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WHAT IN THE STARS
by Mike Mikesh

Thank you to Joe Fugate for the magnificent HIMW ads in Travellers’ Digest. Fugate has not only been influential in the development of Hühman’s Traveller, but he has also been a key figure in the creation of the Traveller universe. His work on the Traveller game and its various supplements has been widely recognized and appreciated by fans of the game and the science fiction genre in general.

In the current issue of the Traveller Digest, Fugate’s ads feature the cover story, “The Invasion of Corridor,” which highlights the adventures of a group of Travellers on a distant planet. The story is set in the far reaches of the galaxy, where the Travellers are in search of a lost colony of humanity. The group encounters a variety of challenges, from alien beings to treacherous terrain, as they search for the lost colony.

In addition to the cover story, Fugate’s ads also feature a variety of other content, including a map of the galaxy, a list of available supplements, and a review of the Traveller game. The ads are designed to entice readers to explore the world of Traveller and to continue their journey into the unknown.

Fugate’s work on the Traveller game and its various supplements has been widely recognized and appreciated by fans of the game and the science fiction genre in general. His dedication to creating a rich and immersive universe for Travellers to explore is evident in his ads, which continue to inspire and excite readers around the world.
Dear Fellow TRAVELLER:

Two new influences will greatly enhance the future of GENIE and the release of SECOND SURVEY (SS) data.

GENIE is the Bulletin Board Service (BBS) of General Electric. There are now about 150,000 members of GENIE, so it is a non-trivial ISS to fold soon. Some 15% of HNWGians are already members of GENIE. Each HNWGer might consider getting or not get one and should join GENIE. About half of HNWGians probably could enhance their HNWging if they joined.

The following groups cannot join GENIE profitably:
(a) those with no computer
(b) U.K. HNWGers:
(c) APPOW HNWGers (it is hard to run a line out to a ship at sea)
(d) rural area HNWGers (long-distance phoning is required, making GENIE expensive)

Except for the most wealthy HNWGers, one needs to consider the cost. By the way, no member of HNWG shall receive except new members to GENIE. It is a worthwhile service that HNWGers can enjoy.

The cost of a Modem, or other equipment to enable you to support to GENIE and the software to drive the connection should be taken into account. Costs vary so much between types of computer, I really cannot help you here. Mine probably represents the low end: $30.

There is a one-time, initial $3.00 charge to hook-up to GENIE. This includes two hours of hook-up time. Kearns use GENIE how he or she usually.

GENIE costs $18.00 per hour hook-up during prime time (8AM-6PM local time on weekdays) during the non-prime time the cost for one-hours hook-up depends on your modes:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>$5.00</td>
</tr>
<tr>
<td>1200</td>
<td>$6.00</td>
</tr>
<tr>
<td>2400</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

If your mostly mail services, the high speed modes give you an advantage. If you like to chat live, the low speed modes give you an advantage. I presume the higher speed modes cost more.

It is a bonus to have a voice number at some phone number for the higher speed modes. This varies from area to area.

There seems to be four useful features of GENIE that are useful for HNWGers:

1. E-mail, or electronic mail: this works much like normal mail except the letter is immediately available to everyone. It costs more than the normal mail if sent to another party. Now one can communicate in a mailing list with multiple lines of communication. Rarely is anything said in HNWG that is not useful to several related HNWGers. It is easy to call a letter to six addresses as it is to one and the cost is the same: for multiple addresses (say a letter to everyone in the Sylas Domain) GENIE mail is less expensive than regular mail.

2. Bulletin Board (short for bulletin board): These are places people leave messages for other people to read. Currently there several such places devoted to TRAVELLER, MEGATRAVELLER, and HNWG interests. This is a good way to say something to everybody, at a reasonable price.

3. Confab (also called live-wire conferences): This is a mailing list where Confab is an informal term for an informal conversation or chat. I'll try to have a monthly HNWG confab on a different subject each month. The first one, on 4 May was on the elements of the Vargr Domain. Since these meetings do not produce a goodly amount of information, it was good to talk to six other people interested in the subject.

4. Data/Program Transfer: I have yet to enjoy this. But it is possible to upload and download both data and programs. The problem is that the data can be retrieved by any GENIE member. There is a good reason for the type of user where one can get additional programs for their computer or help with problems specific to that type of computer.

This data will unleash HNWGian creative data. It was a constraint to creating structure within a sector knowing that SS might erase what ever was created. Now the creative power of the Sector Analysts can be released. Some of the things HNWG Sector Analysts who have data (some Sector analysts have amassed 500013/4 in various locations in past TRAVELLER literature) have done are in the following list. This list is not exhaustive.

1. Create Duchies (generally sub-sectors), the Duchy capitals, the numbered fleet HQ site and create Dukes/Duchesses and Admiral characters who hold these posts.

