

Featured: Jump Destination: Rech

September/October 2018

A Note About Production

Freelance Traveller is prepared using Microsoft Office Publisher 2010 running on a Windows 7 Ultimate x64 system. The program is reasonably easy to use, and produces good results with moderate effort; it also supports advanced typographic features such as typographic quotes and apostrophes, small caps, ligatures, swashes, and stylistic alternatives (if the advanced features are implemented in the font). Generation of the PDF files is built in to this version of Microsoft Office; no additional products are needed.

The title and heading typeface is ZapfHumanist BT, a Bitstream adaptation of Hermann Zapf's digital redesign of his 'hot lead' typeface Optima, chosen as a 'tie-back' to the title typeface of the original edition of *Traveller*. The black-and-orange of the section headings is also a tie-back to *Traveller*'s origins, though we felt that the 'correct' red was too dark. The heading sizes vary from 12 to 16 points. Body text is set in Palatino Linotype, also designed by Hermann Zapf, and is set at 11 points for most body text, giving approximately the same text spacing as Times New Roman at 12 point (which was the original *Freelance Traveller* body text), but a lighter 'color'. Palatino Linotype also 'balances' better as a body text typeface to Optima as a titling typeface.

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From the Editor



TravellerCON/USA is just around the corner, so if you're still trying to decide whether to come, it's time to commit, before registration closes or the site

runs out of rooms.

Freelance Traveller has printed after-action reports on TravellerCON/USA (and TravCon/UK) for several years now, and hopefully we've conveyed how enjoyable it is to get together with other *Traveller* fans to play, to socialize, and to meet some of the creators of published *Traveller* and *Cepheus Engine* products. Come play with us!

In other news, we goofed when putting together this issue of *Freelance Traveller*; when we finished pouring text into the magazine and formatting it, we discovered that we needed an additional two pages. Since we were running late, rather than cutting and rearranging, and perhaps swapping out some articles, we decided that since electrons are cheap, unlike the paper of our notional conceit of "real printing", we'd go ahead and run the extra two pages this issue. Enjoy them; we hope you feel that you came out ahead!

As usual, we can always use new material, for all sections. There's no such thing as too much, and while it *is* possible to end up "too long", it's tough—"Jump Destination: Rech" in this issue, at a full *30* pages—nearly half the issue—shows just how tough! We print what you send us, and we assume that you send us what you want to see, so keep those articles coming!

Critics' Corner

Deep Space Exploration Handbook

reviewed by Jeff Zeitlin

Deep Space Exploration Handbook. Martin J. Dougherty Mongoose Publishing https://www.mongoosepublishing.com 49pp., PDF (softcover forthcoming) Price TBD (see note)

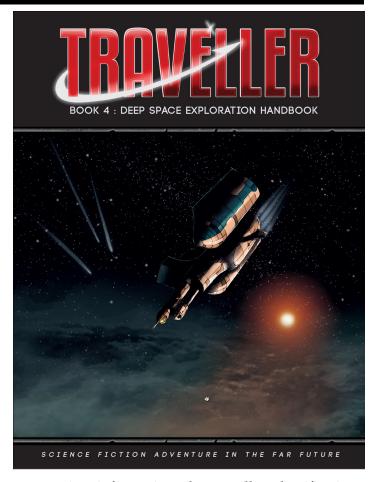
Reviewer's Note: This volume was part of the Great Rift Kickstarter, and the was received as part of the deliverables. The softcover will be delivered when ready.

Exploration campaigns have seemingly always been something of a stepchild in *Traveller*, with only a basic set of rules tacked on. That changes with the release of the *Great Rift Book 4: Deep Space Exploration Handbook*. Although delivered as part of the Great Rift set, its utility extends far beyond the Rift, to any exploration campaign, in any setting.

This volume is divided into two very distinct parts. The first part, five chapters, is more-or-less the meat-and-potatos for (stellar) system engineering gearheads.

After a brief introduction, summarizing why sophonts explore, Chapter One describes the process of Deep Space Exploration, and introduces the concept of the Survey Index, which tells you roughly how much information you have about your exploration target. The different levels of survey are described in order, starting with the simple identification of a target to be explored, and ranging through information gathering from secondary sources (e.g., old star maps, databases, etc.) and extremely longrange sensors, to sensor sweeps on 'fly-by' missions, to increasingly more detailed surveys as more specific targets are identified and more detailed information is acquired. Task checks for conducting each type of survey are provided, and the effect of the checks affects the survey index for the target.

Chapter Two looks at stars and related stellar objects, and discusses starship operations in the vicinity of such objects. In most cases, getting too close means you're in serious trouble—but with this volume, at least you'll know *why*. There is also good



supporting information about stellar classification, and the 100-diameter distance from stars of various types.

Chapter Three looks at substellar objects, such as planets, comets, gas and dust clouds, and so on. The focus here is on rules for detection, which are uncomplicated.

Chapter Four is a set of expanded rules for system generation. Rather than starting with a mainworld UWP, you generate the system from the star (s) outward. Not all resulting systems are necessarily habitable, and you can even end up with a system in which the primary is a black hole. Other exceptional aspects are also possible, such as retrograde orbits, or placement in one of the trojan positions. The end result is a system with as much detail as you want.

While the rest of the first part of this book requires only the *Core Rules*, Chapter Five calls on the reader to have *High Guard* or an equivalent, as it is a "catalog supplement" for the Spacecraft Options chapter therein. Deep Space Exploration has needs

Critics' Corner

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of its own beyond what you might want in the well-settled core, or even the somewhat-settled-and-rough-around-the-edges frontier. This chapter describes the modules that meet those special needs.

The second part gets its own "cover", and its half of this book is *Jayne's Guide to Starships of Exploration*. This section is essentially a catalog of starships and spacecraft, with stat sheets, prose descriptions, and standard isometric color deckplans. Vessel sizes range from 60 to 1500 tons displacement, and not all of them represent "perfect" craft for the jobs described.

Artwork is pretty much what we've come to expect with Second Edition *Traveller*, but I could really like good old monochrome top-down line drawings as plans instead of the new standard of color isometric with "3D" representations of equipment that can occasionally block what's behind it; the plain plans are ultimately easier to read and get a "feel" for, as well as more easily used for miniatures play.

An excellent companion to the rest of the Great Rift set, and worthwhile on its own even if you don't have the rest of the Great Rift. Skip lunch and grab this.

Doing It My Way

Enhancing Psionics

by Robert DeVoe

Psionic abilities have long been a theme in science fiction. *Traveller* has incorporated this gift or skill but it is difficult to obtain and cost prohibitive. Telepathy or mind-reading is the most popular and long lasting psionic ability in science fiction. *Traveller* incorporates this concept by giving Telepathy as a free skill if the player selects it as the first psionic trait. Likewise, the ability to control others through mind control or telekinesis has to be moderated or it can be abused. This is done in *Traveller* by making the psionic cost to use some of these skills to be almost out of reach of many players.

Unless a player can convince a referee to allow him or her to roll for psionic strength in character creation, the *Traveller* rules penalize players who may sometime want to play with mental powers. If a character has spent four terms in service, when psionic potential is rolled the formula used is 2D-4 (DM –1 for each term of service). If a player rolls less than 5, they will never get the chance to have psionic powers (unless you have allowed them to find the Krell brain augmenting device from the movie *Forbidden Planet*, which in itself could be an adventure).

Also, unless the player rolls significantly above average, he/she will only have limited psionic strength. Furthermore, in the standard setting, the 'laws' of the Imperium make training these skills a quest in and of themselves. Unless, of course, you can justify the character being a part of the nobility of the Zhodani Consulate.

Borrowing from Strength or Endurance

Characters who gain psionics late in life may not have the 'power' to do very much. This could lead to dissatisfaction for the player. While there are drugs available to boost psionic power, they are rare and costly, and probably illegal on most worlds (in the standard setting). One way to fix this would allow the character to 'borrow' strength or endurance points to power psionics. This is often demonstrated in television and movies like *Firestarter* and *Stranger Things*. When the characters use their powers, they will often start to have nosebleeds or get weak.

Borrowing PSI from END works as follows:

1. The character must have the Awareness talent. The PSI cost of the check is not applied

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- until the character rests; at that time, the total borrowed STR/END is deducted from the original, unmodified PSI, in addition to any other deductions from PSI as a result of use, and recovered as per the normal rules for recovering PSI. This is, in some ways, the "inverse" of the Awareness skill Enhanced Endurance or Enhanced Strength.
- 2. The character decides how much STR or END to borrow. Roll an Average (8+) Awareness (1D seconds, PSI) check; the delayed PSI cost is the number of points borrowed from STR/END. (If the check fails, impose the cost of a failed check (1 PSI) immediately.) This amount is (temporarily) deducted from STR/ END and added to PSI. Note that if Psi Drug is taken after borrowing STR/END, the effects of the drug should be determined as though each borrowing attempt, successful or not, was an additional dose of Psi Drug (e.g., if the character has borrowed PSI from STR or END twice within the past week, the PSI drug END check is made at DM -2 in addition to the DM imposed by any actual doses of Psi Drug).
- 3. Until the player rests sufficiently to recover the STR/END, any rolls vs PSI are made against the higher PSI—that is, if the character's PSI is 8 (PSI DM = 0), and the character borrows 1 point of END, all rolls vs "unmodified" PSI are made against PSI 9 (PSI DM = +1).
- 4. Until the player rests sufficiently to recover the STR/END, any rolls vs the characteristic borrowed from are made against the lower value—that is, if the character's END is 6 (END DM = 0), and the character borrows 1 point of END, all rolls vs "unmodified" END are made against END 5 (END DM = -1).

