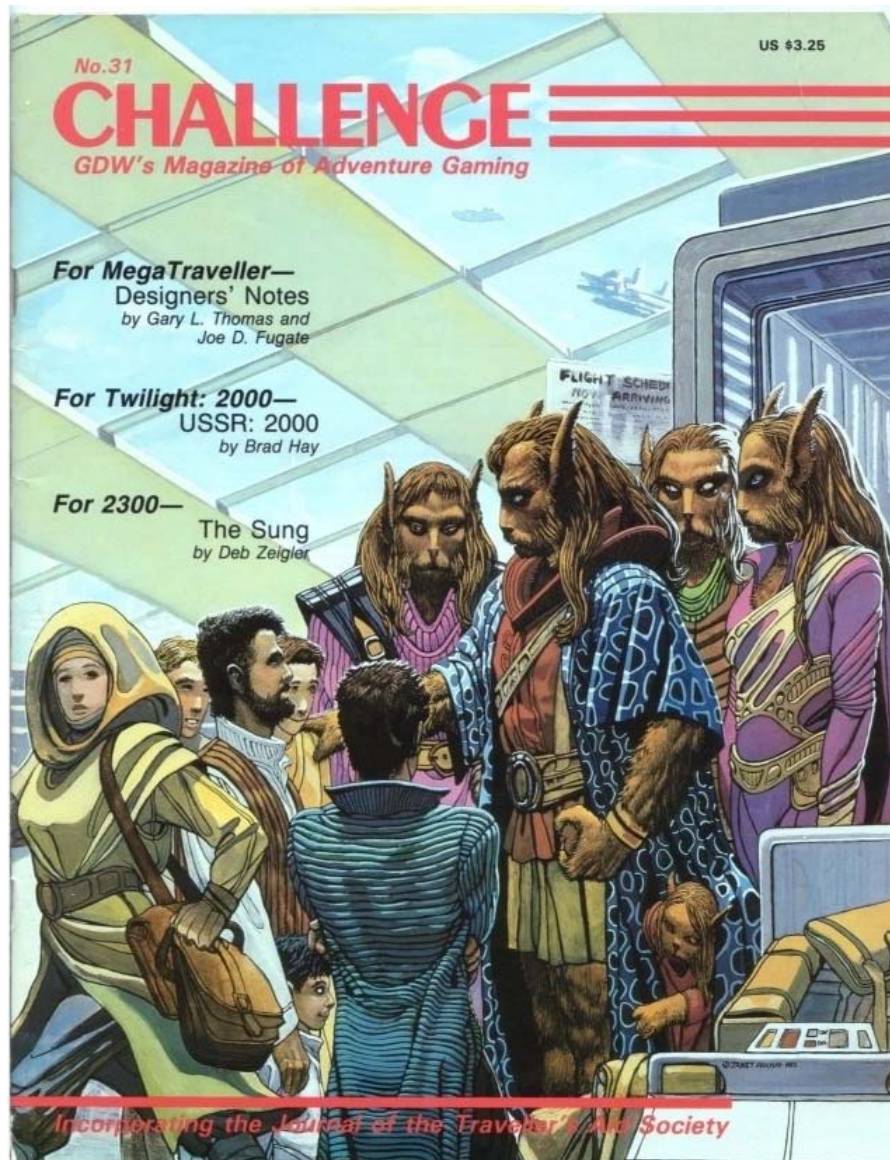




William H. Keith's

The No. 31
JOURNAL
of the Travellers' Aid Society®

Editor: Loren K. Wiseman
Associate Editor: Timothy B. Brown
Spiritual Advisor: Marc W. Miller
Art Director: Barbie Pratt
Graphic Designer: Lauretta Oblinger, Dana Reischauer, Jim Kuntz
Text Manager: Michelle Sturgeon
Publisher: GDW

Cover: Janet Aulisio
Artists: Tim Bradstreet, Liz Danforth, Steve Crompton, Rob Caswell,
Robert Jamison, William H. Keith, Jr.

*The Journal of the **Travellers' Aid Society*** is Game Designers' Workshop's registered trademark for its science-fiction gaming magazine devoted to **Traveller**.

Traveller is Game Designers' Workshop's registered trademark for its role-playing game of science-fiction adventure set in the far future.

Dates in this issue of the *Journal* are given in accordance to an arbitrary Imperial calendar of 365 days. The date consists of a three-digit day number (the current day of the year) a dash, and a four-digit number (showing the current year since the founding of the Imperium). The latest date of **Traveller News Service** in this issue is 180-1117.

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- 31-02, From the Management (Editorial), Timothy B. Brown
31-20, Hazardous Cargoes (Playing), Marcus Rowland
31-27, Twisting Tech Levels: A **Traveller** Variant (Playing), Fred L. Cain
31-32, **Traveller News Service (Traveller News Service)**, Marc Miller
31-34, Wrong Way Valve: An Amber Zone Scenario (Amber Zone), Jeff Groteboer
31-38, **MegaTraveller** Designers' Notes (History), Gary Thomas & Joe Fugate



From the Management

The blanket genre of science-fiction covers a terrific variety of topics and writers. Everything from the humorous **Hitchhiker's Guide** series to the star-faring **Foundation** series to the chaotic realms of Hell can all be on the shelves so casually marked as science-fiction.

For the romance and bestseller readers, keeping all that space tripe out of the way must seem like the thing to do. Only science-fiction fans realize the genre contains infinite subject matter, characterization, writing style, histories, societies--- you name it! It would, therefore, be ludicrous to assume that a single science-fiction role-playing game could possibly be sufficient to recreate all of these different areas of science-fiction. Certain assumptions about the universe have to be made when the game is designed, and with each decision made, thousands of possible science-fiction environments are ruled out. For example, if a game system calls for hyperspace starship travel, that pretty much rules out recreating Niven's universe which envisions no such devices, not to mention such environments as Burroughs' Barsoom where space travel isn't even an issue. Rules modifications are possible (tell me you don't use some "house rules" now and again--- I know I do), but for most people they are not desirable.

For each player of science-fiction games there is an ideal role-playing situation, a preferred setting in which the player can act out his favorite adventure scenarios. Increasingly the trend is toward so called "shoot 'em-ups," where very clear-cut lines of right and wrong can be drawn to shoot high-tech energy weapons across. I like to play these sometimes myself. Other possibilities include exploration and mystery adventures, where more brain work and less gunplay are required. These are my personal favorites, but that's just me. In many ways investigative sorts of role-playing become difficult to administer and keep interesting, and are sometimes better dealt with in literature.

So, part of the trick to obtaining the maximum amount of pleasure from a role-playing game is to pick the correct game to start with. The current trend in game manufacture is to make a role-playing game "universe specific." Each game is tailored to a specific universe, and is therefore better suited for describing and administering events in that universe. It also has the effect of rendering the game impossible to adapt to any other situation--- if you play the game, you have to play in their chosen universe. The original **Traveller** rules were not universe specific, but became so as more and more materials have

been published about the Imperium and its alien societies. All this may sound rather limiting, but actually that's not the case. There are enough universe-specific game systems out there to choose from that virtually anyone can find what they will enjoy.

I have suspicions that many players purchase new games without knowing enough about them when purchased. I realize that this information is often difficult to come by about a new game--- the box back and advertising information is most often designed to excite rather than inform. Game reviews are helpful, but not always available. As a side note, we are planning to include a review column in **Challenge** starting with issue 32.

The theory that people are not always buying the game that's right for them is reinforced from my other duties here at the Workshop. I handle a large percentage of the game question letters we receive. Keep them coming--- we're always glad to answer them. But it has been my experience that perhaps half of the role-playing questions we receive aren't questions at all. I can think of many lengthy lists of questions which could basically be boiled down to the statement "This isn't the game I would have designed." Questions like "Why didn't you do such and such?" aren't rules questions at all. They are pleas from people who haven't found exactly the game suited to them, and my bet is they might have done better to shop around a bit more.

Conclusions? Try to catch a review about a game if you can. Though review writers sometimes also fall into the "This isn't the game I would have designed" trap, they usually give every game a fair shake. Read magazine articles about the game. An article usually deals with an aspect of play in some detail, and will give you some feel for the rules themselves. There are perhaps a dozen different science-fiction role-playing games out there to choose from. Don't dump a bunch of money on something that might disappoint you later.

-Timothy B. Brown

Issue 30 feedback was as follows:

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TRAVELLER NEWS SERVICE

CAPITAL/CORE (0508 A586A98 F)

Date: 125 1117

¶ The Archduke of Antares has refused to commit his sector fleet against Dulinor, despite direct orders from Lucan. (His excuse was to protect his domain from Vargr invaders in the Lishun sector.) Rumors that the Archduke has been in negotiations with worlds outside the Imperium were neither confirmed nor denied by the Emperor's representatives.

¶ Travellers are warned that the Antares sector is a possible danger spot for the future.

KAASU/CORRIDOR (1209 AA7A9CD G)

Date: 1134 1117

¶ Border ships along the coreward frontier have reported a marked increase in Vargr raider activity. Three border worlds and several dozen ships have had incidents with corsairs in the sector in the last month.

TERRA/SOL (0207 A867A69 F)

Date: 150 1117

¶ In a press release statement from the Naval Office on Terra, the Admiralty announced that three distinct Solomani fleets have crossed the border into the sector. The fleet is taking a defensive stance in response to this threat. It is certain that when this news reaches Capital that a state of war will be declared between the Third Imperium and the Solomani Confederation.

¶ The first fleet has jumped from Krypton through Kidashi and is battling Imperial forces in the Albadawi subsector. A second, more powerful fleet is laying siege to Ilike in the Dingir subsector. The final invasion fleet has occupied Scandia, Tewfik, and Melchior in the Arcturus subsector. The Solomani Rim fleet is reportedly on the move to counter these unprovoked advances by the Solomani.

¶ Though the threat of war is imminent along the Solomani frontier, people are encouraged to put their trust in the superior Imperial fleets which are already doing battle with the aggressors.

¶ In an attached statement, a state of martial law was invoked on the entire planet of Terra. Military authority under General Yoshtiru will be in effect until this current crisis has passed.

CAPITAL/CORE (0508 A586A98 F)

Date: 155 1117

¶ Emperor Lucan is at the head of the Core fleet doing battle with the rebel squadrons of the outlaw Dulinor. Widespread fighting has been reported throughout the Dagudashag sector, but no large, decisive battles have been fought to date.

¶ Imperial forces have inflicted heavy losses on the rebel fleets.

TERRA/SOL (0207 A867A69 F)

Date: 158 1117

¶ After a brief battle and siege, Ember has fallen to the Solomani fleet which operated through the Arcturus subsector. The Imperial forces there have retreated to reinforce both Prometheus and Terra against the advancing Solomani.

¶ Elsewhere in the sector, Solomani forces have been held in a large action at Munilgan, but their ships have begun to advance into the Gashidda system.

TERRA/SOL (0207 A867A69 F)

Date: 165 1117

¶ The combined Solomani fleet has overrun fleets from the Albadawi and Dingir sectors. Elements of both fleets are engaged in a large outer system battle at Dingir itself.

¶ Popular support for Solomani reclamation of the sector is becoming apparent in several systems. Increased incidences of rioting, protesting, and sabotage plague the Imperial war effort on Terra and other worlds.

MUAN GWI/VEGA (0107 A456A86 F)

Date: 168 1117

¶ Solomani forces have bypassed Prometheus and have laid siege to Terra. Imperial space forces could not hold out against the Solomani drive and have retreated coreward toward the Vegan Autonomous District. The Vegans have sworn allegiance and support to the Emperor, and their ships are lining up with those of the Imperium to stop the Solomani.