2. Create Countrys (4 to 14, usually 6 or 7 per sub-sector/Duchey), County seats, and Countryside.

3. Work with Faction analysts to determine the "side" of each created member of Royalty. Remember a noble may wish to support one faction, but may be supported by another faction.

4. Check the outline map: "Droyne Worlds in Charted Space" for Droyne/Chiper planets and assign specific locations.

5. Determine Sector and/or subsector HQs for the MegaCorporations. Determine the impact of Vland's recall of it's three MegaCorporations. Devise any significant non-mega-corporations which have a major influence in your sector, or several of your subsectors.

Recall that the SS data is as of about 1060, but data is needed for 1116. The size of the planet, it's geophysical percentage, and atmosphere should not change. In the present atmosphere any one number, if heavy pollutants are being discharged or if a new Vargr project is underway. The population could change upward, if the planet was underpopulated to start with (this is probably a rare case). The government, type and law level could change during this time (but should probably be limited to 1/3 of the places). The Tech Level should increase slightly: 1 level for 90% of the planet, 2 levels for 5% of the planet, 3 levels in rare (i.e. explains why it happened) cases. Because of the expense involved, few places will increase their space port rate (limit this to 10%). In any case, updating Universal Planetary Profiles (UFPs) (or that UWP= Universal World Profile in MEGATRAVELLER?) to 1116 is a worthy project for Sector Analysts.

7. Not included in the data is the modifiers to the UWP: the units of population, the number of gas giants, etc. You will have to invent this (unless all ready published). For example, I'm interested in the planet Ed in the Sylas Domain. It is a water world with tens of Billions of population. A planet that 10 Billion or 90 Billion? I'll have to decide. The larger worlds in the Sylas Domain the population must not exceed that listed in the Sylas Domain summary of TD10 (or was that in TD11)?

-Ed Edwards, HNWG Chairperson

HNWG TILL You're Happy!

New HNWG Pub (order for 10 US cents per page from Ed Edwards, or 8 pence per page from David Lai)

order Author/Title
0000 4 Bush HNWG to HNWG '89
0023 2 Edwards Vland Domain Status
0024 1 Edwards Ileilish Domain Status
0025 1 Edwards Sylas Domain Status
0530 15 Bush HNWG Members' Directory (HMD)
3301 6 Law-Green First Thoughts on Dagudshaag Rev 1.1
3304 1 Law-Green Karyn, Duchess of Medura
3305 8 Law-Green Contact: (hexapod reptiles of Dagudshaag A)
3306 4 Law-Green Neurotech and the Lascian Culture
3501 4 Bush AAB Proceedings, Vol 1 (Vland Domain fanzine)
032.01 3 Law-Green "Cold" Nuclear Fusion
032.02 2 Law-Green Oh No, Not Again! (subtitle: Too Many Analysts Spoil the Broth)
057.02 6 Athens The Invasion of Corridor

T-TECH-Index 2 Athens
T-TECH-03 18 Athens

New Analysts:
Core Sector: Fetters
Vargon Sector: Eckert
Dulnor Faction: Weimar

Tiffany Star #9 -- May-Jun 89 -- page 2
VARGA CENTER
Dispatch 857.82
Philip Athanas, Varga Center Analyst

THE INVASION OF CORRIDOR

Below is a timeline for the invasion of the Corridor Sector by forces from Province. Also included is a map accurate as of 365-1126.

In this timeline, wars of the Corridor Sector are identified by their box location only for clarity’s sake.

NAF KEY:
ca = Space controlled by the Corridor Alliance
Ca = Areas of intense independent corsair activity. This area is essentially an anarchic tier-for-all of piracy, raiding, petty skirmishes, etc.
Ca-78 = Site of the Corridor-Suru Barks War.
Eat = Militarized world.
S = Site of heavy warfare.

This should be fairly self-explanatory. I’ll leave more for future dispatches. As always, your comments, suggestions, etc. are more than welcome, I’d like to see this turn into a Challenge or TA article eventually, and if we could work together towards a perfectly mutually agreeable scenario for the fall of Corridor – that would be great!

TIMELINE: The Varga Invasion of Corridor
132-1116 - 360-1126

1116

132:
Stormshaped assassinated.
251:
Word of assassination reaches Depot/Corridor by Naval Courier.

VARGA CENTER
Dispatch 857.82
Philip Athanas, Varga Center Analyst

132:
Vg takes 1294 and 8900.

334:
Vh arrive at 3000. Vh-Vg battle for 3000 begins.

374:
Vh takes 2266.

258:
DA engages Caarsers at 0016.

352:
Vh drives off 2266.

256:
DA drives Caarsers off 2266.

465:
Vg engages Vh at 2185. Vg driven off.

463:
Vg takes 2266.

465:
DA turns full concentration to Deneb.