5. The effect of borrowing is cumulative, and it leaves the user weakened for other combat encounters. If a character borrows more than half of their END, he/she will become fatigued; borrowing half of their STR means taking a Bane on all physical activity. A character must have at least 1 psionic power point left to be able to borrow from STR or END. *STR/END borrowed for PSI* can be recovered per stun rules, 1 hour of rest; other STR/END loss is recovered per the normal healing rules. Borrowed STR/END is recovered first.

The table below shows the effect of borrowing STR/END for PSI; these effects are separate from any effects of combat or other use of PSI. Note that any effect listed on the table includes the effects of all of the rows above it; similarly with recovery. The effects described are for the total points borrowed from STR and END, combined.

	Borrowing STR/END for PSI	: Effects
Total STR/END Borrowed	Effect	Recovery
1 to 2 points	No visible effect	
3 to 4 points	Nosebleed.	Easy Medic check to stop bleeding. Rest to recover STR/ END
5 to 6 points	All movement is considered over difficult terrain. All loads carried treated as 50% more.	Rest to recover movement
7+ points	Character must make an Average END check to remain conscious.	A character may make an END check every minute to regain con- sciousness.
	TS: Occur if at any time STR/d value (exclusive of incurred	
STR reduced	Any physical action receives a Bane	
END reduced	Character is fatigued	

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Storing PSI

Another option for additional psionic power points is the introduction of Psi Crystals. These could be similar to the Psionic Capacitor in High Guard. They do not use ship's power to charge, but instead store PSI points from the owner. To prevent them from overpowering the game these crystals could be extremely rare, and only able to be found under the right conditions. For instance, it could be a type of crystal that grows only on heavy gravity worlds with a binary star system. The psion could 'store' points in a personal crystal over time, but the crystal must be attuned to the owner and the crystal could never hold more points than the owner naturally possesses. To prevent hoarding, the referee could rule that having more than one crystal on their person at a time causes the crystal to leak power and become ineffective.

Putting PSI points into a Psi Crystal reduces the PSI available to the psion; these points are recovered as per the normal rules. Drawing PSI points out of the Psi Crystal adds the drawn points to the psion's available PSI, but after being expended, they are not recovered. If the referee feels it necessary to impose a task check, the default check should be an Easy PSI (1 second) check.

Psionic Opposition

Just one player with a high enough psionic power score and the right combination of skills can often overturn a carefully crafted game. The referee must watch to see if the local authorities notice anything out of the ordinary about how a group is operating. The Third Imperium has outlawed psionics and if the player(s) starts openly using their powers, or it is thought they are using their powers, then authorities may investigate. The referee may have to determine if Imperium authorities have some form of psionic police group, maybe one that has to be

brought in from off planet. Another option would be to introduce psionic opposition.

These psions would certainly not want authorities conducting a psionic inquisition where they are operating. The players could face threats from individuals or organizations that have a stake in ensuring that the authorities do not become aware of psionic activity.

Coiling: Reading a Computer's "Mind"

Psionic opposition should have new skills and powers. Information is power; what if a criminal mastermind discovered a new way to uncover information? Instead of using Telepathy to read a person's mind the villain could 'read' the memory banks of a computer. This new skill would be called Coiling (from *Coils* by Roger Zelazny and Fred Saberhagen).

Telepathy - Coiling

The most commonly known feature of telepathy is the ability to read the thoughts of other individuals.

Coiling is the ability to read the memory of computers and other digital electronic devices. These devices must be powered up to be able to be 'read' in this way. If the computer system is running security software the task check is increased accordingly. Having the Electronics (Computers) skill will grant a boon die to the Task check. The Effect of the check determines the clarity of the telepath's data retrieval.

Check: Average (8+) Telepathy (1D×10 seconds, PSI) check

Reach: Long PSI Cost: 2

No Range Limitation in Jumpspace

Another opponent that could surface is a Zhodani spy network operating in Imperium space.

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A Zhodani spy would certainly be one of the more powerful psions the party could face. A new skill that the Zhodani may have discovered would involve Jumpspace. What if, like *Babylon 5's* hyperspace, in Jumpspace telepathy had no range limitation? This would make the Zhodani spies able to report directly back to their superiors no matter where they were located. A Zhodani spy could certainly summon a hit squad able to block or suppress player psions. Until the 'specialist' arrived the spy could keep the party occupied by influencing or hiring a variety of locals to get in the players' way.

Luck: Taking Advantage of the Advantage

A Psionic Institute secretly operating on the planet would not want an Imperium psionic investigation team to visit the area where they have set up shop. The Institute could utilize a variety of options when engaging the player(s), from simply telling them they are being too blatant to trying to kidnap and remove. The institute may be funding itself through gambling. Especially if a new skill, like Luck, had been developed.

Clairvoyance - Luck

The character can influence the random acts of chance with this ability. This enhanced awareness of probabilities grants the clairvoyant a boon die on all gambling or combat tasks. The Effect of the check determines the number of Task checks that can be attempted while the awareness lasts.

Check: Average (8+) Clairvoyance (1D seconds, PSI) check

Reach: Long PSI Cost: 2

Less Dangerous Game

Bardicant

by Benedikt Schwarz

A huge four-legged herbivore native to the steppes of the arid planet Spinell, the bardicant has been successfully domesticated and introduced to many other worlds, where it is valued as a mount and beast of burden. Selective breeding and natural adaptation to different climates and planetary gravitations have resulted in many different sub-species. Riding bulls (males) are often bred for speed, intelligence, endurance, or simply for certain hide colours.

An adult female has a height at withers of about two meters and weighs a hefty three tons, with the bulls being slightly smaller. Nearly a third of this bulk is made up of segmented food sacs within a hump in which the animal stores water, fat and protein. This enables a well-fed bardicant to endure long periods of time without food or water. Bardicant meat is edible and rich in essential amino acids

(and there is quite a lot of it in a single slaughtered animal), but it needs to be treated and boiled for at least an hour to get rid of certain toxic by-products that may cause mild diarrhea and fever. Even so, the meat retains an unpleasant sourish taste. On the positive side, it can be dried or salted and will keep for up to four months if so treated.

Growing out of the hump are dark-ringed, pointy quills, which are surmised to be an atrophied defense mechanism against the predators of its home planet. The quills are raised when the animal is alert, angry, or pleased, and flattened when in repose. Bardicants used as beasts of burden often have their quills removed to facilitate fitting a harness. In more primitive societies, the longest quills (which grow to a good meter in length) are often painted and used as javelins.

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Both males and females have a very tough hide, with a horny texture. The original colour is a mottled mossy gray, which on its native planet Spinell enabled a herd to pass as a rocky outcrop when settled down for the night, a time when the bardicant is almost blind. Today, many bardicant breeds have a brown, tan or reddish colour. Primitive settlers and barbarian cultures fashion bulky suits of armour out of the hide.

Male bardicants have a flat, bony crest used as a weapon; with the force of a charging bull behind it, it can cause damage even to an armoured vehicle and knock a civilian four-wheeler on its side. In the mating season, bulls clash with each other in stunning displays of violence, although injuries are rare. Particularly vicious fights may result in a bull being turned on its back; the animal cannot right itself and

will usually die in a short while because its body weight crushes the lung sacs in this position.

Bardicants usually live in herds of three to twenty females and about as many males. The females, being slower and more ponderous, take up the center with the calves while the more agile males form a roaming perimeter protecting the herd from predators. Females are usually sluggish and will only break into a lumbering run in the face of dire danger, but the males can be surprisingly fast for their bulk. Wild herds can be dangerous; while domesticated bardicants seldom harm a human, wild bulls are territorial and may attack.

Out of the mating season, domesticated bardicants are docile and may even develop an affection for their keepers. During the season, which happens between every two years in times of abundant graz-



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ANIMAL	HITS	SPEED	
Bardicant	M: 70, F: 90, J: 45 10m (F: 6m)		
SKILLS	Athletics (Endurance) M: 2, F: 4, J: 1; Athletics (Strength) M: 2, F: 4, J: 1; Recon 0; Melee (bash) 0 (M: 2)		
ATTACKS	Flee 6-; Attack: 10+ (M: 8+); Head Bash (M: 5D, F: 4D, J: 3D)		
TRAITS	Slow Metabolism (-2 to Initiative); Armor (+4, J: +2); Large (M: +3; F: +4, J: +2)		
BEHAVIOUR	Herbivore/Grazer		
NOTE	M: Male ('bull'); F: Female; J: Juvenile ('calf')		

	TL	Range		Damage	Mass	Cost
Quill	0	Melee/20m if thrown		2D+1	3 kg	Cr20
		TL	Protection	Rad prot	Mass	Cost
Hide armo	our	1	(+4)	-	12 kg	Cr200

ing and every six years when food is scarce, the keepers mark the animals with paint and release them into the wild—no pen will stand up to the force of two raging bulls full of hormones. Afterwards, the steppes are searched and the bardicants collected; if well-trained, they will usually recognise their keepers and follow them home willingly as soon as they are found.