¶ The Admiralty assures that with the Vegans as allies, the Solomani have no chance of reaching farther into the sector. A corridor to Core will be maintained.

CAPITAL/CORE (0508 A586A98 F)

Date: 174 1117

¶ The Emperor's staff has issued a statement that Vargr fleets, mostly independent but all acting in similar fashion, have overrun much of the Lishun sector. The Lishun fleet is engaged in a deep penetration battle throughout the sector and is attempting to liberate or hold worlds against the Vargr hordes.

¶ Attempts by the Vargr to make similar moves against worlds in Antares sector have been for the most part thwarted by effective use of the fleet there by the Archduke of Antares.

MUAN GWI/VEGA (0107 A456A86 F)

Date: 180 1117

¶ The Admiralty today announced a great naval victory for Imperial ships in the Dingir system. After a prolonged outer system battle which lasted over two weeks, Solomani forces have been routed out of the system.

¶ A reinforcing fleet of both Imperial and Vegan ships is reportedly on the way to strengthen the Dingir garrison and help secure the vital communications route on which it lies.

¶ In an accompanying statement, it was announced that a messenger ship had successfully eluded the Solomani blockade around Terra. According to the messenger ship, a landing attempt was thwarted more than a week ago, but losses on both sides were terribly high.

¶ General Yoshtiru has apparently died in a bombing campaign across central Asia.

CAPITAL/CORE (0508 A586A98 F)**Date: 184 1117**

¶ The Emperor's Vengeance Fleet has performed excellently in the Zarushagar sector. When forced into a set battle in the Khipge system, the rebel fleets were reportedly absolutely defeated.

¶ Though rebel ships are still on the loose in the sector, the Emperor is reportedly on the advance toward Ilelish and his quarry, Dulinor.

DLAN/ILELISH (1021 A8DIAD E)**Date: 187 1117**

¶ The office of Fleet Admiral Hutara released an official statement today. In it the admiralty announced that rebel forces in the Zarushagar sector have been successfully thwarted by a calculated campaign of military and commerce raiding by the glorious Loyal Fleet. The campaign to retake Capital and the Iridium Throne for the true Emperor is in full swing. Emperor Dulinor praised Admiral Hutara's success in a public announcement from his palace. He also announced plans to move his seat of power to Capital once it has been taken but said Dlan and Ilelish sector would remain the center of popular support and culture in the new empire.

MUAN GWI/VEGA (0107 A456A86 F)**Date: 193 1117**

¶ Renewed fighting between Imperial and Solomani forces is reported in both Zaggisi and Lagash. The Solomani fleets have apparently been heavily reinforced from the Confederation interior so much so that unofficial sources admit the Imperial fleet is stretched very thin trying to cover all possible attacks from the numerous Solomani battle formations.

REGINA/REGINA (0310 A788899 A)**Date: 225 1117**

¶ Archduke Norris has returned to Regina unexpectedly and called an emergency news conference. The Archduke brought with him the dismal news that Vargr raiders have invaded the Corridor sector and effectively cut the Marches off from the rest of the Imperium. As Archduke of the Domain of Deneb, Norris stated that he remains loyal to the Imperium. He has assumed control of his domain in its name until the present crisis has passed.

MUAN GWI/VEGA (0107 A456A86 F)**Date: 242 1117**

¶ Unconfirmed reports indicate that Solomani forces have gained a foothold on the surface of Terra. They have reportedly landed a significant ground force on the Australian continent and are beginning the systematic destruction of Imperial resistance elsewhere.

¶ The same unnamed source from within the Admiralty suggested that the Solomani are meeting with widespread support from the population of Terra, and the future of the Home Guard there is bleak.

CAPITAL/CORE (0508 A586A98 F)**Date: 252 1117**

¶ In a surprise announcement, it has been reported that the Daibei fleet has been activated and is on the move out of its home sector. Its forces will be put to use fighting either the rebels or the Solomani, but their exact destination is unknown. Reaction from the local nobility will certainly be negative.

ANTARES/ANTARES (2421 A686ABF C)**Date: 257 1117**

¶ The Archduke of Antares today renounced his oath of loyalty to the Emperor. In his words, the ascension to the throne by young Lucan was, at best, questionable, and since the true heir to the throne is in dispute the Archduke is assuming control of his domain in the name of the Emperor Strephon until an acceptable solution is reached.

¶ The Archduke detailed the pact he had signed with the Julian Protectorate, incorporating the worlds of Antares and Empty Quarter sectors with the worlds of Mendan and Amdukan sectors.

¶ The Archduke also announced he would use the forces at his disposal to make this secession succeed. Considering both the Archduke's isolationist policies of the last several months and the other pressing issues in the Imperium, it is doubtful that any move will be made soon to force Antares back into the Imperial fold.

Traveller News Service is another Imperium wide benefit of membership in the **Travellers'Aid Society**.

Hazardous Cargoes

... All labeling shall include relevant Hazard Coding, as laid down in statutes KL45384 to KL 51339. Failure to comply with this regulation carries a minimum fine of Cr500 and possible imprisonment.

Imperial Freight Regulations, 1105 ed.

Look at any railway goods yard or motorway (freeway) service area. A good proportion of the vehicles have hazard markings, from petrol and oil to liquid gas, paint, radioactive material, and strange chemicals. There's no reason to assume that this will change in the future, or that this won't apply to space cargoes. The system described below is an optional addition to **Traveller**, but can be used in any SF game with appropriate changes. No real knowledge of chemistry is necessary, but all the examples are real and would have the effects described below. Note: This system partially resembles the EEC Hazchem system but is not identical. Do not confuse real hazard symbols and coding with the examples that follow.

Since the first cargoes were shipped on primitive ocean crates, there's been a continual need to keep aware of the dangers they may cause. This danger is particularly acute in the case of bulk chemical shipments, which are likely to contain hazardous quantities of substances that are innocuous under normal conditions.

One apocryphal Terran story concerns an ocean freighter carrying ingots of industrial grade sodium, sealed in drums of oil. A small fire broke out in the hold. The crew didn't realize that sodium reacts with water, and they flooded the hold to extinguish the blaze. One of the drums was washed against the hull, where it cracked and began to fill with water. The explosion which followed blew the drum through the deck of the ship and several hundred meters into the air; it started a chain reaction, cracking more drums which flooded and exploded in turn.

Although this particular situation isn't likely to arise in space, the principle is obvious; it's essential to know exactly what you're dealing with.

The answer to this problem is labeling, but the multitude of languages used in the Imperium makes normal labels impractical. An example of the potential for error is the ancient Terran word gift, which meant present in English but poison in German. Even if a common language is used, there's a real chance of confusion when different names are used for the same chemical. More English examples include Blue Vitriol (later copper sulfate), Vitriol (concentrated sulfuric acid), and Cinnabar (mercuric sulfide). All are potentially dangerous. The history of chemistry shows that names change as new theories and chemical relationships are discovered. With a huge number of worlds at different tech levels developing their own sciences, confusion is bound to arise occasionally.

The final problem that can occur is the use of trade names which obscure the nature of a substance. Household chemicals are particularly likely to suffer from this problem, since the manufacturers rarely want to admit that they are selling dangerous material.

Multiply these problems by the number of worlds in the Imperium, and the potential for disastrous confusion is obvious.

Some hazards only occur under peculiar conditions; for example, many otherwise harmless powdered chemicals (such as flour) are explosive when thoroughly mixed with air. This situation could arise if a bag broke open in free fall.

The Universal Hazard Profile is an attempt to produce a uniform standard of cargo labeling, tailored to the needs of a space-going civilization. Each label

indicates the types of problems likely to occur, the range of species affected, and conditions likely to affect the substance in space and on alien worlds. Naturally, since this code system was originated by Humaniti, it is most precise when dealing with substances affecting humans and conditions likely to be encountered by humans.

Most merchants tend to regard this scheme as a mixed blessing. It can prevent accidents, but unnecessarily cautious labeling can lead to expensive delays, while specialized cargo handling teams load or unload the ship. UHP code labels aren't always accurate; occasionally, a shipper makes a mistake or simply reads the wrong line of a reference book when printing the label.



The standard Imperial regulations are sold as a starship computer program (including full chemical references). These occupy one CPU and one Store space, and cost Cr2000. The package includes an expert system which can identify chemicals from partial data, generate UHP codes, etc. A portable computer version is available for Cr120; this portable version only covers the standard UHP codes with no expert system.

Hazard Symbols	Name of Substance Formula
	Space for shipping information, storage instructions, etc.
	Computer ID Code  UHP Code 123-4567-89

1. Nature of Hazard (e.g. Explosive, Toxic)
2. Subclassification
3. Species Affected
4. Atmosphere Tolerance
5. Temperature Tolerance
6. Humidity Tolerance
7. Gravity Tolerance
8. Form (e.g. solid, liquid, etc.)
9. Mass (special code; see below)

UHP Code: This code is divided into three sections: three figures indicating hazard type and species likely to be affected; four figures indicating safe storage conditions; and two figures indicating form and mass. Dangerous materials may have two or more UHP codes, with associated hazard symbols.

Figures 1 Hazard Type

Code Hazard Type

- 0 **Special Hazard** (no subcode). Substances that are dangerous in a manner which doesn't fit any of the standard classes below. Code 0 substances must be accompanied by full documentation or a courier. The symbol is three exclamation marks.
- 1 **Toxic.** Substances in this group are poisonous. The subcode shows the main method of poisoning:
- 0 Toxic if eaten
 - 1 Can be absorbed through skin
 - 2 Toxic fumes
 - 3 Toxic dust
 - 4 Avoid prolonged contact
 - 5 Avoid all contact
 - 6 Addictive drug
 - 7 Carcinogen
- 8+ **Unusual toxic effect (rare)** The symbol is a stylized skull and crossed lines.
- 2 **Oxidizing:** These substances speed combustion and rusting, and should be kept from inflammable materials, delicate circuits, etc. The subcode lists the degree of risk, from 0 (potentially hazardous if combined with inflammable liquids) to 9 (spontaneously ignites inflammable materials, e.g. wood, paper, rags). The symbol is an object wreathed in flames.
- 3 **Corrosive:** An acid, alkali, or other material with corrosive effects. The subcode indicates the pH (degree of acidity or alkalinity), from 0 (strongly acidic) to E (equivalent to 14, strongly alkaline). '7' is neutral, and will rarely be seen as part of this subcode. The symbol shows drops eating a hole in a block, with fumes drifting from the hole.
- 4 **Explosive:** The subcode indicates the degree of hazard, from 0 (explosive under unusual conditions, with electrical detonation, etc.) to 9 (spontaneously explosive). Class 6 and above require special shipping containers; ships specializing in these cargoes must be modified for safety. External pods may be

5

6

7

fitted, designed to burst outward in an explosion. The symbol is a broken sphere radiating debris.

Highly Inflammable: The subcode indicates the lowest temperature of combustion, in degrees centigrade, on a special scale. The formula used is to multiply the subcode by 10 degrees, then add it to 50xC. Thus, 0 indicates flammability from 50xC upwards, 5 means flammability from 0xC, A from 50xC, F from 100xC. A subcode of "X" indicates spontaneous combustion at all temperatures, or over a very wide range of temperatures. This subcode is not the same as the safe storage temperature, which is handled by another code below. The symbol is a series of stylized flames.