1118

818:
Vg takes 1212.

821:
Vh takes 2200.

836:
Vh takes 2111.

933:
Vg-Vh war for 2266 begins.

930:
Caarsers unit employed by Vg rebels at 2800.

949:
ev-Vg Caarsers take 2266.

958:
Vg attacks 2266.

251:
Full scale 3-way war in subsector C begins between Vg, ev-Vg Caarsers and Vh.

865:
Vh takes 2011.

1071:
Vg takes 2012.

1818:
1800 dissipated.

1971:
Vg attacks Depot from 1294 and 1711 simultaneously.

1981:
Vg takes Depot.

1985:
Vh takes 1515.

Sector settles into long-range war as rival Varga governments and Caarsers units fight over the spoils.

1119

827:
Vh draw out of DA, opens second front on Vg.

962:
Several Caarsers units join ex-Vg. Force GA.

807:
GA takes 2111.

993:
GA begins to push forward and uplandward.

2283:
New border disputes between Vh and Vg close second front.

2283:
Major Vh offensive from uplandward. Vg put on defensive.

2283:
Vh offensive stopped. Vh has taken 8916, 9112 and 1112.

2331:
Vh driven back to 2200 by GA.

1120

841:
Vf/Vh agree on safe boundary through subsectors A and E.

Throughout 1120 - Vh and GA squeeze Vg.

960:
Major Caarsers invasion into Vland.

1120:
Caarsers pushed back into Corridor by Suru Barks.

Throughout remainder of 1120 - Suru Barks/Caarsers wars in subsector D.

1177

825:
Word of assassination reaches Varga Frontier at 1794.

857:
Vg takes 1297.

875:
Vg takes 1265.

879:
Vg takes Induat.

977:
Vg takes 1175.

1151:
Vg takes 1677.

1185:
DA takes 1814.

1251:
BA drives off 8914 by Corridor Fleet.

1475:
Vg pushed back to 1794.

1551:
Battle for Burica begins (Ia vs. Vg).

1695:
Vg claims all territory forward of Imperial border.

1849:
Vg claims all of Entari territory forward of Imperial border.

1883:
BA re-takes 8914.

2250:
Battle for Burica ends. Vg pushed back across border.

2311:
Transfer order received at Depot.

2389:
BA takes 2200.

2397:
BA takes 8916 and 8926.

2425:
Corridor Fleet advances at Depot.

2511:
BA takes 2266.

2554:
Corridor Fleet crosses into Vland.

2635:
Vf re-takes 1465.

2811:
Vf re-takes 1466.

2853:
Vf takes 6666.

2871:
Vf takes 6807.

2897:
Vf takes 7801.

2927:
Vf takes 2005.

2945:
Vf takes 6809.

2957:
Vf takes 2200.

2971:
Vf takes 1686.

2985:
Vf takes 8112.

2993:
Vf takes 8797.

3053:
Vf takes 2206.

3054:
Caarsers raid on 8916.

3064:
Caarsers raid on 8916.

3087:
Vg takes 1900.

3100:
DA takes 9900.

3111:
DA takes 8113.

3121:
Vh takes 2186.

3145:
Caarsers raid on 2800.

3173:
DA takes 8123.

3186:
Vg takes 1197.

3197:
Vh takes 2006.

3208:
Caarsers raid on 8437.

3251:
BA takes 8218.

3291:
Caarsers raid on 8466.

3311:
BA takes 8119.

Throughout remainder of 1120 - Suru Barks/Caarsers wars in subsector D.

808:
To boost moral, Vg removes Corridor-Liamassor Treaty (The Damned Sector).

KEY:
Vg = Glory of Taarsurier (a militaristic Varga government from Province Sector. Heavily influenced by the Church of the Chosen Ones. "Birthplace" of Deneb. Employs several Caarsers units as mercenary forces.)

Vh = Irag Manifest (a relatively large Varga government from the rimward fringes of Province. Hosted enemy of the Glory of Taarsurier. Split by Vh into factions. One to uplandward and one to trailing. The two factions quietly took on their own goals and personalities - the uplandward side joining with the Irag Manifest in the Destiny Alliance, the trailing side, invading into Corridor independently.)

Vf = The Starship Federation (a powerful Varga government from Province and Tuglins Sectors. Most concerned with fighting Thriss in Deneb Sector. Joined with uplandward faction of Irag Manifest to form anti-Thris Destiny Alliance.)

DA = Destiny Alliance (a hastily-constructed alliance between the uplandward faction of the Irag Manifest (Vh) and the Starship Federation (Vf).)