Riding a tamed bardicant requires a set of electric barbs set into the gums of the animal (the only sensitive area). Without the electric snaffles, the bardicant may still be willing to obey its master, but will have no idea in which direction it is supposed to go (make regular DIFFICULT Riding checks to keep the animal going and pointed in the right direction, and VERY DIFFICULT to get it started again if it has stopped).

The more intelligent breeds of bardicant are about as smart as a horse, and some of them may be trained to obey a few whistled or verbal commands. Females are slower, but can carry greater loads (up to their own weight) and go for longer periods without water, so their main use is as beasts of burden or draught animals. Bulls are faster and less ponderous, and are primarily used for riding.

Morphology	Bilateral symmetry, tetrapod (four-limbed), quadruped (all four limbs used for locomotion)
Biochemistry	Carbon-based
Respiration	Oxygen-nitrogen inhalant, Carbon dioxide exhalant, tolerant of a wide range of tainted atmospheres
Ecology	Diurnal (active during the day)
Habitat	Arid steppes, deserts, lightly wooded areas
Diet and Trophics	Herbivore/grazer, poikilothermic (varying body tem- perature at varying levels of efficiency; will get slug- gish in cold environments)
Reproduction	Two genders, mild sexual dimorphism, conjugal intercourse, viviparous birth (one or two calves), iteroparous (reproducing more than once in a lifetime). Females may also reproduce by parthenogenesis, but this is very rare and thought to be triggered by nutritional factors.
Lifecycle and ontogeny	Two years to sexual maturity. Lifespan of about twenty years in the wild, about thirty years in captivity.

Adventure Seeds

The characters need to cross the desert and purchase riding bardicants.

- Unfortunately, some of the bardicants are not properly trained. As soon as a herd of wild bardicants is sighted, they try to elope (while still carrying their riders?) and join the herd. It will be hard to keep them in check using the electric snaffles. If they manage to reach the herd, the mounted characters will be caught in the middle of a fight as the bulls sort out the pecking order with the newcomers.
- 2. During one night, curious omnivores take apart the electric snaffles (if you think this is ludicrous, consider that a flock of Australian kea birds can take apart a car within half an hour). They carry the batteries to their nest. The characters have to either retrieve the batteries, or jury-rig something from their weapons' power sources (which will probably fry the bardicant's gums if they don't use an inverter or power conditioner).
- 3. One of the bardicants develops a lasting affection for its rider. When the characters reach their

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destination, the animal will refuse to be parted from xir. This may range from a loud and mournful keening whenever the character is out of sight (and the bardicant can keep it up all night) to attempts to break out of the pen or compound and go searching for xir—in a bustling city. "Excuse me, sir, but is that your bardicant heading for the china shop?"

- 4. One of the bardicants has its nostrils infested by parasites. It will be difficult to control, stopping ever so often to rub its nose against a rock or tree. If untreated, the parasites will slowly migrate into the lungs, and the animal will start to weaken and suffocate after a few days.
- 5. The characters come upon a group of tourists on a safari. As the characters are riding bardicants and wearing local garb, they are mistaken for indigenous tribesmen and asked to pose for holograms.
- 6. One of the bardicants inadvertently steps into the remnants of the campfire and burns its foot. Now it is hobbling and cannot keep up with the others. The characters will either have to reduce their pace, or leave the animal and some of their equipment behind.
- 7. One of the bardicants has an annoying habit of suddenly stopping and digging holes in the ground. Just as the characters are getting exasperated with the beast, they notice that it has dug up a subterranean water reservoir. The bottom is sprinkled with gold nuggets.

The characters are hired to transport a herd of bardicants to a frontier planet.

The handler falls ill during jump, and the characters will have to figure out a way to get the beasts out of their cargo hold—they are unnerved by the unfamiliar terrain outside and refuse to move.

- 2. Mating season strikes while the ship is in space. A lot of restless two-ton bulls are in the cargo hold, and spoiling for a fight. The ship's outer hull will take a lot of punishment, but interior bulkheads will not withstand a raging bull.
- 3. The imported bardicants bear a disease. They are immune, but the native bardicants are not. The planet's population, faced with the prospect of losing their herds, is getting desperate. They take one of the characters hostage and force them to get them a vaccine—preferrably quickly, because every day more bardicants are dying, and nerves are on edge.

The characters are crossing the steppe in their own vehicle.

- 1. Mating season. A hormone-driven bull confuses the characters' ATV with a particularly attractive female and tries to copulate with it. Chasing it off with weapons may anger the herd and result in a stampede.
- 2. The ATV runs into a landslide and is turned on its side. Fortunately, there are some paintmarked bardicants in the vicinity (set free for the mating season and never retrieved). If the characters succeed in baiting and handling the animals, they can construct a crude harness and use the bardicants' strength to get their vehicle back on its wheels.
- 3. As the characters make camp for the night, they have to erect a folding fence to keep off a certain species of annoying or dangerous animal. Unfortunately, a bardicant bull lumbers into the fence, gets entangled and destroys part of it in its efforts to get free.
- 4. Travelling during the dark period: The lumpy rocks the ATV moves over are in fact a herd of bardicants settled down for the night. Naturally, the bardicants take offense.

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- 5. The provisions bought in the last village are spoiled. The characters need to separate a bardicant bull from the herd and bring it down, then divide the carcass for meat—and finally, they have to treat it. Did anyone bring a large enough kettle to boil half a ton of meat? A cooking pit may do the trick, but in any case it is impossible to dig a large enough hole for the remains—which will immediately draw scavengers that make the cooking party a dangerous ordeal. At first, the critters keep a careful distance, but they are getting bolder by the minute...
- 6. The characters come upon a group of illegal poachers who shoot the herd's calves. They saw off the crests and leave the carcasses to rot. The mourning mothers will stay at the site of their dead calves, refusing to move, eventually starving. The characters may try to bring the culprits to justice, or they may try to get the herd moving again—for example, by constructing moving dummies with the skins of the dead calves.
- 7. The characters need to be off, but the compound's exit is blocked by a herd of wild bardicants. The locals' advice is to wait—the beasts will go away eventually, and it doesn't pay to irritate them. The mission, however, is urgent and bears no delay—getting medicine for a sick crewmember or getting the message to the Consul in time.
- 8. Lying alone in the steppe is a bull lying on its back and slowly suffocating. It has slipped down the side of a stone slab and ended up in that position. If the characters choose, they may use their vehicle to put the bardicant back on its feet (which should require a bit of planning)—and then they have to gun the engine to get clear of the ungrateful beast.
- 9. The characters come upon a group of settlers who are in a heated argument and on the point of drawing weapons. It turns out that both sides

released their bardicants for the mating season and inadvertently used the same colour to mark them. Now both are convinced that the other side wants to steal their animals.

The characters encounter a group of nomads in the desert.

- 1. They will only accept the characters if they successfully tame a wild bardicant bull—riding a mount of one's own is a badge of adulthood.
- 2. The nomads use lacquered bardicant quills as throwing weapons; each tribe has their own colour pattern. One tribe has attacked the characters before, using quills marked with their enemies' colours. They hope to have created enough of a "misunderstanding" that the characters will take revenge and decimate the rival tribe with their superior star-forged weapons.
- 3. During a long solar eclipse, enemy tribesmen mount a strike against the clan the characters are negotiating with. The clan's riding bardicants are of no use, since they are nearly completely blind in the murky light. The characters need to get the chieftain's fertilised eggs to safety in their ATV— or find a way to use their vehicle's headlights to illuminate the camp so the tribal warriors can use their mounts and drive off the attackers.
- 4. The nomads hold a festival in honour of the characters. The young men of the tribe, wearing their finest apparel, try to outdo each other impressing their guests with daring stunts on the backs of their galloping bardicants. The characters are now expected to show something similarly impressive to honour their hosts.
- 5. The nomads want to improve their own herd and make a lucrative offer for bardicants of a certain breed. If the characters take the offer, they must drive the herd from the settlements to the tribe's lands across miles of steppe. Meanwhile, other nomad clans have gotten wind of the deal and try to steal the herd.

In A Store Near You

Grav Handle

by Jonathan Clark

A Grav Handle is a pocket-sized device designed to carry objects which are bulky, or heavy, but not large/massive enough to need a full-sized grav floater. It also allows you to carry items while keeping your hands free for other uses. It's a great thing to have on you when you're doing the weekly shopping. (How many times have the crew of the tramp freighter in your campaign had to pass up a great deal on 50 kilos of frozen groat steaks because they didn't have any way to get them back to the ship on time?). If you like, you can think of it as a high-tech version of the "airporter" case, or "wheelie bag".