Biohazard: The substance is likely to cause illness or other medical problems, without being a normal poison. Subcodes indicated the nature of the problem:

- 1 May cause allergy
- 2 Likely to cause allergy
- 3 May cause mild infection
- 4 Likely to cause mild infection
- 5 May cause serious infection
- 6 Likely to cause serious infection
- 7 May cause lethal infection
- 8 Unknown biohazard
- 9 Biowar agent

Substances with subcodes from 5 upwards must be shipped in secure containers, and ports must be notified in advance of shipment. Examples include vaccines, pathological samples, corpses, etc. Within the Imperium it is illegal to ship category 9 materials without an Imperial military escort and full Imperial clearance. The symbol is three interlocking circles.

Radioactive: The subcode indicates the type of radiation and intensity:

- 0 Weak Alpha emitter (e.g. uranium ore)
- 1 Weak Beta emitter
- 2 Weak Gamma (neutron) emitter
- 3 Moderate Alpha emitter
- 4 Moderate Beta emitter
- 5 Moderate Gamma emitter

- 6 Strong Alpha emitter
- 7 Strong Beta emitter
- 8 Strong Gamma emitter
- 9 Strong xray emitter
- A Nuclear weapons

Codes 0 to 5 may be shipped by conventional freighters, given suitable type of shielding; 6 to 9 require unusual shielding, as well as special shipping containers and Imperial permits. Nuclear weapon shipment conditions are most generally covered by local and interstellar armament laws, which are beyond the scope of this article. The symbol is a circle surrounded by rays within a black trefoil.

Codes 8 and up are reserved for future expansion of the system.

Hazard Type Figure 3: Races Affected

The third figure of the UHP code indicates lifeforms which are likely to be affected:

- 0 All lifeforms
- 1 All oxygen breathing lifeforms
- 2 Humaniti, Aslan, and Vargr affected
- 3 Humaniti only (all races including Zhodani etc.)
- 4 Aslan only
- 5 Vargr only
- 6 Droyne only
- 7 Hivers only
- 8 K'kree only
- 9 Other lifeforms only

Code 9 is obviously a catch- all code, backed up by more information on the main label. For example, a chemical might only affect the silicon based natives of Eshar (see **Ordeal By Eshar**, by FASA), or might be dangerous to all chlorine breathers. Codes 9 and above will probably elaborate on alien species in the next revision of the regulations, scheduled for 1120.

Figure 4 7: Storage Conditions

This group of four figures indicates the safe storage conditions.

Figure 4: Atmosphere Tolerance

This symbol is a conventional UPP (planetary profile) number. For example, '7' means "Store in standard (Earthlike) atmosphere," "0" means "Store in Vacuum." All codes indicating a tainted, exotic, corrosive, or insidious atmosphere must be backed by more information on the shipping label. There is usually some tolerance for error, but a wise shipper will indicate exact requirements on the label.

There are also two special codes: "X" means "May be stored under any atmospheric conditions;" "Y" means "May be stored in any oxygen based atmosphere."

Figure 5: Temperature Tolerance

This figure indicates recommended storage temperature, plus or minus ten degrees, based on the same code system used for inflammable chemicals above. If the temperature is below 50 C an "X" is used instead, if above 2000 C a "Y" is used instead, with appropriate notes on the label.

Figure 6: Humidity Tolerance

This figure indicates safe maximum humidity, measured in units of 5%. Thus, 0 is 0% humidity, 1 is 5% humidity, and so on. An "X" indicates "May be stored under all humidity conditions."

Figure 7: Gravity Tolerance

This figure indicates maximum safe gravity conditions, measured in units of 1G. There are two special codes: "X" means "DO NOT store in zero gravity"; "Y" is "Keep at exact gravity indicated." Both must be backed by exact shipping instructions.

Figure 8: Storage Form

This is more or less an arbitrary code number. As usual, it is biased towards the conditions preferred by oxygen breathers; a creature living at a much higher or lower temperature or with different atmospheric requirements would probably have a very different view of things.

- | | |
|---|---|
| 1 | Solid (e.g. copper ingots) |
| 2 | Powdered solid (e.g. sulfur dust) |
| 3 | Solid/liquid mixture (e.g. sodium in oil) |
| 4 | Solid/gas mixture (e.g. iodine) |
| 5 | Liquid (e.g. mercury) |
| 6 | Gas/liquid mixture (e.g. bromine) |
| 7 | Solidified gas (e.g. carbon dioxide ice) |
| 8 | Liquefied gas (e.g. methane) |
| 9 | Compressed gas (e.g. oxygen) |
| A | Rarefied gas (unusual) |
| B | Gas plasma (unusual) |
| C | Assorted forms (usually a mixed cargo) |

Codes D and up are set aside for future expansion of the system.

Figure 13: Mass

This symbol shows the approximate mass, on a special scale:

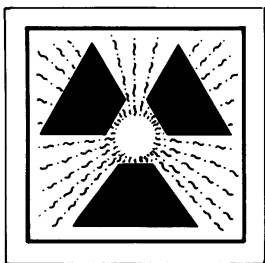
- | | | | |
|---|----------------------|---|----------------|
| 0 | Under 1 gram | 9 | 100 200 tons |
| 1 | 1 10 grams | A | 200 300 tons |
| 2 | 10 100 grams | B | 300 400 tons |
| 3 | 100 grams 1 kilogram | C | 400 500 tons |
| 4 | 1 10 kg | D | 500 1000 tons |
| 5 | 10 100 kg | E | 1000 1500 tons |
| 6 | 100 kg 1 ton | F | 1500 2000 tons |
| 7 | 1 10 tons | G | 2000 3000 tons |
| 8 | 10 100 tons | H | 3000 4000 tons |

Symbols continue after "H" with an incremental increase of 1000 tons per symbol.

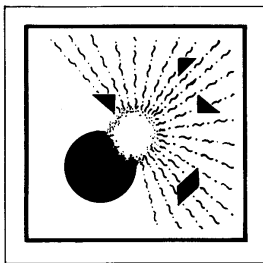
Naturally, an exact mass will probably be recorded somewhere on the label, or amongst the shipping documents; the code simply indicates the approximate mass and is mainly for hazard evaluation. Thus a container of nitroglycerine with code 0 would probably be a fairly harmless medical shipment, but a tank of nitroglycerine with code 8 could be a major risk to buildings around a spaceport.

SAMPLE UHP CODES

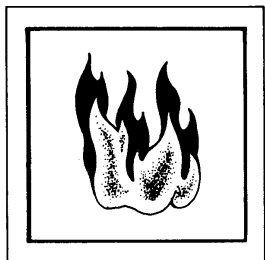
- | | |
|-------------|--|
| 130 XAOX 28 | 20 tons of powdered dry copper sulfate. The dust is poisonous if eaten or inhaled. It also absorbs water, and the container would burst if it was kept in damp conditions. |
| 260 77A3 56 | A 500 liter tank of strong hydrogen peroxide (used in many industrial processes). The tank walls are rated to 3G. |
| 35 77A2 55 | 100 one liter bottles of gourmet wine vinegar. More or less harmless to humans, it can affect chemicals, and some alien species may be allergic to it. |
| 400 YAOX 29 | 150 tons of powdered aluminum. It's explosive if thoroughly mixed with air in free fall, but mustn't be stored in vacuum because particles of the powder would weld to form lumps. It also oxidizes if damp, which could cause fires and may make it useless for some processes. |
| 5XO Y8B3 38 | 25 tons phosphorus ingots, stored under water; inflammable when dry, stored under water in strong containers. |
| 673 Y642 54 | 2000 ampules vaccine. Fragile, keep cool. |
| 700 X7X5 47 | 5 tons of thorium hydroxide, a useful industrial ore which releases radioactive radon gas. The container is hermetically sealed, hence the wide atmospheric and humidity tolerance. Shipping instructions say the container must be vented into vacuum once a week to prevent the radioactive gas from bursting the container. |



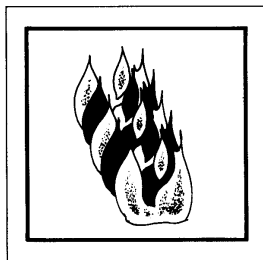
Radioactive



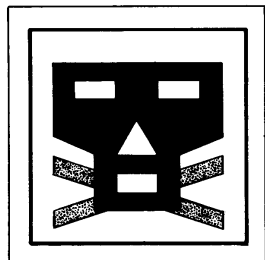
Explosive



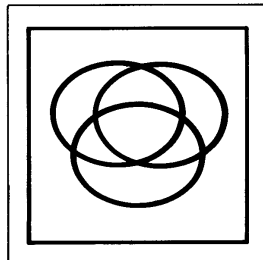
Oxidizer



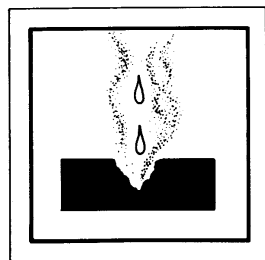
Inflammable



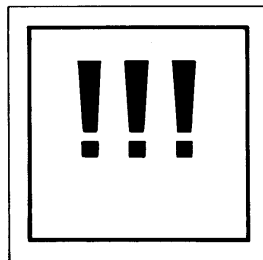
Poison



Biohazard



Corrosive



Special Hazard

USING THIS SYSTEM

Don't assume that every cargo is hazardous; however, one or two ominously labeled containers in each freight shipment should give the players something to worry about, will encourage them to take better care of their holds, and can be a useful starting point for adventures. The examples which follow are in the usual **Traveller 76 Patrons** format, an introduction with two or more possible plots that can be selected independently or chosen by a 1D6 dice roll.

GAS!

Players' Information: During a routine hold inspection, a day after entering jump space, the team notices brown gas seeping from a large cargo container. Anyone who approaches without a respirator starts coughing; atmosphere testing equipment gives a marginally tainted result near the crate. The container is listed as "Assorted Laboratory Chemicals 50 tons," comes from a TL 7 (20th century technology) world, and is valued at Cr25,000. The UHP code reads 000 7772 C7; the label says that the inventory gives full UHP codes for each item in the consignment. Unfortunately someone seems to have packed the inventory inside the container...

GM Notes: The team should not include a Hiver; this race has a very precise sense of smell and could identify the chemical immediately.

1-3: A five liter container of nitric acid has burst open and is reacting with the packing material to produce brown nitrogen dioxide gas. When the reaction ends and the container dries out, several kilos of an explosive material resembling guncotton will have formed; any shock will detonate it and smash hundreds of other containers. If the container is opened and the packing material is soaked in water, the reaction will stop. This means unpacking 20 or 30 boxes of assorted nastiness before finding the one that's half eaten away. Respirators or spacesuits are needed, since the gas is poisonous.

4-6: Some small ampoules of liquid bromine have been smashed, releasing corrosive vapor. The gas is poisonous but soon spreads enough to be harmless. This has no serious long-term effects, apart from turning all the labels in the nearest boxes into brown mush and weakening the glue holding some of the boxes together. Unpack with great care....

RED TAPE AT MORNING

Players' Information: The current cargo is a capacity load of flour to be delivered to a major asteroid colony. A valuable ore shipment is waiting to be picked up. On arrival the team finds that there's a major problem: the spaceport artificial gravity system has malfunctioned, and for the next two weeks or so the entire installation will be in free fall.

Normally this wouldn't affect the team; unfortunately an overly officious port official notices that his copy of the Imperial Freight Regulations says that flour shouldn't be stored in free fall.

The team must somehow persuade the port official to let them unload the cargo or risk losing the export contract. As things stand, they won't even be able to afford fuel if they can't sell the flour.

GM Information: This is an exercise in bureaucracy, as in the "Exit Visa" scenario found in some editions of **Traveller** rules.

The regulation was intended to refer to loosely packed flour, not the sealed containers the team is carrying.

The team must bribe or negotiate its way to freedom; attempts to solve the situation violently will leave them stranded without fuel in an unfriendly port.