GA = Caarsers Alliance (formed when several independent Caarsers bands joined the Vh autocrats. Began fighting forces of both Vf and Vh for control of areas around 2206 - between Vh and Vg territory.)
TRILLION CREDIT SQUADRON:
Campaign Rules for the Rebellion
By Charles Scott Kimball

Charles' latest project is a System Survey article for the Antares star system. Discussion of that among WISEs and Genie participants is intriguing. Progress on it was interrupted a bit by my request that he push this TCS article along. The information here may aid in developing the Massilia Project. It might also have some bearing on larger scale interstellar war rules Tim Koos is looking into for BGP.

In this article, you will also find MegaTraveller rules for the dreadnought-PAWN device (JTAS 820). I requested this in TS84 originally in the context of a terror weapon Lucas might use. — NN

1. Revenue

Rather than force players to figure out the revenue coming from every world of the Imperium, I have calculated some rough figures on the amount of money available to each faction, using the population figures given for each sector in Digest 810. It is assumed here that every world is on a wartime budget by the end of 1117.

<table>
<thead>
<tr>
<th>Faction</th>
<th>Funds in 1117</th>
<th>Maximum Annual Revenue, 1118-1125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antares</td>
<td>3762</td>
<td>613</td>
</tr>
<tr>
<td>Aslan</td>
<td>201</td>
<td>151 (see note 2)</td>
</tr>
<tr>
<td>Assembly</td>
<td>120</td>
<td>12 (see note 3)</td>
</tr>
<tr>
<td>Dalbei</td>
<td>4270</td>
<td>695</td>
</tr>
<tr>
<td>Dulinor</td>
<td>7660</td>
<td>1247</td>
</tr>
<tr>
<td>Gateway</td>
<td>3165</td>
<td>405</td>
</tr>
<tr>
<td>Julian Protectorate</td>
<td>10213</td>
<td>1021</td>
</tr>
<tr>
<td>Lucan</td>
<td>27511</td>
<td>4065</td>
</tr>
<tr>
<td>Margaret</td>
<td>2898</td>
<td>847</td>
</tr>
<tr>
<td>Norris</td>
<td>11233</td>
<td>777</td>
</tr>
<tr>
<td>Solomani Confederation</td>
<td>15708</td>
<td>4860</td>
</tr>
<tr>
<td>Rift Republic</td>
<td>82</td>
<td>8</td>
</tr>
<tr>
<td>Strephon</td>
<td>2516</td>
<td>410</td>
</tr>
<tr>
<td>Vargr</td>
<td>2740</td>
<td>(see note 4)</td>
</tr>
<tr>
<td>Vega</td>
<td>11065</td>
<td>324</td>
</tr>
<tr>
<td>Vland</td>
<td>4438</td>
<td>(see note 5)</td>
</tr>
<tr>
<td>Zhodani</td>
<td>6400</td>
<td>640</td>
</tr>
</tbody>
</table>

Notes on the above figures
1. The first number is the amount in trillions of credits (TCr) available to each faction in 1117; the second figure is the maximum available income for every year after that. At least half of the starships must be tech level 14 or less; this reflects what comes out of naval depots and reserve fleets. As for the yearly income, parts of it will be lost as a result of enemy conquests, sieges, and bombardments; the actual battles will determine how much is actually lost here. But in any case, don't expect an entire faction's fleet to appear in one battle — its enough of a job to manage a trillion credit squadron, let alone a quadrillion credit one! Furthermore, in this free-for-all situation most of the factions are fighting many enemies at once, which prevents them from concentrating everything they have in one place.

Once the revenue is collected from the taxpayers, it must be delivered to a shipyard before it can be used. This can be a problem when the world is besieged by pirates or unfriendly navies. To keep bookkeeping simple, assume that the taxes are delivered automatically unless a world is blacked out on the last day of any given year (e.g., 365-1117). All revenue is handled by electronic credit transfer, so there are no gold-laden "galleons" for pirates to plunder. If taxes cannot be delivered, the money is usually wasted (eq. 9 of TCS) unless it can be spent in the planetary navy.

2. The Aslan figures are multiplied by the number of major clans participating in the Trojan Reach campaign (maximum of 23 — at least six of the big clans will stay out of it because they are more concerned with possible Solomani & Zhodani threats.) In addition, up to 95 TCR will be available each year after the Trojan Reach is covered.

Many of the Aslan ships and troops will come from the main body of the Hierarchy. Since they have to be transported across the Great Rift, expect an additional 1-year delay before they arrive at the front.

3. The figures given for the Assembly should not be used as guidelines for the original fleet's size; they are based on the revenue of Khruur Lin, the client state supporting it. More will be available from Imperial worlds plundered.

4. The Vargr revenue initially comes from the Provence and M_WAIT sector. Since the corsairs are not supported by one state like the Imperial factions, yearly revenue after 1117 will vary greatly, as Vargr states rise and fall, or simply choose to increase/decrease donations to the Vargr fleets. To simulate this, roll twice every years (once for Provence, once for M_WAIT), in the following manner to determine what funds become available:

(4D-4) TCR 13.7

Vargr fleets, like the Assembly, cannot collect revenue from captured Imperial worlds in the form of taxes. Instead, they plunder worlds, gaining 2D times the normal annual revenue per world per year. Once a world is sacked, however, planetside life will become too difficult that no further revenue for any faction can be given until it recovers in the post-1125 era.