It's basically a portable grav module, a battery, a control unit, and a means for connecting it to the object being carried—perhaps carabiner clips, bungee cords, "magnatomic adhesion", or whatever fits your campaign setting.

How does it work? Well, if you have to transport something then you hook the object up to the Handle (e.g., by putting the handles of the bag it came in or you put it in through the carabiner, or by using straps around it and hooking it up ditto, or whatever), and turn the device on. It then lifts up, cargo and all, until the cargo is 10cm or so off the ground. You then use the control unit to drive it along to where you're going (probably your ground vehicle, but could be taxi, subway, anything). Simple, no?

Notes

There's a trade-off between carrying capacity and battery life. The exact tradeoff depends on TL, speed, and quality/cost; see the table for one set of suggestions.

There is a potential 'pendulum' problem with basic models—the bag is going to swing. More advanced models might have various methods for stabilizing the load.

Most models allow some variation in height. Generally, the range of permissible heights is 10-30cm, but the most sophisticated models at higher TLs can adjust this based on the mass and shape of the object, and the speed of travel.

Control units vary; the earliest are literally handles—essentially, making the load into a "wheelie bag" without the wheels. Later versions range from button-based to touchpads to haptic sensing to voice control; which you get depends mostly on how much you want to spend.

Safety Features

Even the earliest models have a "dead-man switch"; if you release your grip on the control unit, the Handle (and its load) will stop. Later models, which can be controlled by your personal comm or hand computer over a personal-area network (think BlueTooth-equivalent), will stop if the controlling device goes out of range or is powered down.

More sophisticated units, with various types of load sensors, may limit how high a load may be lifted, based on where the estimated center of gravity/center of mass of the load is.

		Load vs TL	and Quality	
TL	Quality	Load at 5kph	Load at 7.5kph	Load at 10kph
10	Low	15kg	10kg	5kg
	Moderate	25kg	15kg	10kg
	High	50kg	35kg	20kg
12	Low	20kg	15kg	10kg
	Moderate	50kg	40kg	30kg
	High	75kg	65kg	55kg
14	Low	35kg	30kg	25kg
	Moderate	60kg	55kg	50kg
	High	75kg	75kg	65kg

Load is estimated maximum safe mass, for given speed of motion or slower. For intermediate TLs, interpolate using same quality, or simply use figures from one column left (e.g., 5kph figure for up to 7.5kph, 7.5kph figure for 10kph).



The Prep Room

Google Names

Or, Web Search and Translation Software as Chargen Aids By Jeff Zeitlin

You've rolled up a character, written a history, filled in most of the character sheet or index card, ... and suddenly realize ... What's xir name? And then your brain freezes up. You have no idea what to name the character. Everything you come up with is either No, BO-RING! or No, I've already used that one. You could pull out the language tables and 3d6, but that's boring, too. So, now what?

Or you're doing worldbuilding, and you don't want to use cliché names for your cities, like "Landing" or "«worldname» City". What else can you do?

If you've got a connection to the internet, you have access to two tools that just might help: Web Search, and Translation.

Translation

Characters, especially recurring NPCs, are supposed to be memorable in some way. It may be appearance, it may be personality, it may be behavior, it may be ... whatever. You can use that fact, plus a little bit of work with Google Translate or Bing Translation (or other translation websites, but Bing and Google are undoubtedly the 'biggies'), to come up with a name.

First, pick a memorable characteristic, then convert it into the kind of phrase that's used as a byname in fantasy societies (or barbarian SF societies). As an example, suppose your character's history has xir losing a hand, and having it replaced by an obvious prosthetic, one that's made of shiny stainless steel. The obvious byname possibilities are "Steelhand", "Silverhand", "hand of steel" or "hand of silver". Multi-word phrases are more likely to be translatable than oddball compounds, so let's go with "hand of steel".

Now, fire up Google Translate. Set the left side to English, and paste in your byname. Now, start picking languages – the more obscure to your gaming group, the better – and see what the translation of your byname is. Google Translate says that "Hand of steel" translates to Xhosa as "isandla sensimbi", which just might have some possibilities.

So, now that we have the phrase in Xhosa, how do we convert it to a name? You can come up with your own method, but here, I take advantage of the "Yanks in space" meme for *Traveller*, and try to extract a name that I wouldn't find out of place in a New York phone directory. "Isandla" has that nice "sand" in the middle – Sandra, Alexander or Alexandra, Lysander, Much better options for first names than 'sensimbi' offers. But 'sensimbi' sounds like any number of 'African' names that show up in the directory, so why not just use it as it stands?

So now, your character has a name – Sandy Sensimbi. That was easy.

Sometimes, you'll want to alter both. Consider a character who runs a gaming (gambling) house. If you punch "master of the casino" into Google Translate, with Arabic as the target language, you get "syd alkazinu".

Well, "syd" can be used as-is as a first name, but that "alkazinu" doesn't quite work, if for no other reason than one of your players will immediately key on "alka" and start with the jokes about "Alka-Seltzer".

Let's try "master of the gambling club", instead: "syd nadi alqimar". Still not right – but which word drops out if we drop "gambling" from the phrase? "Master of the club" turns into "syd alnnadi", and there's a little oddity in Arabic which means that

The Prep Room

(Continued from page 12)

"alnnadi" is pronounced as if the *l* is silent – "annadi".

That's actually got possibilities: Syd Annadi, Syd Noddy, what else? Ummm... "Sid/Syd" can be a nickname for "Sidney/Sydney", so we decide that our character likes to be formal and so, "Sydney Annadi". I happen to know that the syllable "al" is the indicator for the word "the", so what happens if we drop it? "Alkazinu" becomes "kazinu", a fairly obvious borrowing from whatever language gave English the word 'casino'.

Let's go back to "alqimar", and drop the "al". "Qimar", but the Arabic sound usually transliterated as "q" doesn't exist in English, and usually gets mutated (mangled?) to "k" by English-speakers. "Annadi" can yield "Andy" without too much trouble, so we also have "Andy/Andrew Kimar", or even "Sidney Andrew Kimar" or "Sidney Andrews" (we're not wedded to the 'qimar', after all). And we can mangle "Kimar" as well; weaken the stress on the last syllable, and make the vowel more slack, and "Kimar" becomes "Kimmer", which is a short morph from "Skimmer" or "Kimmel", or a slightly longer one from "Skinner".

So from "master of the gambling club", we've come to "Sidney Andrew Skinner"? Well, yes. But the way you came to it is pretty different, and you're likely to remember it. Which was the goal, wasn't it?

Since you're looking for names, you can't adhere slavishly to the translations you get. Don't even try. Use them as inspiration. Take the non-English words, throw in a few vowels, change a few consonants, toss in some different vowels, and see what happens. Use alternate spellings – for example, if you have a criminal mastermind who sorta looks like a frog, ... Hmmm. "Boss Frog". Spanish, "boss" is "jefe", and "frog" is "rana", so... "Jeff Ranna"? Take the full name, and use the British spelling:

"Geoffrey Ranna". And that wasn't even an *obscure* language.

Use cognates. Flip gender. "Pen name" in kiSwahili is "jina kalamu", which right there is fine with a bit of respelling – "Gina Calamu". Except the character is male. Flip "Gina" over to "Gene", take the long form, "Eugene", and take the Russian cognate, "Yevgeny". "Yevgeny Calamu" is your character's name. Or maybe his *alias*?

When it comes to translation, some people like Google Translate, others like Bing Translation. Don't hesitate to use both; their language selections overlap, but each has some obscure languages that the other doesn't (for example, Xhosa in Google, Klingon in Bing). There are other sites that do free online translations as well, using different wordlists, dictionaries, or algorithms, and maybe language selections as well. Use them, too, if you like.

Web Search

Start with a name out of a list (e.g., phone directory, team roster, class roll, whatever) or an interesting word (perhaps from a word-of-the-day desk calendar, website, or list), and punch it in to a web search engine with "origin of" or "meaning of". If you can get the result down to the same sort of epithetical phrase that we started with in the previous section, translate it, and apply changes as above: An example: "Fletcher" is "maker of arrows". In Mongolian, that comes out as "sumny üildverlegch". Play with that a bit, and it's not such a stretch to come up with "Sonny Olverleg". "Sonny" sounds like a nickname or 'handle'; try a search on "what is sonny nickname for?", and we see that it might be the (English) nickname for the Italian name "Santino", so you've managed to extract "Santino Olverleg" from "Fletcher". Go a bit further. "Santino" sounds like it could also give rise to "Sandy" as a nickname, so "Sandy Olverleg", then fix "Sandy" back to the formal version and you've

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The Prep Room

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managed to go from "Fletcher" to "Lysander Olverleg". Hmmm. That "Olv..." is a little awkward to say. Drop the *l*. "Lysander Overleg".

As with translation, there's more than one search engine out there. The 'biggies' seem to be Bing, Google, Yahoo!, and DuckDuckGo, and there are also some engines that are really "metasearch" engines; they search primary search engines like Google and Bing, analyze the results, and consolidate and reorder them based on their own algorithms. Again, use whichever one(s) you prefer, but don't hesitate to try one of the others once in a while, just in case it ends up leading you down an unexpected but productive path.