1: Bad luck. The team has run into a genuine Jobsworth (as in "It's more than my job's worth!"); there's no way he'll let them unload. Bribes will be reported to the police. They could dump it in space, but that breaks other regulations about littering and would mean a fairly major financial loss. The only way to solve the problem is through negotiation with his superiors and a prolonged struggle through the jungle of red tape.

2: He's bribable. He's also a little paranoid and will go to elaborate lengths to avoid leaving evidence of the transaction. Payment involves left luggage lockers, numbered bank accounts, etc. For a really silly scenario, throw in a few smugglers and a spy transferring sinister briefcases at the same time.

3-4: A rival shipper has bribed the official to prevent the team unloading and is negotiating to take over the export shipment. The team doesn't have enough money to outbid its rivals, but might be able to con the official, blackmail him into cooperating, or expose him publicly.

5-6: Choose one of the options above. Eventually the team gets permission to unload. The cargo

handling union has now gone on strike, pending repairs to the gravity system and a resumption of "normal working conditions." All cargoes are affected, including the export shipment. If the team tries to unload or load without union labor, it'll be blackballed by a moderately corrupt union....

BIG BANG THEORY

Players' Information: It's the first time the team's ship as been overhauled since bought from a bankrupt cargo company, and team members are relaxing for a few days while technicians service defects. On the third day, armed police come to their hotel and hustle them to the spaceport; they say that there's a problem on the ship, but won't give any details. As the police car reaches the 'port, the team notices workers streaming away; it appears that the area around the ship is being evacuated.

Referee's Information: The spaceport service crew has found an old 50 kilo chemical container in a hidden storage locker. It's corroded and looks ready to fall apart. There are the torn remains of a hazard label visible: it's only enough to show the nature of the hazard; all other detail is missing. There's a label stamped into the metal of the drum, but it's in an alien language which no one recognizes. It will prove to be the name of the company which made the drum, which is no help at all. The team may remember hearing that the former owner went bankrupt during a long trial on smuggling charges.

1-4: The visible fragment is an "explosives" symbol. Roll D6:

1: It formerly held nitroglycerine but is now full of packing chips concealing a fairly worthless piece of broken computer equipment. This has nuisance value, but nothing more.

2: Packing chips conceal a 25 liter drum of nitroglycerine. This could cause several thousand credits worth of damage and would kill anyone in the hold. It is now old and fairly unstable.

3: Eight machine pistols and 20 clips of incendiary ammunition from an illegal shipment are concealed by packing in the drum. Depending on the law level, this may cause problems.

4: The packing conceals 25 detonators, plastic explosive, and safe-cracking equipment. This will cause legal problems.

5: The packing conceals a tactical atomic warhead, correctly wrapped in layers of radiation screening material. It isn't armed. This is big legal trouble, but nothing worse.

6: As 5, but the explosive charge used to detonate the warhead has deteriorated and is unstable.

If the result is 5 or 6, radiation sensors can detect the warhead.

5: The label is a "Poison" symbol; roll D6:

1 3: It's weedkiller, relatively harmless unless eaten.

4-5: A lethal toxin that can cause long term illness and death.

6: A chemical warfare gas, illegally shipped without authorization. This could kill everyone in the port and surrounding area.

If the result is 4-6, experts will insist the only safe answer is to dump the drum in an escape orbit. The repairs to get the ship ready for space will be hasty; there could be a lot of problems before the team gets back to port for the rest of the refit.

6: The label is a "Biohazard" symbol; roll D6:

1: Post-mortem samples that "got lost" in transit / evidence in a murder case that can lead to freeing an innocent man. Interests will stop at nothing to prevent the case being reopened.

2-3: Time-expired agricultural antibiotics. About 90 percent of humans are allergic to them and develop rashes, blocked noses, etc.

4: Remember Alien? The container holds the egg of something equally nasty in an embalming fluid that hasn't yet killed it. See **Traveller** Double Adventure 5, The **Chamax Plague/ Horde**, for a monster if you don't feel inventive.

5-6: The case seems to be full of old rags. They harbor parasites (equivalent to fleas) that carry infection. On a roll of 1 3, it's relatively mild; on 4 6, it's lethal. This was originally intended for a pest control laboratory, but it was mislaid.

Unless a member of the team has some relevant medical qualification, this problem will be handled by scientists from the local university. There'll be an accident if the dice roll was 2-6, and the team members are nicely at hand as scapegoats....

These examples suggest possibilities of hazardous cargoes. Even something seemingly innocent could do a lot of damage.

SOURCES

Safety and Laboratory Practice. Ellis and Riches.

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The Cargo of Rice. C.S. Forester.

Marcus L. Rowland

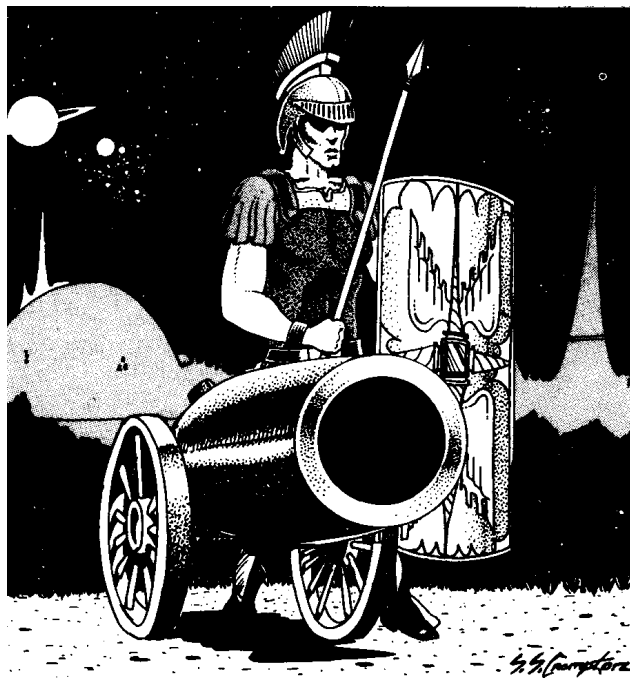
Twisting Tech Levels: *A Traveller Variant*

This article is intended to provide ideas for **Traveller** variants. While no specific rules are given here, the essay should spark your imagination enough to spice up any number of **Traveller** scenarios.

While reading the article, "*Till They Glow In The Dark*," by James F. Cumber in **Journal 22**, I thought he raised an excellent point in suggesting that levels 6 through 9 be subdivided into five-year long sub-units. As he pointed out, a Scout crew would be very interested to know whether the tech level 6 world they were exploring might threaten them with a World War II 1950s prop style jet, or a late '60s atomic ABM.

However, there are two "other" matters in this field which bear consideration: First of all, tech level 1 is Bronze Age; tech level 2 is 1400s to 1700s A.D. That's a helluva long period of technological progress to lump together even if a lot of it was rather slow at times! If a warrior of Xerxes "Immortals" of the early Iron Age took on a fully armored Frankish knight of the late Iron Age, there wouldn't be a battle there'd be a massacre, though both would be well-armed professionals of the same tech level.

But to me, even more interesting are the worlds one might find where technology took paths which, on Earth,



only exist in the realm of "what might have been," Consider this example:

Charcoal, sulfur, and saltpeter were known of in Classical times; it would have required no great effort of genius for some ancient Greek or Egyptian alchemist to discover the formula for black powder. Many people in ancient times commonly carried flint, steel, and tinder, and the manufacture of both spring operated mechanisms and metal pipes and tubing was well-developed, with many common applications by the time of the late Roman Republic in the 1st century B.C. It's only a fluke of history that Caesar's legions were not armed with flintlocks and cannon, even though their basic sublevel of technological progress would remain unchanged in relation to their tech level.

(Apparently the Romans had developed a primitive steam engine, but there is no direct evidence that they ever put the technology to use. Also, the Aztecs knew about the wheel, but apparently never used it for anything other than toys. T.B.)

With this prospect to consider, that is the unexpected "surprises" which might greet the unwary adventurer, we enter whole new realms of

risk and opportunity. For instance, in Book 4 **Mercenary**, on page 46, it mentions that the first tanks and armored cars appear at tech level 5 (circa 1900-1939). But imagine the difficulties that might beset a party whose ship or company-owned trading post is caught between two warring nations of a tech level 3 (1700 to 1860) or tech level 4 (1860-1900) world, and both sides are fighting it out with steam-powered "land battleships" armed with carronades, 16 inch Civil War Dahlgrens, and Gatling guns from out of Jules Verne, H.G. Wells, and *The Wild, Wild West* TV show. Many different considerations might limit any overt use of greatly higher technology by the players. But even if the high-tech owners of said trading post wanted to get involved, even laser, stunner, and disrupter small arms of a group of less than platoon strength would still be poor odds against one or more armies of primitives. And the risks! If their ship is threatened by the possibility of being caught in the center of a Patton-Rommel-style tank battle, the adventurers might never see home again, the company trading post goes up in smoke, they won't dare go back; their employer would take it out of their wages until a week after doomsday. And if they start bagging tanks out of season with laser carbine fire, the Scout Service will file enough charges to get them convicted of everything back to the burning of Rome by the Visigoths.

(Anybody want to quietly suggest the invention of the bazooka?)

Go to the public library and look at old copies of *Life*, *Mechanics Illustrated*, and *Popular Science* going back from the early '50s to the turn of the century. In them, you see pictures (many not implausible) showing views of futures that might have been, many of them quaintly "futuristic" in an "old-fashioned" sort of way. Each decade even has its share of spaceship designs.

In the 1890's, when Prof. Konstantin Tislovsky (a boyhood fan of Jules Verne) calculated that the thrust of a rocket fueled by liquid oxygen and kerosene would be powerful enough to reach the moon, he recorded that he "almost fainted with delight." Tislovsky proceeded to design and write about all the things required to build a practical working rocket ship. Given the need or opportunity, other worlds and cultures (or even our own, with a slightly different course of history) would not necessarily have had to have waited for the science of the 1960s to venture into space if they'd had the motive or the right application of science. It could have been done earlier more on raw courage,

brute force, and bullheaded daring (and one shudders to think of the risks and sacrifices), but it could have been done.

One obvious drawback to these earlier applications of space technology, however, is a lack of sophisticated data processing. However, there are plenty of science-fiction ways around this lack. Large mechanical calculating devices could be employed, or perhaps some sort of bioengineering solution like cybernetics or a purpose-grown intelligent organism to perform routine mathematical functions. Remember that in science-fiction there is almost nothing to limit your imagination.

These items of superior ability might very well be crude, less sophisticated, certainly more difficult to create, possibly even "primitive" compared with the present technology of our 1980s decade, but not at all impossible.

As an example, let me briefly describe a few possible versions of these "twisted tech levels" that a referee might wish to consider and the logic behind them. If a native equivalent of George Washington on a tech level 3 planet gets word that "The Redcoats are coming!" via the telegraph, then it is not implausible to imagine a "Ben Franklin" on that world who goes a little bit "farther" in his study of electricity. If that world's Cornwallis breaks the siege of Yorktown with fusion X guns, then the "only" possible answer is that somebody's running guns to the natives. On a tech 3 world, a Maxim-style machinegun is not beyond the possibility of that world's potential (though perhaps stretching it just trifle), but an Apollo moon rocket is!