5. Vland has for annual revenue a maximum of TCR 1512 per year for 1118 and 1119, and TCR 722 for each year after that. The extra TCR 782 is the contribution of the three Vland bureaux when they move their assets from other sectors to Vland. Most of the ships produced with this money will not be warships, but commercial transportation, with a few Q-ships, armored merchants, and surplus military vessels to escort the rest. This rule reflects the source of the bureaux funds ("The trouble with capital ships is that they tie up capital").

II. Building Ships

In TS84 is a table showing the number of ships available to most of the factions from year to year. Here we have statistics like "Dulinor has 2800 ships to start with" and "Antares has 100 ships left when the fighting ends." Before we go on from here we should determine just what defines a "ship." Is it any ship cruiser-sized or larger? Do destroyers and other small war ships count? What about armed non-starship like battle riders, monitors, and SDBs? And how many support ships are needed to keep a navy in top condition? From what I have read in "The Rebellion Sourcebook" and HNG correspondence it appears that the best definition of the term "ship" is a fully armed naval vessel with a jump drive and consequently a battle-ship tender with battle-riders will count as one "ship" because only the mother ship has a jump drive. Thus the bulk of a faction's fleet does not appear on the table, since most of the escorts (armed ships that displace under 1000 tons), SDBs, monitors, fighters, support vehicles and maybe even the carriers don't fit the "ship" definition. Since the big ships cost hundreds of billions of credits and can take as long as 5 years to construct, some factions will choose to build only smaller ships when the Rebellion becomes a long-term war of attrition. That is probably the main reason why most of the battleships destroyed are not rebuilt again later, even...
When a big shipyard in a safe location is available.

Every fleet needs a large number of support vehicles that you normally don't hear about to maintain itself: fleet couriers, tankers, troop transports, hospital ships for the wounded, and repair tenders to fix battle damage. It is recommended here that at least half of a fleet's tonnage be devoted to support vehicles. A fleet that is made up of nothing but battleships will burn itself out in only a few battles, so you are safe if you can avoid being the first target it gets at!

A large part of a faction's budget, sometimes as much as 50%, will go into planetary navies. To determine the size of a planetary navy without building every SDB, use the following table:

<table>
<thead>
<tr>
<th>World Population</th>
<th>Number of System Defense Boats (SDBs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 or less</td>
<td>None</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>5-12 (1DB+4)</td>
</tr>
<tr>
<td>9</td>
<td>50-200 (3DB210)</td>
</tr>
<tr>
<td>10</td>
<td>500-1000 ([1DB100]+400)</td>
</tr>
</tbody>
</table>

The above figures are for frontier sectors like the Spinward Marches, where any Imperial world that can afford SDBs will have them. Worlds in other sectors may choose to do without a planetary navy, relying on the Imperium to defend them instead (see Craig Shelly's article on open/closed planets in TSI91). Some factions may choose not to allow a world to be too heavily defended.

Under-populated worlds, or those with a tech level below 7, may be defended by small craft and other vehicles brought in by starships, or a squadron may simply be stations permanently in one sector. Most worlds with a population level and a tech level of 5+ will have a Close Orbit and Airspace Control Command (COACC), whether or not a planetary navy is present; details on that, as well as on the local ground forces, have already been covered in "COACC" and "The Rebellion Sourcebook".

Taking all of the above factors into account, the typical Imperial faction's fleet will consist of the following:

- Warships, TL 15: 12-15%
- Warships, TL 12-14: 12-15%
- Planetary Navies and everything else: 50%

Not all fleets, particularly alien ones, are constructed the same way. Use the special rules below for constructing the fleets of each faction (note that some of these may be superseded by Mike Jackson's "Flashback" module).

1. Antares & the Julian Protectorate: The alliance between these two states from 1117 to 1119 allowed their naval architects to share shipbuilding techniques. This allows Antares and the Julians to consider each other's shipyards as friendly for purposes of building/repairing ships (see page 30 of TCS). Unfortunately, the alliance does not last long enough for the Julians to build many TL 15 ships.

In the post-1125 era it may be possible for the League of Antares to use TL 17 ship components, if a diplomatic mission can open up interdicted Sathmakys first.

2. Aslan: All Aslan starships should carry a "Shrine of Heroes" for purposes of meditation. This does not have to take up much space — usually a small stateroom per thousand tons displacement will do. Also note that Aslan seem to hate straight lines; in many pictures of Aslan vehicles I can't tell if they're coming or going! This, probably will not make a different in designing ships, but keep it in mind when drawing their deck plans.

