Freeman, passing the 100D limit, jumping outsystem to Jenghe at this time, no estimated time of return."

"Freeman, I show you departing Regina System at 16:05:15-115-1120. Jump approved; squawk 0000. Come back and see us sometime."

"Regina Departure, this is S.S. Freeman, squawking all zeroes; will do, thanks and out."

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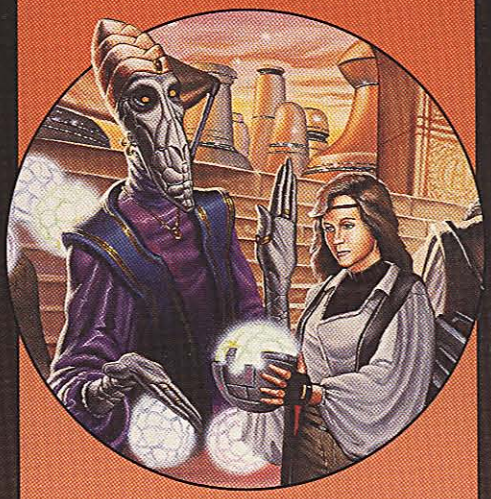

The ***GURPS Basic Set, GURPS Traveller,*** and ***GURPS Space*** are required for full use of this book in a ***GURPS*** campaign. ***Ultra-Tech*** and ***Ultra-Tech 2*** are not required, but will be very useful. The background presented here will be of great value to any ***Traveller*** campaign, and will also serve as a source of inspiration for other SF games.

ADVENTURE CAPITALISTS:

Written by
Christopher Thrash,
Jim MacLean,
and Steve Daniels

Based on the award-winning *Traveller* science fiction universe by
Marc Miller

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Sean M. Punch

Cover by
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Jesse DeGraaf,
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Tom Peters,
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SHIP'S ARTICLES (COMMERCIAL)	1. Date of Preparation
2. Ship Name	3. Registration Number

IT IS AGREED between the Captain and the Crew named below that the Crew shall serve aboard the _____, of which _____ (or whoever lawfully replaces him) is Captain, from the Port of _____, to _____
_____
_____
_____
and other ports and planets as the Captain may direct, and back to a final port of discharge in the Imperium; OR for a term of time not to exceed _____ standard days; OR for so long as the Captain and Crew agree. At the expiration of the voyage (if hired for a voyage), or the above stated amount of time (if hired for an amount of time), or at the will of either party (if hired by mutual agreement), the term of service will end.

[Strike through the phrases that do not apply.]

The Crew agree to conduct themselves in an orderly, faithful, honest, and sober manner, to be diligent at all times in their respective duties, and to obey the lawful orders of the Captain (or of any person who lawfully succeeds him) and of their superior officers, in everything related to the vessel, and her passengers, stores and cargo, whether on board, in boats, or in port.

The Captain agrees to pay the Crew, as wages, the sums and shares entered next to their names on the Manifest; to supply them with room and board according to custom and Imperial regulations; to provide liberty of such ports as time and circumstances permit; and to provide for their repatriation to the port named above if they separate from the vessel through no fault or negligence of their own.

It is also agreed, that no member of the Crew may depart the ship in port without permission of the Captain; that any embezzlement or willful or negligent destruction of and part of the vessel's cargo or stores shall be made good to the owner out of the wages of the guilty person; and that if any member of the Crew has a grievance under these Articles or otherwise, he will report it in a quiet and orderly manner to the Captain or officer in charge of the ship, who shall then take such steps as the case requires.

It is further agreed that _____
_____
_____
_____
_____
_____
IN WITNESS, _____, Captain of _____, on _____ (date).

The Crew have signed above their names on the attached Manifest, sheets ___ through ___, dated as indicated on each, which are specifically included by reference in the terms of these Articles.

A copy of these Articles was delivered to the Office of the Imperial Shipping Commissioner for the Port of _____, on _____ (date).