In such cases, a partial guideline for some of the "potential" of a tech level would not be

restricted just to the actual inventions of our own history at that period, but also to the science-fiction, speculation and research, and prototype work of that era (in many instances, work in a certain field has been advanced or delayed for mere reasons of luck, availability, finance, practical needs, or public interest or apathy). To return to the example of armored tanks: DaVinci (tech level 2) designed a workable model that could have used mere foot treadles and a hand-turned crankshaft for drive. If he'd improved on the idea of Hero's steam engine toy of ancient Greece, the cannon-armed steam tanks of a hypothetical tech level 4 might have appeared in a Renaissance Italy that might in other ways remain virtually unchanged as to technical progress. It could have happened. But when DaVinci offered his ideas to the Medici, the Duke considered them "impractical," and history was forever changed.



Within the technical progress of the Renaissance "Age of Reason," and Industrial Revolution, both historical, fictional, and speculative examples of individuals and sources of ideas where history might have "gone otherwise" might be grouped thus:

- A. 1400s 1700s:** Da Vinci, Newton, Paracelsus, Galileo, Jan Christian Heuygens, Leeuwenhoek.
- B. 1700s 1800:** Ben Franklin, Lavoisier, Laurencio de Gusmao, the Montgolfiers, David Bushnell, steam engines.
- C. 1800 1860s:** Cayley, William Henson, Fulton, Edgar Allan Poe.
- D. 1860s 1880s:** Jules Verne, American Civil War, the modern Wild, Wild West TV show.
- E. 1880s 1900s:** H.G. Wells, the "Frank Reade, Jr." series, Doyle, art of Winsor McCay, the "pseudo classicism" of art nouveau.
- F. 1900 1920s:** "Tom Swift" series, Edgar Rice Burroughs.
- G. 1920s 1930s:** "Buck Rogers," Hugo Gernsback, the movie Metropolis, the recent books/movie Dune, futurism.
- H. 1930s 1940s:** "Flash Gordon," When Worlds Collide, book/movie (Shape of Things to Come, art deco, Modern Mechanix magazine, World War II).
- I. 1940s 1950s:** Rocky Jones Space Ranger, EC comic art of Frank Frazetta and Wally Wood, "Silver Age" comic art of Steve Ditko, Carmine Infantino and Jim Mooney, Mechanics Illustrated, Superman comics.
- J. 1950s 1960s:** "Tom Corbett" books, American and Japanese science-fiction movies, Marvel Age comic art of Jack Kirby, Steranko, Steve Ditko, authors Andre Norton and Robert Heinlein.

In this list, real persons and events are mixed with works of art and fiction which sometimes had considerable overlap. These examples are in no way a complete picture, but they do mark somewhat specific "periods" in people's notion of progress and the scientifically possible as measured by the tech level of their day.

In a recent reprint of some of the early adventures of Buck Rogers, a page from a Sunday funnies episode of 1939 shows spaceships and soft helmet/shirt-sleeve environment spacesuit uniforms almost identical in appearance to the modern day space shuttle and astronauts of almost fifty years later.

What if adventurers should have to rely on the space travel of a world that developed it "earlier" than Earth? What would it be like (heaven have mercy)? What about the spaceships of a tech level 5 planet of the Hugo Gernsback era? Much of their technology would be built on a massive scale with considerable use of large tubes, coils, baffles, circuits, meters, levers, switches, dials, screens, and industrial scale mechanical parts. In its own way it would be impressive, awesome in its suggestion of power and "raw technology," but also, to a certain degree, understandable, as technological sophistication has not yet reached the degree to allow for a high level of "solid state" and miniaturization.

The first, crude, Fermi type atomic reactors could, with just a little bit of effort (and a colossal level of self-confidence, if not risk), appear by the early to mid-tech level 5 (1900s 1929s). Rocket planes, perhaps of crude, solid fuel "cluster"

types, and perhaps resembling in appearance the World War II German jet and rocket fighters, might make their debut as early as the mid tech level 3 of a world resembling ours of the 1820s 30s. Also, it is amusing to imagine how the world of an earlier generation might have described discoveries made on our world at a later age. Musing on terms such as "radiovision," "space dirigible," and "land ironclads," we see ourselves through the eyes of an earlier decade or century.

Here's yet another example of a different kind of twisted tech level. Imagine this: there are two soldiers, both equally brave, skilled and alert; both are tech level 12. Each soldier is light infantry and armed with a laser rifle and two hand grenades using the same kind of chemical explosive. An even match, right? Maybe ... maybe not.

The first soldier is of Humaniti stock. The second soldier, though a member of a "human" race, belongs to a race I designed. It was inspired by the highly lifelike and "plausible looking" 1940s animation of artist Connie Rasinski in Mighty Mouse (© Viacom, Inc.) In the cartoons, this race is usually shown as standing about knee high to larger races. That would make our young mouse boy soldier approximately 45 to 55 centimeters or 18 to 22 inches tall compared to his Imperial counterpart.

Prior to the development of gunpowder, any clash between this race which evolved (either naturally or via genetic engineering) into what the human race would be had it evolved from rodents, and their human Bronze Age counterparts would be, for the little people, the sort of battle legends are made of. Not that they would be helpless. Out of arm's reach, their small size and nimbleness would not make them the best of targets for either a spear or a bow and arrow. Once a mouse person is close enough to hit with a sword, it can take one step forward and be under your guard. You then risk cutting off your own foot if you miss in your offensive or defensive attempt at him.

It would be a David vs. Goliath battle (but remember who won that one). The little people could use force of numbers (whether for open "banzai" attacks or infiltration night assaults) to overwhelm foes, and with poisoned arrows, marble sized slingbolts, and other tricks, could manage a rough parity of strength.

The discovery of gunpowder, which brings along with it the ability to strike from out of range, could give larger foes a small but formidable advantage. A smaller race could, of course, make use of explosives, rockets and artillery to obtain somewhat of an advantage; but the real weakness would be in the ratio of man portable weapons.

Two mouseling soldiers could probably manage a World War II Sten gun or M 3 "grease gun type" submachine gun like a light machinegun crew, but an M 1 rifle would be light "field artillery" for any one soldier of their race. Perhaps a smaller race of beings might have an advantage by making use of spring-fired maula pistols and rifles, throwing a venomous dart, or firing rocket squib "slow pellet" guns like those in Dune for infantry small arms.

Grenades of an elfin-like race would probably be equivalent, for tech levels 4 through 8, to human-scale blasting caps these would be less than what an Earth human might be capable of throwing, but the grenades would still have enough devilry in them to start up something, or stop it in its tracks. Bullet firing



infantry weapons of human scale caliber might be possible in the form of shoulder fired "recoilless style" weapons,

but their main drawback, along with the other infantry small arms usable to a smaller race of these tech levels, would be a slower rate of fire (since an infantryman couldn't carry as great a load of ammo as a larger race) and a reduced range for weapons of the same caliber (because a smaller race couldn't take the "recoil" of a man-portable firearm that a human could carry).

Ah, but with the advent of laser technology, our little trooper has now at last found an "equalizer" to set him on a par with any larger foe, hasn't he? Well, that all depends on what you're using to judge his technological advantage by. As far as mere applied tech level, yes. And remember, even at any higher or lower tech levels, their natural advantages of numbers, mobility, and low target profile would still remain. A pitched battle with a determined force of such troops might, from either side of the picture, bring to mind battles with all the clawing, relentless fury of the "Battle of the Alamo." Imagine fighting a horde of cornered rats possessing the weapons and intelligence of humans.

So, our little soldier and his human counterpart each have a laser rifle of the same tech level. But, wait a minute! His laser rifle is equal to a human's laser pistol. A pistol for him would be a derringer for a human. So, sometimes "equal" tech level, even on an Imperial scale, might not, in reality, be even ... or, then again, would it? Again, time to start exercising one's grey matter.

And so, a closing question:

What about tech level 4 space travel?

Well, would you like to consider a Jules Verne style version of Captain Nemo's *Nautilus* or Robur's *Albatross* as a rocket ship (possibly a winged shuttle) launched with the aid of jettisonable boosters, a rocket powered jump sled and a mountaintop, ski-jump style launch track or ramp? I wouldn't even begin to speculate myself, but if you would like to ... ? Feel free the sky's the limit!

Fred Lee Cain

Wrong Way Valve

PLAYERS' INFORMATION

You've just completed a profitable run in the latest of a bewildering line of starports ("if today is Thursday, then it must be Hey, where's the itinerary?"). The engines fire up, and the G forces press you and your passengers down into your acceleration couches. Before the ship settles onto its prejump course, engineering staff begin preparations to top off the tanks in the oceans before jumping.

The crew is well into the routine of valves, connections, and switches which must be engaged and secured before scooping begins. All goes well; the ship begins its descent into the atmosphere of the world, settling the ship into a hovering position above the peaceful sea of water. The tubes are dropped, and the engineer's monitor panel in main control begins to reflect a flow of water across the sensors in the lines.

He frowns. One indicator is apparently burned out. Tapping the panel, he wonders why it didn't show up in the preflight diagnostic checks. He returns his attention to the other indicators, soon forgetting the panel marked "fuel tank," which continues to read 32 percent.

REFEREE'S INFORMATION

The seemingly trivial indicator light that the engineer ignored will be found to be the cause of a major dilemma. Depending on the specific alignment of the valves, a number of different spaces within the ship could be flooded with scooped water!

When crews fall into a routine, accidents are more likely to happen than when they are newly assigned to a job. They become complacent and tend to overlook details which they do not ordinarily have to think about. This is the situation here.

Naval ships, of course, are less likely to be plagued with this type of accident; they have more stringent maintenance and operation policies than do merchant ships. Privately owned and operated vessels are even more lax on procedures though.

However it happens, an improperly aligned valve (or series of valves) is responsible for a problem, perhaps a catastrophe!

Whatever the space flooded, it will be difficult to clean up the mess. Scooping provided the pressure necessary to push the water into the ship, and many spaces will not have installed pumps for removal of such great amounts of water. Cleanup may necessitate draining the flooded spaces by exposing them to the vacuum of space, which would mean that time must be spent in recovering those pieces of equipment which would be removed with the water.

Depending on the size of the space and the amount of water taken in, this could require days. Effects of flooding on some specific spaces are: Cargo in a flooded hold might be ruined materials which are pervious to liquids and are not packed especially well, such as foods and clothing. In a flooded engineering

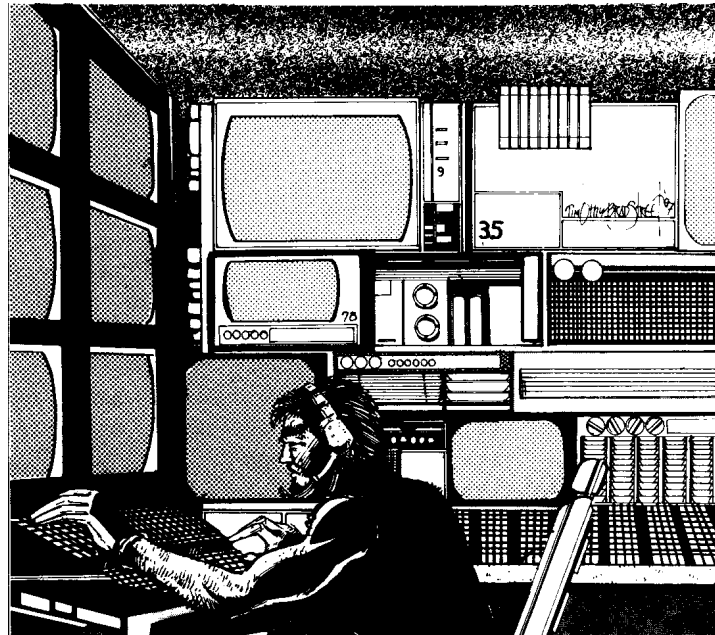
space, generators will short out, causing a loss of electrical power; ship's batteries may not last long enough for power to be restored. Personnel in flooded compartments may not have access to emergency alarms, or such alarms might be shorted out before the personnel are drowned by the influx of water. Water being pumped into lube oil service systems will cause major engineering damage; turbine generators which supply low pressure steam and electricity for many ship's systems, including the laundry, galley, and sanitary

systems will become casualties when water mixed with the lube oil impinges on the turbine blades. Extensive yard periods, costing exorbitant amounts of money, will be necessary for repair of such damage.