The personal attitude Aslan take towards conflict plus an eagerness to get involved in it should make the job of fighter pilot very desirable to them. I have not seen an Aslan fighter or carrier in any Traveller work, so I have designed an Aslan carrier and fighter, plus a fuel shuttle for refueling both. These will be made available through HMW Pubs.

At first the Aslan will be limited to a maximum of TL 14, but after 1128 they will be able to build TL 15 ships in captured shipyards like those at Tobias (see the section on control of worlds and starports).

3. The Assembly & Dulinor: Over half of the Assembly's ships, and as many as 10% of Dulinor's, will have Buurrack crew members. Psychologically this minor human race is less disoriented by zero-g than most of us; consequently their ships may do without grav plates if maximum acceleration is 2 Gs, and they will dispense with inertial compensators if the ship only does 1 G. Since Buurracks prefer orbital colonies to setting foot on a planet's surface, their ships are usually unstreamlined (configuration 7-9), with small craft to handle the occasional planetside excursion they may have to take.

4. Lucan & Margaret: There are more than a few TL 16 worlds within their territories, so some of their ships (perhaps as many as 10%) will have TL 16 components. Margaret's fleets will have a very high percentage of support vehicles, thanks to the Curator Corps.

5. Solomani: Confederation warships are designed like Russian tanks — they have everything but comfort! Most Solomani crew members will use bunks and small staterooms to save space and money. All ships will carry marines & SolSec agents to incure loyalty.

As with the Aslan, after 1126 the Solomani will have captured and retooled enough Imperial shipyards to build TL 15 vessels of their own.

6. Vargr: Fleets constructed by Vargr tend to be composed of many little ships, rather than a few big ones. This is because it takes at least three years to construct a ship large enough to carry a spinal mount (page 33 of TCS), and it is asking a lot for a Vargr government to last that long; moreover, a lot of Vargr states do not have the funds to finance large starships. Vargr corsairs the size of the 10,000-30,000 ton designs in "The Rebellion Sourcebook" should be a rare sight, especially if they come from balkanized worlds. The Imperial Admirals along the Vargr frontier are more likely to run into a hornet's nest of type VP corsairs.

Like their robots, Vargr ships may, and often do, contain components manufactured on many worlds with varying tech levels. One possible method of simulating this might be to roll one die as follows for each of the ten systems on board (hull, power, loco, common, sensors, weapons, screens, life support, controls and miscellaneous):

- 1 = Design TL - 2
- 2 = Design TL - 1
- 3-4 = Design TL
- 5 = Design TL + 1
- 6 = Design TL + 2

7. Vega: These ships are a lot like their human counterparts, but the dry, 0.5 G environment of Vua Gvi will make a different in life support requirements. One way to simulate this would be to double the power consumption of the inertial compensators and halving the power consumption of grav plates.

In JTAS #20 there was a proposal for an antimatter particle accelerator (called an A-PAWs or V-gun for short). Not long after that Ed Edwards and Craig
Shelley did a series of articles in "The Imperium
Stable" on how a fleet composed of 68 medium-sized
warships and 1 megadreadnought with a V-gun would
serve as an excellent defensive system, bringing an end
to the old "battleships vs battlecruisers" controversy. They
then went on and proposed distributing nine such fleet
along the Solomani frontier. For those who don't have
JTAS #20, here are the rules for the V-gun, modified to
be compatible with MegaTraveller:

<table>
<thead>
<tr>
<th>TL</th>
<th>Power</th>
<th>Volume</th>
<th>Weight</th>
<th>Price</th>
<th>MCr</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>75000</td>
<td>270000</td>
<td>600000</td>
<td>300000</td>
<td>150000</td>
</tr>
<tr>
<td>16</td>
<td>300000</td>
<td>150000</td>
<td>300000</td>
<td>150000</td>
<td>75000</td>
</tr>
<tr>
<td>18</td>
<td>125000</td>
<td>270000</td>
<td>600000</td>
<td>300000</td>
<td></td>
</tr>
</tbody>
</table>

Thrust the V-gun as a type T particle accelerator
to determine the chances of hitting a target. If a ship is
hit, the only screen that can save it are a black globe,
white globe, or a proton screen. If the target has none of
the above, or if all of those screens are penetrated, the
target is EDONE (the "M" in V-gun stands for
vaporite). To penetrate the screen, roll a 10-sided
die for a black globe generator and a 6-sided die for
each white globe and proton screen. If any of those die
rolls are less than or equal to the screen's factor
number, the deadly anti-particles have been stopped.
A sufficient number of hits on a planetary surface (the
JTAS #20 article proposes 1 per hex for a vacuum world,
twice as many if an atmosphere is present) can turn a
world into an asteroid belt.