Other Techniques to Apply

Word Association

Best known as a tool in Freudian (Freudulent?) psychoanalysis, word association is simply responding with a word that you think of in response to hearing a different one. This can be a useful tool in creating names, as well. For example: "Einstein" is a name made from compounding "ein" and "Stein", which Google says is "one stone" in German; in Vietnamese, it comes out as "một hòn đá". We'll toss the diacritics: "mot hon da". "Mot" pretty easily becomes "Matt" becomes "Matthew", and "hon da" is a brand of motorcycle, and (word association here!) so is Harley-Davidson, which is commonly called "Harley", so... Einstein is really "Matthew Harley"?

Sound Changes

We've been doing this all along, more or less. When we change a vowel or consonant to a different one (like 'mot' to 'Matt'), or drop one entirely (like "Olverleg" to "Overleg"), this is what we're doing. It covers more, though; suppose we decide that we want the resulting name to fit a particular culture? We can take what we come up with, and spell it according to that culture's rules, changing things where necessary – if, for example, a language does

not have the phonemes usually written as 'ch' or 'j' in English, and all syllables are of the form CV (consonant followed by vowel), then "Richard" gets a little bit mangled when rendered in that language – perhaps 'Risharidu'. That also falls under 'sound change'. For a given culture, you might want to try to establish rules for this kind of change, just to ensure consistency. Generally, though, this sort of change will be very nearly the last change you make.

Worldbuilding and City Names

Many of the same techniques described above for character names will work for city names. Descriptive phrases for translation may point to factors of climate or geology or geography. Translating "cliché" names is also useful. Take "Landing", for example. Of the several alternatives for Uzbek that Google offers, one, "qo'nish joyi", translates as "landing-place" Let's go with that. As with Arabic, the 'Q' becomes 'K', the glottal stop (represented by the apostrophe) drops out, and since 'sh' and 'j' are similar sounds, we decide to assimilate them: "Konishoy".

In English, many municipality names combine words for geographical features with words that signal their municipal nature - '-town', '-ton', '-ville', and so on. Or, they're two-word names, where the second is either the signal for a municipality, or is a characterization thereof or of the geography -'Haven', 'Harbor', 'City', 'Point', and so on. Translate those, too, and don't necessarily use the same language for both words. "Oyster Bay": Maori gives "Tio" for "Oyster", and "Bay" is "Lahti" in Finnish, so why not welcome the characters to "Tiolatti"? Or perhaps the city was founded by a persecuted group? Take what the group calls itself, translate "Haven" into their language (or use a language from Bing or Google as a stand-in), and have your characters check Library Data for "Saxipristan" (from "Witness" (Nepali), Sāksī, and Przystań, "Haven" (Polish)). 0

Critics' Corner

Signal 99

reviewed by Robert Weaver

Signal 99. Richard Hazlewood.

Stellagama Publishing http://facebook.com/StellagamaPublishing 38pp., PDF

US\$3.99/UK£3.11

Signal 99 is a Cepheus Engine adventure for 4-6 PCs, set in the universe of *These Stars are Ours!*. The PCs should most likely be the crew of a private starship, but if they have no ship, they can be passengers aboard a commercial vessel.

Signal 99 takes place in the Parvati system, in United Terran Republic space. The adventure takes place in space, so the exact system is not crucial to the play of the encounter. There's enough background information to be comprehensible even to players new to the TSAO setting.

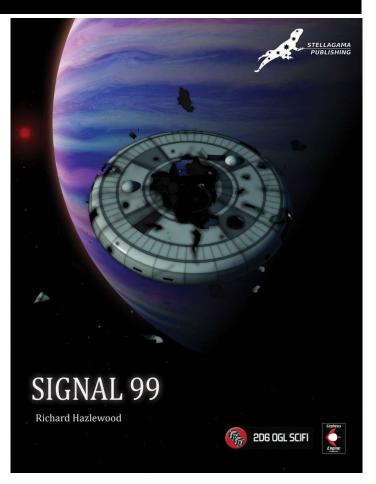
There is no patron *per se*; the PCs are responding to a distress signal, which by recognized interstellar law, anyone within range must do.

The ship sending the Signal 99 is genuinely damaged and in distress. The PCs' approach should be to get aboard, assess the damage, repair if they can, or transfer survivors off if they can't.

There's no cash reward, of course, but there are things and people aboard that can be to the PCs' benefit for having encountered them. PCs from spacefaring backgrounds should feel that maintaining the tradition of answering distress calls (and expecting others would do so for them) is the reward.

The PCs will quickly learn that the ship is an 'enemy vessel'. All the damage aboard makes moving about dangerous, and the ship may not last much longer. The players will have to make some hard choices about what/who to focus on in the time they've got.

Plenty of setting/background data is provided for the Referee, which means *Signal 99* is an easy adventure to introduce. It is self-contained which means not much prep time needed. There are good deckplans and detailed explanation of the ship's damage, which will help bring the setting to life and keep tension high. There is also a helpful list of 'typical actions' in task format. A quantity of high



tech goodies can be found aboard. Each significant NPC is detailed with their own motivations and courses of action beyond simple survival. It is self-contained but it is also open-ended; this adventure can lead into a number of future adventure avenues.

While it is not actually a weakness, I have to point out that there is a lot of time record-keeping for the referee to do. I am not fond of such record-keeping. Players who dither or waste time will find the clock has run out before they get anything done. I found one editing mistake: on page 29 there is a 'see page' reference which is incomplete, but as the adventure is only 38 pages, it is easy to determine what page is referred to [page 32].

What would I change? I can't think of anything. This adventure is dramatic, and a regular 'to the rescue' 'let's be heroes' theme, which appeals to me. Plenty of detail is provided, while still giving the PCs plenty to choose from. Their choices will matter in a lot of ways. In summary, a good product worth the asking price that will work well for a one-shot or as part of an ongoing campaign.

Jump Destination: Rech

by Jonathan Sherlock

Lanth/Spinward Marches 2212 Rech D9957AA-6 Ag 501 Im MOV

System Overview

Rech System Profile				
Orbit	Name	UWP	Notes	Orbital Distance
Primary	Ahrweiler	M0 V		
0.5	Rech	D9957AA-6	Ag	44.85 million km
1	Bauler	GS0056A-5	Co	59.80 million km
1.3	Jump Point			76.37 million km
2	Sinzig		Small GG	104.7 million km

The major bodies in this system are named for municipalities in the Ahrweiler district of Germany.

The primary star Ahrweiler is a main sequence red star. Such stars do not normally form large planets in their planetary disc. The prevailing theory is that Rech is a captured body, and this accounts for a non-standard orbit.

The star of Ahrweiler is slightly more than half the diameter of Sol, but Rech is much closer to it than Terra is to Sol. On Rech, Ahrweiler appears to have a diameter of 1.8 that of The Sun, and overall appear about 7 times its size.

A typical journey out of the Rech system requires a ship to travel 31.52 million kilometres to reach safe jump distance from Ahrweiler. Typical travel times for a ship leaving the system are in the following table.

ionowing table.					
Rech System	Travel Times				
Origin	Rech Orbit 10 Rech Diameters Rech Orb				
Destination	10 Rech Diameters Ahrweiler		Ahrweiler		
		Safe Jump	Safe Jump		
1G	2h 08m	31h 07m	31h 11m		
2G	1h 31m	22h 01m	22h 03m		
3G	1h 14m	17h 58m	18h 00m		
4G	1h 04m	15h 34m	15h 35m		
5G	58m	13h 55m	13h 56m		
6G	53m	12h 43m	12h 43m		

Note that the total travel time from orbit to safe jump is faster than the other times added together—they allow for acceleration and deceleration to a complete stop.

Ahrweiler (System Primary)

Ahrweiler Stellar Profile	
Diameter	0.549 Sol (381,830 km)
Mass	0.489 Sol
Luminosity	0.45 Sol
Apparent Diameter	1.8 Sol
Apparent Size	7.3 Sol
Safe Jump Point	76.37 million km

Ahrweiler has a red-pink tinge to the human eye—although being the brightest object in the Rech sky looks close to white at high noon. It is a relatively cold star and so only the closest orbiting planet has a habitable temperature; Bauler is a cold ice-ball by comparison.

Rech (Mainworld)

Rech is the main world of the system—full details are provided in the following pages.

Bauler

Bauler is a penal colony of the Rech Chancellor. Traffic between the worlds is infrequent as the Rech government lacks the technology for space travel—it must charter merchant ships for needed journeys. It is otherwise an uninteresting vacuum ball of ice. Full details are provided on the following pages.

Sinzig (Gas Giant)

The sole gas giant in the system is in a colder outer orbit (for this star). Sinzig has no satellites.