Scooped water is, understandably, not pure enough for human consumption and may contain large amounts of toxic chemicals. Should a valve allow scooped water to enter the potable water system, the first indication might be illness on the part of ship's crew and passengers. An unusually high level in the fresh water tanks is usually welcomed, rather than a cause for suspicion, so that this casualty is the most difficult to detect, although it is not necessarily the most devastating.

In addition to the above effects, a ship which is drastically flooded will require more fuel for a standard jump due to its increased mass. Depending on the fuel state before scooping begins and the amount of water scooped into the ship, there may not be enough fuel for even one jump. The result would be either a misburn (resulting in expenditure of fuel but no jump) or a misjump. If

AMBERZONE



enough fuel was in the tanks to make a proper jump, there may not be enough to operate the power plant and maneuver drive on the other end of the trip.

If the valve is still open when jump is activated, a suction could be created in the flooded compartment. While at first glance this appears beneficial, the suction would not care whether it was taking solids or liquids; all manner of items would be sucked into the lines, probably clogging them and causing a misjump.

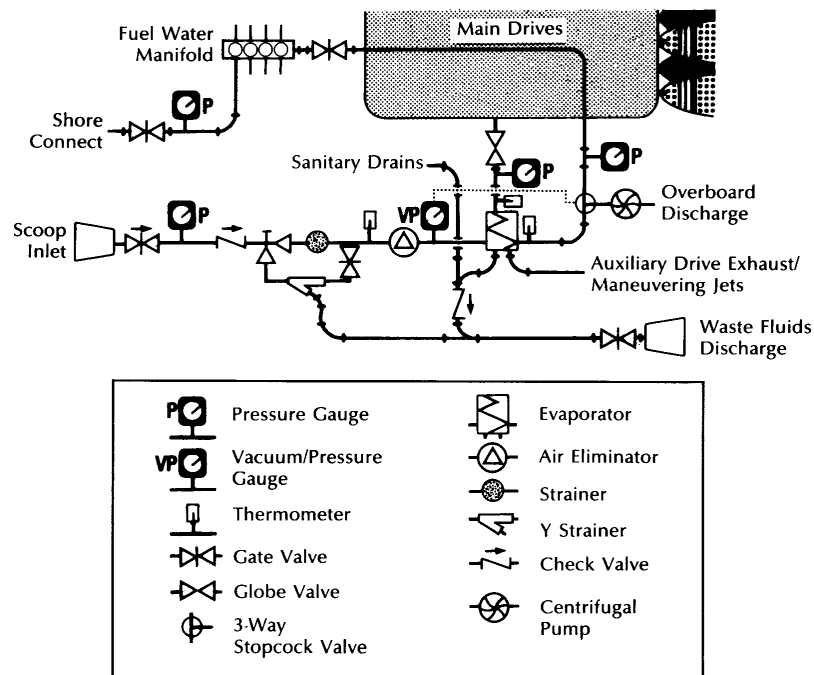
If the engineer in charge of scooping operations is on his toes, he should be able to spot the problem quickly and secure scooping until the valves have been aligned properly. If the error is not discovered until after scooping has been completed, detection of the unwanted flooding will require physical discovery. Investigation may be prompted by the failure of some affected system, as mentioned earlier, or by accident. If a passageway is flooded, for example, the first person attempting to use the passageway may be the one who discovers the flood! The effects of opening a hatch backed up by a few hundred tons of water should not require elaboration.

To determine the space flooded, the referee should use the Flooding Calamity Table provided, as well as a little bit of devious cunning. Pick a compartment which is either not manned or in which NPCs would be isolated and quickly drowned by the flooding water. (This latter idea would surely test both the insurance coverages and legal skills of the shipowners.)

Care should be exercised in timing this little catastrophe. If the players are engaged in smuggling or if they are on the run from someone, this would definitely spice up the adventure! Conversely, this scenario could be used to add flavor to an otherwise dry campaign as indicated in this article's opening paragraphs.

Before employing this scenario, the referee of the game should determine the flow of the scooped water. He should make a decision concerning whether, according to the layout of the ship's engineering systems, such a calamity in a particular space is possible, then if it is probable. Some things to think about are: 1) Is the space located near the lines connecting the scoops and the fuel tanks? 2) Which space can be flooded with the fewest misaligned valves? 3) Which valves are manned during the scooping operations (misalignment of these will be easily detected by personnel, and the problem will be corrected too soon) and 4) Which space will provide the most appropriate calamity?

The piping diagram is provided as an example of a single scoop (or one-half of a dual scoop) system. The atmosphere of a gas giant is sucked into the



scoop and is forced through a strainer and air eliminator. An alternate Y type strainer is provided for maintenance of the basket strainer. The water enters the evaporator where it is flashed into steam. Those components which cannot be boiled are expelled out the bottom of the evaporator and are discharged overboard along with items strained by the Y strainer and liquids from the sanitary drains. The pure water passes a centrifugal pump and runs into the fuel water manifold, which distributes it to the appropriate fuel tank for storage. In larger ships, much more extensive purification plants precede the manifold in the water's path.

The simplest misalignment is leaving the discharge valve closed and the Y strainer isolated (unused). During scooping, when sediments drain out of the evaporator into the discharge lines, they will fill those pipes. Once the wastes back up past the check valve at the joint of the evaporator waste and the sanitary waste lines, the sanitary drains back up and flood. Soiled, unsanitary, even poisonous water floods out of lavatories, sinks, and

showers. If the fuel water manifold valve stays shut, the line from the evaporator backs up, sending the water into the sanitary drains. Alarms indicate a malfunctioning, and the vacuum pressure gauge engages the centrifugal pump, sending the water overboard.

FLOODING CALAMITY TABLE

Roll 2D6	Compartment
2	After Staterooms
3	Lube Oil System
4 5	Cargo Hold
6 8	Engineering Mainspaces
9 10	Potable Water System
11	Passageway
12	After Staterooms

Jeffrey Groteboer

MegaTraveller Designers' Notes

MegaTraveller is without a doubt the largest **Traveller** project ever attempted to date. Many people had a hand in the original design and conceptualization of the game, but when push came to shove the final editing and assembly work was handed to Gary Thomas and Joe Fugate. We thought it would be nice to let them get in their two cents about what they have done, why they did it, and what you can expect to get out of it.

MegaTraveller is here at last! By the time you read this (we have to write it some months ahead to meet publication schedules), all three volumes of the new rules set should be available in your local game store. Was the 10 year wait worth it? If you already play **Traveller**, is this something you need? What changes were made, and why? These are all good questions, and this is our chance to give you some answers.

First, who are "we"? Marc Miller first conceived of **Traveller** 10 years ago, and along with Frank Chadwick has guided its development since that time from the bridge at Game Designers' Workshop. In that time, GDW has published more than 50 different **Traveller** books and magazines. Gary Thomas and Joe Fugate are the brains and brawn behind Digest Group Publications, publishers of **Travellers' Digest** magazine and several other approved **Traveller** books.

When **Traveller** first appeared, it was revolutionary: a powerful, playable, science-fiction role playing game with infinite expandability. A whole universe waited to be explored. At the beginning, GDW didn't publish background material for the game, but allowed referees and players to develop their own milieux. It soon became apparent, however, that the game could grow faster if more background was laid out. Not everyone has the time to invent a galaxy of worlds, inhabitants, culture, and technology.

So GDW started in. The Spinward Marches were laid out in loving detail. Aliens appeared: the proud and ferocious Aslan, the intent and mysterious

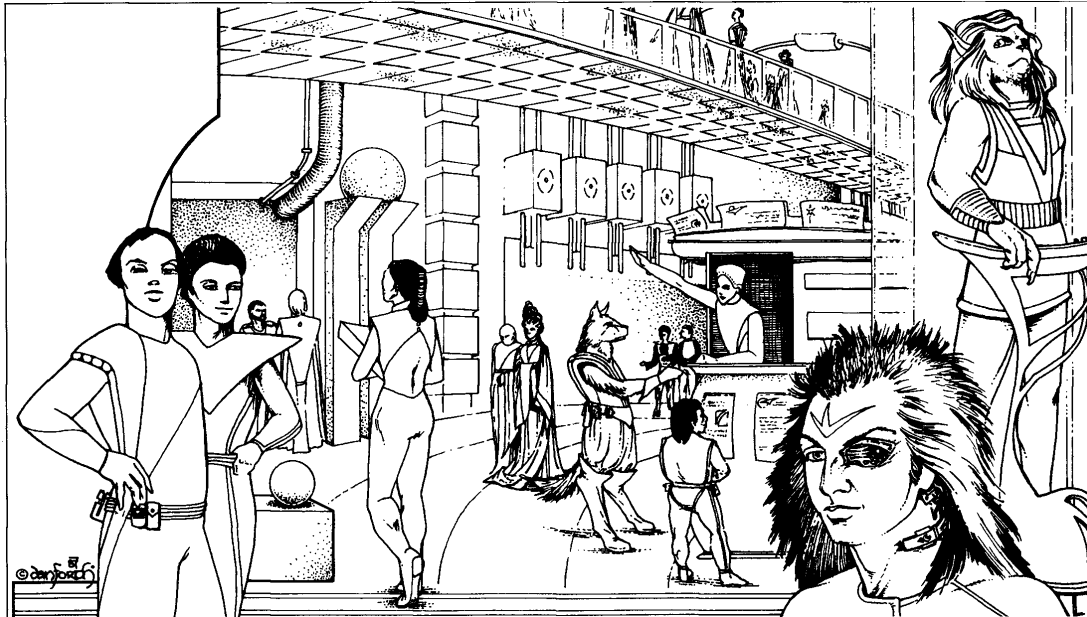
Zhodani, the tradition-bound and militant K'kree, the mercurial and quick-to-take-offense Vargr, the silent and scheming Hiver, the anachronistic and quiet Droyne, the reactionary and independent-minded Solomani. Cultures flourished. Technology and commerce prospered. Far ranging starships were designed and built. The historical underpinnings of the Third Imperium were discovered. And the first inklings of the governmental structure of the Imperium were hinted at in the system of nobility.

In this development, many hands played an important role. Besides Marc and Frank, the Keith brothers William and Andrew were instrumental in giving the game a definite flavor through their writing and art. Magazines like *Journal of the Travellers' Aid Society*, *High Passage*, *Far Traveller*, and *Travellers' Digest* came along with their contributions from many sources.

SO MUCH FOR HISTORY

But not to belabor a point: if you've come this far in your game playing, you probably know where **Traveller** came from. The reason we mention it here is that it is important to be clear on where we are if we are to understand where we are going. Ed Edwards, former editor of *Working Passage* and one of **Traveller's** most vocal and devoted fans, says that in one sense, "Everything we have done for the last ten years has been playtesting." Now that we've had a chance to try out the game, we've encountered its kinks. We've found its strong points. And over the years, each of us has thought of how we would change the game to perfect it.

Some of the game's growth has been unpruned; different branches of the same tree have fought each other in space and stunted each other's growth. Some of the roots had reached bedrock, or withered from exposure, lacking a firm foundation. A few years ago, Marc decided that we were approaching the time when the game would need to be rebuilt, from the bottom up, to



incorporate everything that all of us had learned over the years about role-playing in general and **Traveller** in particular.