SHIP'S REGISTRY (COMMERCIAL)

1. Date of Preparation			
2. Ship Name		3. Registration Number	
4. Ship Type	5. Builder	6. Homeworld	
7. Laid Down	8. First Flight	9. Cost (new)	10. Occupation

STATISTICS

Basic information for classification and registration purposes

11a. Hull Class (dton) ☐ Std ☐ Custom		11b. Streamlined? ☐ Yes ☐ No	12. Air Speed (mph)
13. Acceleration (g)	14. Jump Capacity	15. Power (MW)	16. C/G Lifters? ☐ Yes ☐ No
17. Large Staterooms	18. Small Staterooms	19. Low Berths	20. Cargo (dton)

21. Ship's Vehicles (describe)

22. Required Crew Manning

23. Owner (include full particulars on owner(s), whether present or not) ☐ Aboard ☐ Absent

2. Ship Name	3. Registration Number

SHIP'S COMPUTERS

Data concerning the onboard computers and available programs.

24a. TL/Complexity	24b. Hardened?	25. Option

26. Programs (Complexity/Skill)

BRIDGE	27a. Bridge Type? ☐ Cockpit ☐ Basic ☐ Command		27b. Hardened? ☐ Yes ☐ No
13. Acceleration (g)	28. Tactics	29. Pilot Skill	30. Dodge
31a. PESA	31b. AESA	31c. Radscanners	32. Sensor Skill
HULL	33. Hull PD/PR	34. Hull Hit Points	35. Hull Size Mod
36a. Stealth		36b. Modifier	38. Compartments ☐ Normal ☐ Heavy ☐ Total
37a. Emmision Cloaking		37b. Modifier	
SCREENS	39. Meson DR	40. Nuclear Damper	41. Screens Skill
TURRETS	42. Turret PD/DR	43. Turret Hit Points	44. Turret Size Mod

Turret /Bay	Configuration			Ready Ammunition Missiles	Sand	Gunnery Skill	Adjusted Gunnery Skill

Key: L=Laser, M=Missile, MB=Missile Bay, PB=Particle Bay, GB=Meson Bay

ANNUAL MAINTENANCE		46. Last Performed	47. Location
48. Date Due	49. Cost (MCr)	50. Deferred Maintenance	

CREW/PASSENGER MANIFEST	1. Date of Preparation	2. Ship Name	3. Sheet ___of___

4. Line Number	5. Full Name	6. Rank/Title	7. Position/Occupation	8. Homeworld	9. Salary	10. Shares

TAS Form 11 *(Line through "Crew" or "Passenger" as appropriate)* **Crew/Passenger Manifest**

PRIORITY

<<= FF

ADDRESSEE(S)

FILING TIME

: -- -- --

ORIGINATOR

-- --

MESSAGE TYPE

<<= FPL

1. CRAFT / FLIGHT OPERATOR

2. REGISTRATION / MISSION NUMBER

3. TYPE OF FLIGHT

4. NUMBER OF CRAFT

5. TYPE OF CRAFT

6. HULL CLASS

7. PORT OF ORIGIN

-- --

TIME / DATE

: -- --

8. ACCEL / CRUISE

9. ROUTE

10. PORT OF DESTINATION

-- --

TIME / DATE

: -- --

11. ENROUTE TIME

:

12. ALTERNATE (IF REQUIRED)

-- --

8. ENROUTE TIME

:

13. REMARKS

14. PERSONS ON BOARD

15. CRAFT COLOR AND MARKING

16. LIFEBOAT

NUMBER CAPACITY

X

TYPE(S), COLOR(S), AND MARKING

17. NAME OF CAPTAIN / PILOT IN COMMAND

=>>

TAS Form 12 **Flight Plan**

CARGO MANIFEST	1. Date of Preparation	2. Ship Name	3. Sheet ___of___

4. Line Number	5. Lot Size	6. Origin	7. Destination	8. Terms of Shipping	9. General Contents/Special Handling	10. Cost or Fee