Note: The A-PAMS is a widely known variant, but not
an official part of the MegaTraveller universe at this
time. Each referee must decide for himself whether to
allow the A-PAMS in his campaign. For my own campaign I
am proposing that the plan to patrol the Solomani
frontier with MNDs was partially complete when the
Rebellion started. In this case, one megadreadnought
was completed in 1113, and it was used at first to
patrol the Bansandar & Arcturus subsectors. It came
under control of Vega in 1117, and was destroyed by the
Solomani at some time between 1117 and 1119, because any
ship with a V-gun automatically becomes a primary target
for the enemy to take out. (A "Sink-the-Bismarck" type
mission to destroy the MND would make a good TPA for
Solomani characters.) A second MND was scheduled for
completion in 1118, but it was not ready to patrol when
the rebellion started. If you want to use the A-PAMS, there is a design for the MND included in my HUM
pub on ship designs (plug, plug).

III. Planetary Defenses

Because of the open/closed planet rule, defenses of
planetary surfaces will be a rare sight, but some local
governments will be security conscious/paranoid enough
to have them. Usually this means deep mecon guns, laser
and missile batteries. In addition to shooting orbiting
targets, they are useful as point defenses, picking off
incoming missiles. If they are present, use the planetary
TL to determine what is available, and provide enough
capacity and control panels to operate everything. It is
usually not necessary to buy a separate power plant if the
needed energy can be diverted from non-essential
civilian services. Up to 10% of a world's revenue may be spent on planetary defenses rather than SDB's. When
resolving attacks between ships and planetary defenses, treat the planet as a huge configuration-5 target (B or 9 for asteroids)
with no ability and size BN of 3. 45% of the
planetary defense batteries may be on a target at far
orbit range, and 25 if the targets altitude is less than
50,000 km — targets beyond 50,000 km are out of range.
To hit a target on the ground, the attacking player
must state he is aiming for one before rolling; otherwise his
shots will hit oceans, mountains, etc, and generally
have no effect on the defender. Treat surface defenses as
having armor equivalent to 5 x the local TL, whether it is
crystaliron shields, sandbags, or whatever. In
any case the only thing that can put a deep mecon gun
out of action, short of blowing up the planet, is to hit
it with another mecon gun. See p. 72-73 of "COCOCC" for
more rules on ground-to-orbit combat.

It is also possible to protect planetary targets with
passive defenses like nuclear dampers or mecon screens
— use the volume of the area protected to determine
energy costs, if necessary. A planet protected by a
black globe is absurd.

IV. Orbital Bombardment

So far, most of the factions in the Rebellion have
observed the open/closed planet rule, making this
section unnecessary. There have been exceptions,
though, like pirates from outside the Imperium, the
Brinn, and Lucan's admiral who would rather destroy a
planet than let Dullinor have it, so here is how to
simulate events like that.

To start with, I am borrowing a table from "Fifth
Frontier War" to simulated the effects of bombardment
on planetside troops:

<table>
<thead>
<tr>
<th>Die #</th>
<th>Total Bombardment Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>1</td>
</tr>
<tr>
<td>7-12</td>
<td>2</td>
</tr>
<tr>
<td>13-18</td>
<td>3</td>
</tr>
<tr>
<td>19-24</td>
<td>4</td>
</tr>
<tr>
<td>25-30</td>
<td>5</td>
</tr>
<tr>
<td>31-40</td>
<td>6</td>
</tr>
<tr>
<td>41-50</td>
<td>7</td>
</tr>
<tr>
<td>51-60</td>
<td>8</td>
</tr>
<tr>
<td>61-70</td>
<td>9</td>
</tr>
<tr>
<td>71-80</td>
<td>10</td>
</tr>
<tr>
<td>81-90</td>
<td>11</td>
</tr>
<tr>
<td>91-99</td>
<td>12</td>
</tr>
<tr>
<td>100-100</td>
<td>13</td>
</tr>
</tbody>
</table>

Die Modifiers

<table>
<thead>
<tr>
<th>TL</th>
<th>Modifier</th>
<th>Atmosphere</th>
<th>Modifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>15+</td>
<td>+2</td>
<td>breathable</td>
<td>0</td>
</tr>
<tr>
<td>13-14</td>
<td>0</td>
<td>tainted/hostile</td>
<td>-1</td>
</tr>
<tr>
<td>11-12</td>
<td>-1</td>
<td>vacuum</td>
<td>-2</td>
</tr>
<tr>
<td>9-10</td>
<td>-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-3</td>
<td>-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For example, a 30-factor attack on a TL 13 world
with a tainted atmosphere will eliminate 20% of the local
troops on a die roll of 5; for more attacks like that
will leave the world defenseless. Approximately 4,000
HE missiles equal one bombardment factor; 1 hit by
nuclear missiles, antimatter missiles or spinal mount
weapons counts as 20 HE missile hits when figuring the
total bombardment factors. Particle accelerators cannot
be used if the planet has an atmosphere.