IN THE BEGINNING

So here we were, with a mass of material and a deep desire to make all the pieces fit without throwing any away. A monumental task? Definitely. An impossible task? Definitely not!

We worked hand-in-glove for the entire duration of this restructuring task, knowing that what we came up with at the end had to be greater than the sum of its parts. It had to breathe fresh life into a game that was still quite healthy but had grown flabby in a few places and had a few muscles that hadn't been exercised as much as they could be. Marc never wanted a cosmetic retouching of the game: Instead, he insisted that whatever came out of this process had to be right. If something was wrong, it was changed. If something was right it was kept. If something needed more development, the development was done. And if something was over-inflated, it was pared down to size. We like what we came up with, and we think you will too.

ON WITH THE TASK

One of the first decisions, one that was obvious after working with it in **Traveller** sessions for the last three years, was to include the DGP task system in the new version. The structure of the Universal Task Profile was an enhancement that gave real meaning to character skills and attributes, and it enabled referees to resolve actions in a consistent and easy way.

Every time a task roll is attempted, no matter how trivial, there is some element of risk. This risk creates conflict (the skeleton on which any adventure is built), and success gives the characters (and their players) a sense of accomplishment that was sometimes lacking before.

You can't pick up the **MegaTraveller** rules without encountering the task system. What does this mean to the referee and the players? Once you've learned the basics of the task system, you're well on your way to creating realistic (yet playable) dramatic situations. Your air/raft is stalled and the villains are hot on your trail? Make a task roll. The Vargr who had "befriended" you now turns against you, weapons ready? Make a task roll. The customs agent wants to have "just a closer look" at your ship's hold? Make a task roll. Your starship sensors pick up an unknown object coming at you at a high rate of speed? Make a task roll.

The simplicity and universality of the task system give it its power. After just a few minutes, a referee can have at his fingertips a way to bring any situation to life instantly. In playtests, we've found that inexperienced players are not at a

disadvantage: they can have just as much fun as the "old hands" by virtue of the task system. As long as the referee understands its fundamentals, it is a tool ready for any circumstance. And players enjoy using the system: when they encounter a new situation, more often than not, they ask if some task could apply if we don't mention one first.

In fact, some of the universality of the system came from these requests. As obvious as it seems now, the task system was not originally used for combat. Then in a playtest, a newer player, who didn't know the standard **Traveller**

combat rules, asked what task roll was needed to shoot at an enemy. Lightning struck! The lightbulbs went on over our heads, and we realized at once that we were really on to something. As we said, you can't open the **MegaTraveller** rules without finding the task system as the thread that gives color to the whole cloth.

GOODBYE, OLD FRIEND

One result of the increased use of tasks is the elimination of many unnecessary rules for situations that are now handled in one comprehensive way. Most of these nit-picking details were impossible to remember anyway, and looking them up always slowed down the play of the game.

Quick now, a quiz: What's the basic roll needed to avoid a mishap with a vacc suit? And what's the die modifier for vacc suit skill in this instance? What about your air/raft do you remember the DMs for bad weather, being chased, and so forth, to avoid crashing the thing? Under the task system, you will never have to look these up again.

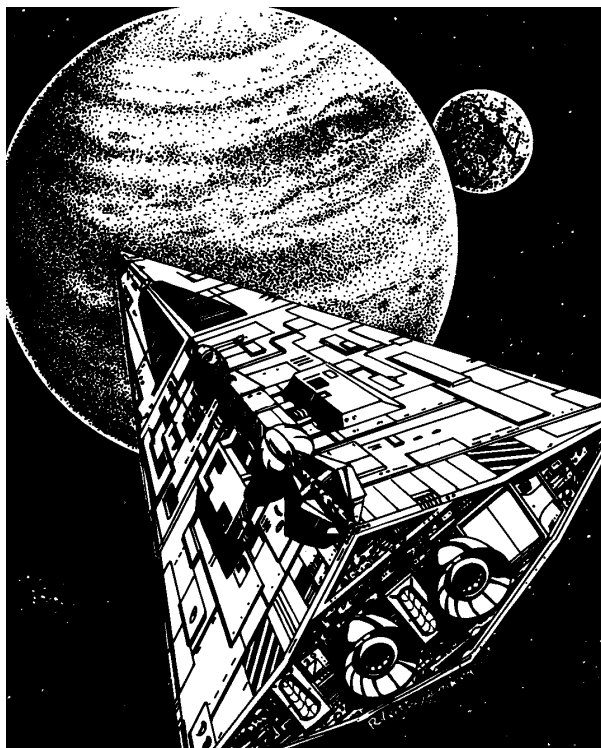
CHARACTER GENERATION

Traveller revolves around its characters, those disembodied entities that carry out the players' desires in the game. Thus, changes to the character generation system were some of the most important

made in **MegaTraveller**.

Advice on this point came from many sources. Some old time **Traveller** players wanted us to base character generation on the one year system (like **Mercenary** and **High Guard**) and to throw out the "regular" four year system altogether. We hesitated to do this, though, because of the added complexities (read: it takes a long time) to generate a character year by year.

But something needed to be done. That the systems were different was obvious. A player using the one year system had a greater degree of control over the resulting character information. Not only that, but a player using the one year system could get a lot more skills than someone using the four year system. In the context of the game, this wide diversity wasn't "fair" to those with



less time, but we hated to throw out the baby with the bathwater and cause players to lose control over the identities of their game personalities.

The compromise we reached is an effective one. By adding new skills to the system and by revamping the charts with many new cascade skills (in which players choose a specific skill desired from a group of related skills), we've given the "four-year" player as many skills as the one year player had without costing him the extra game time necessary. The one year systems are still given as "advanced" character generations. Too many players insisted that we leave them in **MegaTraveller**, and we were more than happy to fulfill this request. Where a specific one year system is not given for a particular character career, the four year system is designed in such a way as to suggest what the one year system would be like.

SKILLS FOR ADVENTURES

One result of the new system is that characters generally have higher skill levels than before. The task system takes up this slack perfectly: its tradeoffs make the game more realistic without requiring characters to be unbelievably talented in any one realm. In those cases where characters do end up being "smarter than the average bear," we find this an advantage. After all, no one really wants to play "the fellow down the street." The reason behind the game is the search for adventure among the stars: the characters are adventurers, individuals culled out of society because they do stand out in some way.

But this system is still "unfair" because of the different degrees of experience that different characters have. A career Navy officer with 36 years under his belt will be a better pilot than the green recruit getting his first taste of a starship. Is there a way to reconcile this disparity within the structure of the game?

Certainly there is, and **MegaTraveller** accomplishes it beautifully. Again starting from the basis of the task system, characters can try their hands at things they may not be completely expert at. Over time, by dint of these repeated efforts, they learn, just as "real" people would under similar circumstances. Eventually, this experience can be measured after the character's ability has reached a plateau point, and the character record is then changed to show the addition of this new skill level. In **MegaTraveller**, you can play the veteran or the recruit, and after a number of terms of game time, the recruit's skills will be similar to those "rolled up" in the veteran's character generation.

If you want to start out with an 18 year old novice, go for it! It won't be long before your character has accumulated many skills useful to a party of galactic adventurers. If your character is the academic type, he can go to college, too, and pick up skills that way. (Naturally, the more you play, the more your character will pick up skills, but we've never claimed there's anything wrong with playing **Traveller** a lot!)

OH, GIVE ME A HOME

Another enhancement to the **MegaTraveller** character generation system is the required homeworld determination. No longer are characters faceless

orphans without any roots. With the new system, the first characteristics rolled up are those of the character's homeworld.

The impetus for this addition to the rules is a desire to expand the role-playing aspects of the game. If you know where your character is from, it's easier to create a personality that seems real. Once we had decided to make this change, our playtesting helped us to discover that knowing your homeworld has much more impact on play than we realized at first.

Characters from high tech worlds, for example, live under different environments than characters from low tech worlds. We've simulated this by including lists of automatic zero level skills for characters from these worlds. Certain skills, too, are limited by their Tech Level. If your character is from a low tech world, he won't get much chance to fly an air/raft (grav vehicle skill); on the other hand, your high tech character won't ever have the chance to learn how the clutch on a standard transmission works (Ground Car skill).

Another problem that every **Traveller** player has wondered about from time to time is the effect of tech level on skills. Is a navigator from a tech level three world able to act as navigator on a tech level 15 starship? Seems doubtful, but the rules were never specific on this. **MegaTraveller** spells out the conditions under which skills can transfer between devices of various tech levels.

FLESHING OUT THE CHARACTERISTICS

By better defining what characteristics mean, we've solved one recurring problem in the game: "I just rolled a 9 for my (fill in the blank); is that good?" Players will now have a firmer basis for knowing the abilities as well as the constraints of their characters... another change that enhances the game's role playing aspects.

For example, the mysterious social standing is now clear and meaningful and has continuing influence on play sessions. A character with a high value has an abiding need to "keep up with the Joneses," by spending money to stay in the lifestyle he's accustomed to. In the context of the game, this means that the character has a regular cash outflow he must maintain. The result? The character needs an equally regular cash inflow, and that means adventure.

Remember the typical monthly salaries for characters given in **Traveller**? Now characters have typical monthly expenditures, too. Let's get that hold loaded up with cargo and head on to the next system. We need a good profit this month!

YOU'RE AS YOUNG AS YOU FEEL

Anagathics medicines that reduce the effects of aging are covered in great detail in **MegaTraveller**. Characters can use these drugs both during character generation or after mustering out. In either case, anagathics are expensive and potentially dangerous to one's health. But it's entirely within the scope of the rules to have a 70 year old character with the fitness and physique of a 40 year old. (This could be a good way to build up skills....)

PSIONICS

Task based, of course. Psionics are streamlined and made more consistent with other aspects of the game. What psionics can and can't do is clarified in

the new rules. Levels of psionic skill are handled just like a level of any other skill, and the all-powerful task system resolves any attempted use of psionics.

One interesting side effect of using tasks is that many psionic tasks are classified as "uncertain." This places these events in the proper light: psionics are no longer the super duper powers that never fail. So you've read your adversary's mind, have you? And you know what he's thinking, do you? So you're sure you can trust him, are you? All right, it's your neck.

ALL DRESSED UP AND NO PLACE TO GO

World generation has always been an important feature of **Traveller**. You begin with a basic star system then go as long as you want. Create a major world for the system. Add other worlds if you want. Satellites? Just keep going. The beauty of the system is that you can stop wherever it's most appropriate. Sometimes players don't need that much detail, and in those cases the new system can save the referee's time. (The new system incorporates all of the original system, most of Book 6: **Scouts**, and a smidgen of **Grand Survey**.)

The new Universal World Profile listing standard also gives you more information than you had before. It now includes the population multiplier, the number of gas giants in the system, and the number of planetoid belts.

MINOR DISAGREEMENTS

The combat systems in **Traveller** (and in other role-playing games) vary considerably in their techniques and effectiveness. At one point, GDW started to develop an advanced combat system for **Traveller** in order to consolidate and simplify the systems then in use for the game.

Some minor work on this concept was begun, but before it could bear fruit, the **MegaTraveller** project had already started, so GDW decided at that time to incorporate the advanced combat system into **MegaTraveller** along with whatever enhancements or modifications the new rules set required.

Surprise, surprise! Combat in **MegaTraveller** is task-based. Players pick up on the risks associated with tasks quite readily, and this basic knowledge of game mechanics carries right over to combat resolution. Should I stick around and fight? Or should I strap on my grav belt and head for the hills? Decisions like these are made easier by the consistent nature of the task system. A player already understands the different difficulties a task might entail, so he can better assess the risks involved in any combat decision he makes.