Sinzig Planetary Profile	
Diameter	131,200
Density	0.28 Terra
Mass	154.383 Terra
Gravity	1.469G
Orbit	2 (0.7 AU)
Orbital Period	305d 21h 39m (standard days)
Sinzig Travel Times to 100-Diamet	er Limit
	U1 233334
1G	20h 07m
1G 2G	
	20h 07m
2G	20h 07m 14h 13m
2G 3G	20h 07m 14h 13m 11h 37m

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System Travel Times

The following tables show travel times at various accelerations to cover distances between major system bodies. The Closest column refers to travel times when the bodies are at their closest—one planet between the star and the other planet. The Furthest column refers to travel times when the bodies are on exactly opposite sides of Ahrweiler.

Obviously some deviation is required around the central star, adding to the length of travel time. But this is balanced by a skilled navigator using the gravity of the star to considerably shorten the journey along a hyperbolic navigation path. The straight line calculations presented here give an indication of the upper limit of time that would be needed to travel from body to body.

Red	ch System T	ravel Times	3			
	Rech—Bauler		Rech-Sinzig		Bauler-Sinzig	
	Closest	Furthest	Closest	Furthest	Closest	Furthest
1G	21h 28m	56h 49m	42h 58m	67h 56m	37h 13m	71h 15m
2G	15h 11m	40h 11m	30h 23m	48h 02m	26h 19m	50h 23m
3G	12h 24m	32h 48m	24h 48m	39h 13m	21h 29m	41h 08m
4G	10h 44m	28h 24m	21h 29m	33h 58m	18h 36m	35h 37m
5G	9h 36m	25h 24m	19h 13m	30h 23m	16h 38m	31h 51m
6G	8h 46m	23h 12m	17h 32m	27h 44m	15h 11m	29h 05m

Note that travelling to the gas giant Sinzig for wilderness refueling could add nearly 2 days to the length of the journey to the main world (taking into account that the safe jump-point for the star is considerably outside the orbit of the main world of Rech). Most commercial ships therefore proceed straight to the mainworld of Rech to refuel from the oceans.

Although the local law level is high, Rech does not have sufficient space or air technology to enforce airspace restrictions. But merchants who need to get along with local authorities for ease of trade are advised to following starport directions for authorised refuelling points, which is generally in the oceans away from the settled continent of Berg.

System Space Encounters

Roll only once on the following for each journey in-system for an encounter at the end or near the end of a journey. Consult the appropriate table from the *MegaTraveller Imperial Encyclopedia*, p91.

Rech System Starship Encounters			
2D	Encounter Type		
2	No encounter		
3	No encounter		
4	No encounter		
5	No encounter		
6	Merchant (see table 2)		
7	Merchant (see table 2)		
8	Merchant (see table 2)		
9	Merchant (see table 2)		
10	Civilian (see table 3)		
11	Scout (see table 6)		
12	Naval (see table 7)		

Rech (Mainworld)

Planetary Characteristics

Rech: Size-related Data		
Diameter	14,745 km	
Density	0.96 Terra	5.28 g/cm ³
Mass	1.484 Terra	8.863×10 ²⁴ kg
Gravity	1.09G	10.87 m/s ²
Orbit No. and Radius	0.5	0.3 AU (44.85×106 km)
Orbital Period	85d 14h 49m	
Axial (Rotation) Period	27h 26m	
Axial Tilt	26°	
Orbital Eccentricity	0.00	
Seismic Stress	3	

A world the size of Rech is not usually associated with a Class M star, and occupies a very close orbit not predicted by Bode's Law. The world therefore presents something of an astrophysics conundrum. One possible theory is that it is an object captured by the star rather than formed in its planetary disc. The local year works out to 75 local days, which are split into seasons of around 18 to 19 local days each.

The temperatures on Rech cycle through hot days at the equator (up to 51°C) through to ultra freezing conditions at the poles (down to -67°C during winter nights).

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Rech: Atmosphere-related De	etails
Composition	Oxygen/Nitrogen mix with Chlorine taint
Surface Pressure	1.8 Atmospheres
Orbit Factor	713.865
Energy Absorption	0.780
Greenhouse Effect	1.15
Base temperature	288K (15° C)
Orbital Eccentricity Modifier	0.00
Latitude Temperature Effects	+7/-7 per hex
Axial Tilt Effects	0.00=2-
	0.25=3
	0.75=5
	1.00=6+
Daytime Plus	+15
Nighttime Minus	-7
Native Life	No
Terraforming	Atmosphere: No
	Greenhouse: No
	Albedo: No

The seasons pass rapidly on Rech, taking only 18 to 19 local days each. Rapid heating and cooling of the world can result in violent storms, but the high density of the atmosphere takes more energy than on Earth for storms to be whipped up. Electrical storms and cyclones happen less often and disperse more quickly than on Earth, but are potentially more violent at their peak.

Chlorine is the gas taint in the atmosphere at about 100 ppm. Travellers to Rech commonly remark that it smells like a swimming pool only stronger. Where fog forms on Rech, it is strongly acidic and is more poisonous, a hazard to travellers in the open.

Filter masks are required to work in the atmosphere for more than short periods. Fortunately, filter masks are simple to manufacture and consist of breathing through gauze soaked in water. Pads need to be changed periodically.

The taint is enough to irritate the lungs after short exposure, and the skin after long exposure. Head to toe covering including gloves is recommended. IISS issue Tailored Vacc Suits are ideal, but not practical to issue to the entire population. In addition to filter masks, locals have adopted head-totoe skintight under-clothing for protection when outdoors for periods longer than a couple of hours.

The following rules should be used for exposure to the atmosphere.

Rech Atmosphere E	xposure Effects	
Short Exposure	Up to END × 5 minutes	No Effect
Extended Exposure	END × 5 minutes or longer	Impose immediate 1D damage, then an additional 1D damage each subsequent END × 5 minutes
Recovery	1D per hour	After return to non-tainted atmosphere (generally indoors). If the character is unconscious, treat as 'minor wound' for treatment and recovery as per p.82 of the MegaTraveller Players' Manual.

The character is assumed to be suffering from debilitating nausea and vomiting after a short exposure. Damage represents general debilitation from chlorine poisoning. Recovery represents body chemistry fighting back.

The stormy, dense atmosphere tainted by chlorine causes rain to have a high acid content. Rain and river water is undrinkable without deacidification, But having said this, filtration of the water is not complex, especially for the high environmental technology present on Rech. These considerations have dictated the placement of cities for water supply. The atmosphere is effectively a highly churned disinfecting washing machine and probably prevented the evolution of native life. One historical benefit of the highly chlorinated atmosphere is the ability to quickly and economically disinfect vehicles. Starships are commonly 'vented' by simply opening them completely to the windy atmosphere for a couple of hours which sterilises the entire ship. Standard air conditioning filters on starships (up to about 1,000 displacement tons) will return the interior to normal atmosphere within half an hour of resealing the ship. Microbial life has been introduced on Rech in more recent times, however, and this method is no longer guaranteed to work, despite it being commonly told as "good for ships" by locals who have never set foot in a starship.

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Rech: Hydrosphere	-related Details				
Surface Coverage	52%				
Composition	Water with hydrochloric acid taints				
Tectonic Plates	6				
Terraforming	Hydrographic: No				
	Terrain: Yes				
Land Masses	Major Continents: 5				
	Minor Continents: 4				
	Major Islands: 2				
	Archipelagoes: 5				
Notable Volcanoes	8 on two major continents, 7 on minor continents				
Weather Control	No				
Export Production	Natural Resources: Agricultural Goods, Ores				
	Processed Resources: Agricultural Products, Non-				
	metals				
	Manufactured Goods: None				
	Information: Recordings, Documents				

Water from rivers and oceans is generally not drinkable. It contains substantial amounts of hydrochloric acid. On the other hand, rain water is more drinkable as the chlorine has had less chance to dissolve, but it is still unpalatable and is not recommended for drinking long term without filtration.

Life Forms of Rech

Rech has no native life. However, over the centuries since settlement significant life has been imported and genetically modified for local conditions.

Primary crops include chlorine-dependent hemp, and hemp fibre products, especially textiles, paper and rope. Genetically modified rubber trees and rubber products (important for skin-tight clothing to shield the effects of chlorine) are also another major export offplanet. This is in addition to the various food crops grown to provide staples and for economic trade.

Food crops were a huge challenge for early settlers. Edible crops that are chlorine dependent or resistant were genetically engineered based on common known grain and vegetable crops. There were a mix of species introduced locally to complement the research, and fauna as well. Some were simply planted or let loose and watched to see what survived. Others were genetically engineered in response to research on why most life forms died and

what was needed on a micro-biology level to ensure survival of crops and livestock for agriculture. A combination of research methods was used at first to develop the life infrastructure needed.

In order to make the meat palatable (instead of tasting somewhat like soap), smoked meats where developed to at first cover the flavour. As centuries passed, the best smoking methods and culinary traditions have developed. Rech is now famous for its smoked meats and spicy sausages, both of which are a prime export. In a similar way, leather is a major agricultural commodity on Rech. The smoking and meat preserving skills developed quickly transferred to leather production with animal skins, especially when combined with the advanced micro-biological technology available.