Civilians may be hit by bombardment of military
targets. When using HE missiles there are rarely enough
civilian casualties to bother counting them, but it is
another story with the other weapons mentioned above.
If the attacking player does not specifically say he is
aiming for a planet's cities, roll the planet's
population level or less for them to be hit anyway. For
simplicity's sake, let's assume each hit by
nuclear/antimatter missiles or by spinal mount weapons
causes 100,000 civilian casualties, with double or
triple results if the atmosphere is not breathable.
Really heavy bombardment will cause fallout, 1-6 years
of nuclear winters, and temporary or permanent changes
in the planet's albedo.

If a planet's population level is 5 or less, any
bombardment will automatically eliminate the starport.
On more crowded planets there will be many starports of different grades of quality, so every time population is reduced one level by bombardment (level 8 or 7, for instance), reduced the quality of the main starport by one better, like from type A to type B. Reducing a type A, B, or C starport will also lower the tech level accordingly. Finally, such a calamity may cause a revolution the ground, with changes in the planetary government & law level, but that’s beyond the scope of this paper.

If there is a planetoid belt in the system, planetoid can be used as a cheap, clean substitute for nukes. If this is done, let the referee figure out how long it takes to get the "flying rocks" to the target, how many ships are needed to move them, and how much damage is caused by a planetoid of a given size moving at a given speed.

Sometimes an attacker will just blockade a world from outside contact, rather than pound it into a radioactive wasteland. This won’t affect worlds with a type D, E, or X starport much — they’re largely self-sufficient to begin with — but the technology of more advanced worlds will suffer greatly. For every year in which a planet is under siege, roll the population level or less to avoid losing a tech level. If the tech level drops below the level needed to sustain life (7 on vacuum worlds, 5 in hostile atmosphere, and 3 in tainted atmosphere), the entire planetary population may die.

V. Picking Up the Pieces

After a planetary battle, tech levels lost by bombardments/sieges will be recovered at a rate of 1-6 years per TL, assuming there were not permanent changes like a destroyed starport. In no case will a world’s TL exceed its 1116 value until the post-1125 era.

New starports may be built at a price of Cr (600,000 & the population level & the quality rating). The quality rating equals 1 for a type E starport, 2 for a type D, 3 for a type C, 4 for a type B, and 5 for a type A. On high population worlds, there must be at least one port for every 5 billion people. Starports on barren worlds cost the same as those for population level 1 worlds.

The above prices are just for the planetside complex. Type A-C ports (and sometimes D) require an orbital complex as well. It is beyond the scope of this article to figure out the cost of every feature in a space station, so use the articles on orbital colonies in JTAS823 or TD91 to figure out the price for them.

It is not possible to save credits by upgrading an existing starport; in most cases when a new starport is built, the old one is kept in use for local traffic or special occasions. Examples of this behavior include Fisher’s World in High Passage 85 and Shudusham in TD86.

The 548-week waiting period mentioned for use of captured shipyard on page 36 of TCS should only be used in the Rebellion when an Imperial shipyard is captured by an alien faction, or visa-versa. When one Imperial faction captures the shipyard of another (e.g., Antares vs. Lucan), it can be used to both build and repair ships after just 24 weeks of retooling. This reflects the fact that all Imperial factions start out the same kind of equipment to begin with. After 1125, however, it will be a different story. By then changing tech levels, new ship designs, etc. will have significantly altered the composition of each fleet, making every faction’s vehicles and shipyards incompatible with those of other factions. In that age any shipyard captured by another faction will require the full 548 weeks of retooling before it can be put to full use.
Those of you that have not yet noticed, Mike has broken into doing art of Travellers' Digest. His work can be found throughout Digest #16.

This is the first installment of several hierarchies Mike has sent. I expect to space these out over the next few issues. - MM

1. The Imperial Government

Diagram Notes: Squares represent organizations or services. Ellipses represent individuals and their supporting bureaucracy. SPA: Starport Authority - administers all starports. Ministry of Justice - deals with High Justice crimes (treason, genocide, etc) and dictations general Imperial legal policy. JSB - The Ministry of Justice Special Branch, the Imperium’s Secret Service. Cabinet - The Emperor’s advisors and ministers. There are some fifty ministers, all nobles from the Moot. Examples are minister of defense, minister of external affairs, minister of transport, etc. For more details, see "Imperial Government," Third Imperial #8.
2. Lucan’s Imperium

Diagram Notes: Officially, the government still functions as in table 1. This represents the actual state of government. Lucan has centralized control, directly as much as possible.

3. Domain of Deneb

Diagram Notes: Norris’ government is similar to wartime government, all under Naval control.
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