The new combat system is improved in other ways, too. In some games, dice are king, and they reign as long as they can. "Let's see, this fellow is about to

shoot his laser pistol at you Let me check the result." And only 16 dice rolls later, the referee has determined that the draw was successful. "Now let's see if he's aiming at you

Excessive dice rolling is tedious; it drags the game down at a point when it should be the most exciting. The **MegaTraveller** combat system is also derived from our "fast combat" system, a **Traveller** variant used for years of playtesting in extended campaigns. This means that results are known almost instantly, with a minimum of dice rolling or paperwork.

One way combat is speeded up is by deferring the detailed determination of damage until the end of the combat session. If someone's drawing a bead on you with his FGMP-15, and you're lucky enough to get your shot off first, you don't really care whether your slug hit him in the thigh, the kidney, or the neck. What you want to know is whether he's still standing and whether he's still got you in his sights. Once things have settled down, then you can take the time to check on his medical condition.

The new combat rules also incorporate "interrupts." Interrupts mean that characters can "jump into the action," pre-empting another NPC or PC by acting first. In the game, the result of this interrupt is heightened attention from all the players. In some systems, while the referee and a single player spent time resolving one interaction, the rest of the group could go out for pizza without missing any of the events, thinking, "That doesn't affect me, does it?" However, it does affect you in **MegaTraveller**: you always have a chance to change the course of events by taking direct action. But again, there's conflict. If you interrupt too soon, your action may be wasted. If you wait too long....



GET THE BIG PICTURE

One advantage to the **MegaTraveller** combat system is that there is only one **MegaTraveller** combat system. Whether you're attacked by a groat, a thug with a cudgel, a Vargr with a laser carbine, or a system defense boat with a meson gun, the system is the same. Do you really want to shoot at that armored starship with a bow and wooden arrows? OK, it's up to you (personally, we think you'd have to be nuts), but with the new system you can do it and find out how much damage was done. (Hint: absolutely none at all! Has anybody got a bottle of starship touch up paint handy?)

MAYBE WE CAN WORK THIS OUT

Not every character interaction ends in combat, of course. In **MegaTraveller**, five types of interpersonal tasks allow characters to use their skills to negotiate

and resolve conflicts without coming to blows. Want to pump someone for information in a conversation? Make a task roll. Want to bribe an Imperial official? Make a task roll. Want to agree on a fair price for your ship's cargo? Make a task roll. (By now, you should be getting the picture: everything in **MegaTraveller** revolves around the task system.)

The reaction table now shows the degree of cooperation over the long term, rather than some immediate inner emotion felt by the NPC. We used to hate rolling "hostile": if you stop someone on the street to ask directions, are you assaulted? Probably not, but you might not get a straight answer, either. The new interpersonal interaction system allows a wider spectrum of meaningful responses in the game.

WE'VE GOT TO STOP MEETING LIKE THIS....

The encounter system in **MegaTraveller**, like most other systems in the revision, is integrated: one set of charts does all the work for the referee. Animal encounters, patron encounters, NPC encounters, starship encounters, pre-determined adventure encounters, rumors, all are resolved in one consistent system. The headache of trying to remember six different sets of rules is thus eliminated, as well as the problem of remembering when to roll which number of dice for which type of encounter.

CRAFT DESIGN

It would seem pointless to keep the "**Traveller**" name unless there were plenty of opportunities for characters to actually travel. We needed systems that designing would allow craft of any and all sizes, from the very smallest all the way up to the largest.

For small vehicles, we used **Striker** as a jumping off point. This system, developed by Frank Chadwick, was remarkable in that it allowed the designer to use one set of rules for the whole gamut of tech levels. At the same time, we wanted to cut down on some of the **Striker** complexity and ensure that the vehicle design system and the starship design system did not contradict each other.

As work progressed on the two systems, we realized how powerful this concept of non-contradiction was. It didn't take long to start linking small vehicles, small craft, and starships into one integrated craft design system. Now, using the same set of rules, you can design almost any vehicle imaginable, all the way from your grandfather's Model T clear up to a 100,000 ton tech level 15 battle cruiser. (Pitting the two against each other is still an unfair fight, however.)

One significant addition to starship design is ship sensors, many of which were borrowed from DGP's **Grand Survey** and **Grand Census** (which in turn owed their beginnings to Marc Miller's Special Supplement 3: **Missiles**). Once starships have "real" sensors, the fun is just beginning.

NOSE TO NOSE, TURRET TO TURRET

Starship combat in **Traveller** has benefited greatly from the new rules. At once more realistic, easier to learn, and easier to run, it owes much of its

procedure to the **MegaTraveller** personal combat system. Once you've learned one system, the second follows along the same basic lines.

The starship combat hit resolution is a, yep, you guessed it, task-based version of **High Guard**. Another difference between the two is the use of starship sensors just mentioned. Under the old system, any ship "within range" was a possible target. Under **MegaTraveller**, you have to determine what the ship is first. Is it a Vargr corsair? Or a friendly vessel maintaining radio silence during the battle? You better know for sure before firing. Besides, you're aiming your weapons with the dual assistance of your sensors and your computer; now don't you wish you'd gone ahead and installed that Model 9?

With the necessity of sensors, there's a lot more possibility of skullduggery and deception. Power down your fusion plant, and your enemy's sensors show that your vessel is an insignificant target. But if your enemy isn't fooled, you could end up a sitting duck. On the other hand, what about that clump of space debris you just whizzed by? Maybe it bears a closer look.

BUYING AND SELLING

Money makes the world go 'round, so they say, and we're dealing here with 11,000 worlds. Commerce rules in **MegaTraveller** were adapted from **Merchant Prince**, with the addition of detailed cargo rules. Now you know whether your cargo hold is filled with laser rifles or vacc suits. (We can certainly think of a scenario in which this would make a difference.) Special rules for hazardous cargoes also serve to spice up an adventure; you wouldn't mind the firefight between your ship and that corsair if it weren't for the fact that your hold is loaded with potentially explosive petrochemicals.

Dealing with the day-to-day details of interstellar trade is also unified by means of the task system and the use of character skills.

YOU CAN ALWAYS LOOK IT UP

Ten years of role-playing taught us one thing: Players want background material, even if they sometimes exercise the option of modifying that material for their own campaigns.

To this end, **MegaTraveller** has much more background material than the original **Traveller** had (which was minuscule, at best). The third book of the **MegaTraveller** set is the **Imperial Encyclopedia**, which is completely filled with library data, several maps, exhaustive lists of equipment, armor and weapons, a catalog of starships and vehicles, and a few details on starship operation.

In developing the background, Marc wanted to provide more opportunities for adventure than currently exist in the Third Imperium, so changes were in order. But Marc insisted that these changes be implemented in a peaceable manner: things had to be "upward compatible," so we couldn't go back in time or otherwise change the written history.

To create a new scenario, then, we had to move forward in time about 10 years allowing some radical shifts in the political makeup of the regions contained in and around the Third Imperium. Emperor Strephon is dead, shot down in cold blood by an archduke who then claims the throne by an ancient right. In the ensuing confusion, big chunks of the Imperium start breaking off,

and Aslan and Vargr on the border start encroaching. (If you've read the articles in the last two issues of **Challenge**, you already know about this.)

These border spats (and they exist throughout the whole region, because there are lots more borders) are dangerous to anyone travelling in the area, and danger spells adventure. Anywhere you go, you might find warships, corsairs, petty thieves, and a general state of lawlessness.

LIBRARY DATA

In some respects, this third volume was the hardest to write, even though it had no new rules per se. We collected the background from the entire corpus of **Traveller** books and magazines and then summarized this into library data.

But not your ordinary library data: the **Imperial Encyclopedia** has library data with a twist. In order to further develop the background for **MegaTraveller**, we give one version of library data and specify the version. According to this scenario, the information collected was part of a project instituted by Archduke Norris of Deneb. Naturally, this funding source brought about certain biases in the library data. Of course it's still complete and accurate well, comprehensive, at least, and reasonably correct, oh, forget it: some of the library data entries that "should" be there are missing, and others are just plain wrong.

Now, you know that, and we know that, but do your characters know that? Some do, some don't (in doubt as to which is which? That's right, make a task roll). But those who believe everything they're told might be in for some nasty surprises later on. We can say this: the library data collectively is at least as accurate as the books, taken as a whole, in your own local library. Is that reassuring or what?

(A special section for the referee's eyes only fills in some of the gaps, but players should resist the temptation to peek.)

EQUIPMENT, WEAPONS, AND ARMOR

The third volume of the **MegaTraveller** rulebooks contains a complete listing of handy gadgets. We combed through everything in print for **Traveller** and included almost all of the equipment for this revision. The handy part about this list is nearly everything is in one place: from books, magazines, adventures, alien modules, you name it. And everything fits together well in one standard tech level progression. In the original system, there was no laser pistol; in the new system, there are two different versions at several different tech levels.

CRAFT DESIGN EXAMPLES

The **Imperial Encyclopedia** contains craft designs, each with the new Universal Craft Profile listing. In one place, this listing gives you a complete rundown of the craft's operational status.

We included small vehicles like the air/raft and ground car, small craft like the GCarrier and the ship's boat, and full-fledged starships like the Scout/courier and the system defense boat. Space was at a premium here, but we were able to squeeze in all the vehicles from the basic **Traveller** book.

MISCELLANY AND POTPOURRI

Taking advantage of 10 years of **Traveller** experience, the new rules are much more comprehensive. Your character wants to jump off a ledge? It's in there. Throw a rock across a chasm to hit that pesky K'kree in the snout? It's in there. Throw that same rock across the same chasm, but on a.125 gravity world? That's in there too. What's it take to power up your starship when you want to blast out of port in a hurry? It's in there. Want to use your communicator to call down fire from your orbiting starship? It's in there. Want to put on a tech level 15 false moustache to sneak past the guard? It's in there.

SOME FINAL THOUGHTS

We all love **Traveller**, or we sure wouldn't have agreed ahead of time to work on a project that would take such big pieces of our lives to complete. But we recognized its weaknesses, and we had good ideas to change the game for the better by incorporating 10 years of "playtesting" the original system.

We wanted the new game to better simulate the "reality" of science-fiction. We wanted the new game to have more detail, yet be more playable. And we wanted the whole shebang to fit in with what's been done previously in **Traveller**.

Conversely, there are some differences between the old and new systems, but we made these changes only when we decided that the change was necessary to bring about the greatest improvement. We weren't afraid of complexity, either. While much of the game mechanics are streamlined and simplified (thanks mostly to the task system), a few aspects are more detailed in order to heighten the sense of "being there." The complexity came about because of the comprehensiveness of the new game: simply stated, you have many more options to choose from in the **MegaTraveller** rules.

This myriad of choices, though, was made easy to handle by focusing our efforts. We knew that if we added to the game indiscriminately, the wealth of detail would overpower both players and referees alike, giving a "realistic" system that was never any fun. **MegaTraveller** has the best of both worlds.

In appearance, the three volumes of **MegaTraveller** are meant to be enjoyed. No one enjoys flipping through rulebooks to find some obscure reference (and we think we've eliminated the need for that), but even if you did we think you would enjoy the graphic presentation.

The books contain small vignettes scattered through them: small "sketches" of a few paragraphs that give the reader a better look at some aspect of the **Traveller** universe.

All three books went way over their "expected" size; for the most part, we bit the bullet and included the extra material.

THE BALL'S IN YOUR COURT

MegaTraveller is on its way to your dealer's shelves. Take a look at it and let us know what you think. This game is yours; we need feedback so we can start preparing the next 10 year revision.

By Gary L. Thomas and Joe D. Fugate Sr.