Over the 1,500 years or so since settlement, breeding has replaced genetic engineering as the primary adaptation mechanism. Once genetic engineering established basic survival thresholds for local conditions, it was possible to experiment with breeding to refine the best survival mechanisms. There are some wilderness animals in and around the terraformed Rech projects, but mostly the surface is barren of life.

The animal encounter tables are restricted to the Terraformed Zones (shown in green on the world map). There are rarer encounters just beyond this zone, as noted next to the tables.

Descriptions

There is not that much variation in life on Rech as it is largely imported based on settlement needs. Many creatures encountered in the wild are simply escaped domestic animals or their descendants. There are some species that have been introduced carefully into the wild simply to balance the ecology, and so there is a growing wilderness on Rech. There are two larger creatures that are worth a more detailed description.

(Continued from page 19)

Iugolo Carnotauros: A predator originally introduced to control livestock that had turned feral in the wild. The introduction of this species from a nearby world was bitterly opposed by the scientific community on Rech. But history and politics means that, ironically, the land-owning class demanding action on feral livestock became childishly more determined to introduce the species (see History and Rech Government, below). The entirely predicted result was a minor ecological catastrophe. This animal is now itself a threat to domestic livestock and humans and is actively hunted by Rech land-owners (see Hunting Rifle on page [xx] designed specifically for this purpose). It is a lizard-like animal weighing in at 1600kg. It runs on its hind legs and resembles a smaller version of a Tyrannosaurus Rex, although its forepaws contain vicious claws. From teeth-filled snout to tail it measures around 30 metres, and walks as fast as a human can run.

Giant horn-backed turtle: A river-based turtle originally introduced simply to eat river weeds to keep them in check. They are very heavy, and stand about one metre high, but have dome-like bodies about two metres in diameter. Their hide is covered in horns which they use to ram attackers, but they are timid creatures who typically swim off at any approach. Their shells are incredibly tough, and are the subject of much biological research.

History

Rech was first explored by Terran exiles who left Terra around -420. This migration wave moved on to establish the Sword Worlds. The survey commander's home town was Rech in Ahrweiler, Northern Germany on Terra, and he named many features of the Rech system for municipalities and towns from this region. Some 250 years later, an initial settlement was established of scientists whose priority was settlement of Rech as the planet appeared reasonably habitable (if challenging) and with plen-

ty of land. The planet had not yet been occupied due to environmental challenges facing any settlers.

Initial problems encountered almost proved too hard too surmount. The breathing problems were quickly solved with filter masks. Exposure to the skin was not a problem for short periods over several days, but more lengthy exposure threatened long-term health. Initial expeditions covered up with vacc suits as this was standard issue equipment, but this was not practical for settlers into the long term. The population adapted by completely covering the skin with locally fashioned clothes. This has lead to a

Ca. –1520 Probable first sighting/contact with Rech by Terran traders -401 Terran exiles take note of Rech for settlement potential. Nothing comes of this. System bodies named for Terran home district of survey commander's family. -399 Gram (Sword Worlds capital) settled -300 Sword Worlds settlement complete -150 Sword Worlds survey ships re-investigate Rech. Detailed survey considers life is possible with some adaptation. -112 Settlement established on Rech by Sword Worlds colonists. Scientific adaptation to chlorinated environment made top priority. Introduction of genetically-modified plant and animal life begins. -102 Tyrfing Incident triggers widespread rebellion in Sword Worlds. Rech settlement cut off as Sword Worlds interest turns inward. -100 Rech government forms around a charismatic individual who adopts the title "The Kanzler", who gives highest priority to science to adapt to surviving on Rech without high technology. -70 University of Glees established. -60 Civil war narrowly averted. Caused by clash of priority of scientific process with emerging agricultural population. Compromise worked out; The Kanzler appoints The Counsellor, who heads up population administration; each acts as advisor to the other. -56 Geselligkeit firt formalized with a regular meeting of scientists and farmers determined to keep proper records. The Counsellor's power cemented as result. 0 Founding of Third Imperium 60 First Imperial settlement in Spinward Marches 65 First Imperial contact with Rech		
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1	65	First Imperial contact with Rech
101 Rech integrated into Imperium	101	Rech integrated into Imperium
341 Iugolo Carnotauros introduced to control livestock turned	341	Iugolo Carnotauros introduced to control livestock turned
feral. This animal soon became a vicious predator in its own		feral. This animal soon became a vicious predator in its own
right and a legendary danger on Rech		right and a legendary danger on Rech

(Continued on page 21)

(Continued from page 20)

general preference for milder or even colder parts of the planets as locals tend to 'rug up' against exposure to chlorine, including boots and gloves.

There were enormous problems for settlers in relation to water supply—no directly drinkable source of water existed. Explorers initially distilled water with the abundant supply of energy available with fusion power plants from starships. But this was not economically nor technologically viable for colonists, especially as the initial settlement occurred towards the end of the Long Night several centuries before the Third Imperium reached the Spinward Marches. Fusion power plants require skilled staff to maintain them, and with a small and initially very transient population, a cheaper and less complex solution was needed.

A bacterial based filtration system was developed that involved shifting large volumes of water through several permeable membranes that had chlorine-fixing bacteria in them. The bacteria were self sustaining in the open environment, and were later able to be used to establish open micro-cultures in the surface soil. This eventually lead to sufficient soil improvement to enable the ability to grow genetically modified crops in the open air. This introduced micro-biological life to Rech for the first time.

The initial settlement used hydroponics to grow food in enclosed areas, which expanded to enormous green houses with built-in air filtering and deacidification of rainwater. Growing food in this way became common and self-sustaining but was still relatively labor intensive—after all, filters must be maintained and green houses must be built.

Lack of native life also lead to all biological resources being imported. Even the state of the soil was completely sterile, and introducing lower level bacteria for composting and other soil enrichment techniques were at first failures as the bleaching derived from the atmosphere was very strong. Even human excrement was quickly bleached and useless

after several days for compost—a process which takes 6 to 8 weeks.

The research that lead to chlorine fixing bacteria for purifying air and water also lead to cultivation of nitrogen-fixing strains that could survive the bleached conditions of the soil on Rech. This was the initial basis for projects to enrich the soil and make possible crops in local conditions. This research lead to the building and maintaining of a local scientific community that would maintain a high level of technology in certain areas such as genetics, environment and biochemistry all deemed highly important to adaptation to Rech.

Chlorine-fixing bacterial methods began to produce self-sustaining managed life cycles, and in turn well-ordered agricultural communities. Some of the newly introduce genetically modified bacteria began spreading their own colonies around the world, and has set the stage for the beginnings of wild plant life. None has been recorded yet, although large parts of Rech remain unexplored. Based on this initial science, crops and animals for human consumption were introduce (see Life Forms of Rech on page 19). From these animals also came meat, and culinary traditions evolved as noted above. However, the chlorine bleaching of plant life which were the animals diet made the meat unpalatable to humans. Smoking techniques were developed, and a culinary

Craft ID: Fighter Aircraft, TL5, Cr587,190

Hull: 20/50, Disp = 23, Weight: Loaded = 5 tonnes, Airframe= Sim-

ple, Armor = None

Power: 0.04 MW (drawn from engines), Endurance = 6h 20m

Loco: 4/10m Basic propeller, Thrust = 2.02t, Cruise = 225kph, Top =

300kph, Min = 150kph, Agility = 1, Range = 1440km

Commo: Radio = VDist (50km)

Sensors: None

Off: Medium Machine Gun × 8, 16,000 rounds

Def: None

Control: Simple controls, Simple cockpit

Accom: Crew = 1 (Pilot), Oxygen tanks and mask

Other: Fuel = 960l, hydrocarbons

This basic small fighter provides air cover for ground attack aircraft, though not enough to stand up to interstellar craft

(Continued from page 21)

tradition built around smoked meats was formed. This is now a source of interstellar pride for Rech. These self-sustaining technological innovations meant that the local settlement could survive at a relatively low technological level, although life in an agricultural community requiring filter masks and head to toe clothing is by no means easy.

The first formal government was formed around a charismatic scientist Wolfgang Hausen. He is considered the first *Kanzler* of Rech and directed the scientific strategy for survival on Rech. The second *Kanzler*, John Mueller was appointed by Hausen on his death. This established the long-held tradition of appointment of the next *Kanzler* by the previous in their Will.

The science-based survival and biological techniques quickly became well known. As a result settlement became viable and a new class of land holders emerged, demanding more political power. They were not satisfied with government by scientific bureaucracy. The population had grown and so had the economy. The social unrest in -60 almost came to civil war. Fortunately a compromise was struck: The *Kanzler* would share power with a second person who had approval of the new land owning class. But the *Kanzler* would have the constitutional power to dismiss the second person, known as The Counsellor.

Gatherings of land owners and their families kept a close eye on the emerging political compromise, and records started to be kept of meetings. These gatherings—initially "social" gathereings and hence called *Geselligkeit*—were bent strongly in favour of the land owners and away from the scientific community. They regarded The Counsellor as "their man". They gave laws enacted by him their tacit acceptance or rejection. This was later formalised and so The Counsellor enacted laws by distributing them to *Geselligkeit* who quickly organized formal structures. The *Geselligkeit* came to act as local

Craft ID: All Terrain Vehicle, TL6, Cr97,348

Hull: 36/90, Disp = 4, Config = 4USL, Armour = 10B, Loaded =

50.42 tons, Unloaded = 43.34 tons, Turret = 1% (0.5kL)

Power: 3/6, Improved Int. Comb. = 1.6MW, Duration = 30 hours, Air

Intake Filter

Loco: 10/20, Tracks, Max Speed = 85kph, Off-road = 50kph, Range

= 2,550km (1,530km off-road)

Commo: Radio = Continental

Sensors: Headlights=4, Environment Sensor, Magnetic Sensor, Radia-

tion Sensor, Active IR Sensor, Passive IR Sensor (sensors

turret-mounted)

Off: None

Def: Smoke Discharger

Control: Panel = Enhanced Mechanical x 6, Basic Env, Basic LS, Ex-

tended Life Support, Air Lock

Accom: Crew = 1 (Driver - cramped), Passengers = 5

Other: Fuel = 3000 litres hydrocarbon, Cargo = 3180kg

For extended exploration surface work; also a minor export

law centres, including recruitment of juries for deciding questions of law. Social power came through being a land-holder, and social advancement through their social structure, primarily *Geselligkeit*.

Interstellar trade was never completely cut off—but this backwater world inevitably became a landworking peasant community, and associated conservative attitudes developed. This was balanced with scientific progress needed for expanding useful land depended upon maintaining environmental technology. But other technology deteriorated and expertise diminished. This was slowly rebuilt after the contact with the Imperium, but technology adoption has been very slow.

The Third Imperium has been friendly trade relations with Rech, offering the exchange of scientific support and useful products for agricultural goods. The city of Glees has a major established university that regularly collaborates with off-world scholars and a fruitful relationship has developed, promoting the scientific insights brought about by solutions to thriving in conditions on Rech. This has extended in recent years to social and historical studies and Glees has attracted modest but significant academic attention. However local attitudes (dominated by *Geselligkeit* and the land-owning class) poorly recognise Rech's academic contribution because "proper"

(Continued from page 22)

people work the land and attend *Geselligkeit* (see **Religion** below). The academic world is known for having more liberal opinions because of their contact with interstellar life and urbanisation.

The on-going history of Rech is dominated by these two factions: the agricultural landowning class represented politically by The Counsellor; and the urban and scientific community are represented by The *Kanzler*.

The People and Cities of Rech

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ment figures	ment figures			
Population	Port Class			
8,000,000	D			
8,000,000	E			
7,000,000	G			
6,000,000	Е			
3,000,000	Н			
900,000	Н			
700,000	Н			
700,000	Н			
each 500,000	Н			
each 50,000	Н			
each 5,000	Υ			
each 500	Υ			
	59,300,000 Military figures name characteristics Population 8,000,000 8,000,000 7,000,000 6,000,000 900,000 700,000 700,000 each 50,000 each 50,000 each 5,000			

The economy is functioning but relatively small, and relies on agricultural exports. As discussed in the history above, the population of 59,000,000 is generally conservative in outlook—although the prevailing conservative attitudes are much less pronounced in the primary cities. This is largely a response to the great need for communities to ensure tight social bonds in the face of the environmental challenges facing them in a world that is largely self-reliant because it is a back-water. Having said this, there is a hard work ethic mixed up with a generally conservative ethos. Advancement through hard work and right behaviour is approved.

The people of Rech are stern, quiet and will not readily start conflict. They will not hesitate to defend and organise themselves, but their conservative nature works in with their unaggressive attitude. A life's hard work on the land in a hostile environment has made them very reserved. Their military might has not been frequently tested, though it does have a reasonable military budget given its circumstances.

The military is not therefore socially prominent, and so looks up to other more famous social strata. This has lead to the tradition of officers naming their children for local media personalities, singers, actors, dancers and other entertainers. Children are most commonly named in the military for interstellar entertainers whom player characters are likely to recognise.

Rechians are not exactly hostile to interstellar visitors. In fact, in the startowns of Alternhar, Honnigen and Glees they are motivated to friendliness by catering to offworlders. But travellers wandering outside the major cities and starports will encounter a taciturn people who will take some patient coaxing before anything like courtesy will be forthcoming. The world as a whole has very even social attitudes and all Rech inhabitants recognise a common culture that works together (*see more under Government and Religion below*). Inhabitants are spread over the one inhabited continent, Berg (a very wide area), but are closely tied together socially.

The cities of Alternhar and Honnigen are completely sealed against the tainted atmosphere. It is possible for people to spend their entire day in a sealed environment, including parks, gardens and agriculture broadly based on the original greenhouse schema. The cities are not arcologies under a giant dome, but have hundreds of miniarcologies as well as more mundane buildings.

The establishment of basic starport facilities at Alternhar and Honnigen has attracted large swathes of the local population to them, seeking the opportunities that interstellar trade provides.

The starport at Glees has recently opened to interstellar trade and so at the moment is only a land-

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ing facility. Kalenborn, ironically, has better facilities including unrefined fuel, but is restricted to chartered supply ships that make the infrequent but regular journey between Rech and Bauler.

The Terraform Project

The major city of Alternhar is at the centre of a terraforming 'green' project. This project has taken centuries to progress and includes the introduction of life to wilderness areas in addition to developing more arable land.

The smaller city of Aremburg is just beyond the edge of the Alternhar Green Project. Its primary function is to host the facilities for extending the project up the Very Big Canyon River. It also serves as a major river port on the route between Honnigen and Alternhar.

Muespath and Insul, similarly, are focal points for the Green Project on the north coast of Berg. This project is now extending towards the major city of Kalenborn.

The Very Big Canyon River is another place where life has been seeded to found a new ecology. The river teems with life compared to the rest of the planet, although communities have yet to settle there in great numbers. While there are some small settlements along the river, especially outposts of environmental rangers, Aremburg is the last serious

Craft ID: Troop Transport Truck, TL6, Cr25,901

Hull: 45/113, Disp = 5, Config = 4USL, Armour = 1B, Loaded =

20.25 tonnes, Unloaded = 14.61 tonnes

Power: 3/6, Improved Int, Comb. = 1.6MW, Duration = 21 hours, Air

Intake filter

Loco: 8/16, Wheels, Max Speed = 126kph, Off-road = 37kph

Commo: Radio = Continental

Sensors: Headlights = 4, Environment Sensor, Magnetic Sensor, Radi-

ation Sensor

Off: None

Def: Smoke Discharger

Control: Panel = Enhanced Mechanical × 4, Environment = basic env

Accom: Crew = 1 (Driver), Passengers = 22
Other: Fuel = 2200*l* hydrocarbon, Cargo = 200kg

The primary troop mover on Rech, the Troop Transport Truck is ubiqui-

tous with the Rech military

city on the river until Honnigen. The river is mostly wilderness as a result.

The animal enounter tables at the end of this module reflect the limited animal life on Rech. It is confined to the Green Project and the river, with some life encroaching further, and beyond that arid desert.

Note that all settled places contain agriculture, ecologies, and tamed life. The Green Project is to spread wild life on Rech to create a self-sustaining ecology.

Rech Government:

The Kanzler and The Counsellor

The planet is governed by the *Kanzler*, who appoints his or her successor as part of their last will

Rech: Governm	ent –related	Details	
Authority	Branch	Type	Name
Representative	Executive	Single Ruler	The Kanzler
Other	Legislative	Single Ruler	The Counsellor
Other	Judicial	Demos	Juries drawn from Geselligkeit

and testament. Intrigue has occasionally surrounded the forging of The Kanzler's last will and testament, leading to conflict over the rightful succession. However, the conservative outlook of the population usually favours one party or the other very clearly. The 'religion' (Geselligkeit—see below; also see History, above) on Rech also has a conservative influence. A strong ethical sentiment of Geselligkeit is that participating in conflict can only be for self-defence, thus starting a conflict to gain power will generally be unsupported by the people of Rech. The Kanzler is always at least nominally a practicing member of Geselligkeit and any pretender to ruling must take it into consideration. This has been a stable form of government over time as it has produced many popularly supported Kanzlers, including the current one. The Kanzler appoints The Counsellor, who effectively runs the legislature as his or her own show. Both The Kanzler and The Counsellor must approve any new laws, and new laws may be initiated by either party. The Kanzler may impeach The Counsellor although

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not the other way around. The *Kanzler* is also the commander-in-chief of the military and runs the police force and the public service.

Impeachment results in a public trial. But as The Counsellor is always the titular head of *Geselligkeit*, impeachments are rare—the conservative population (even those who do not regularly attend devotion) can easily be roused against this offence on their sensibilities by the mass media.

There are three ways The Counsellor is removed from the post: death or disablement; the death of The *Kanzler* (the incoming *Kanzler* appoints the new Counsellor, but may decide to affirm the current Counsellor which generally happens); or impeach-

Social Standing on Rech

Initial: Social Standing as normally applied is different to local

social standing.

Subtract 5 from Social Standing for Rech Social Standing (RSOC)—this represents some recognition of important

individuals.

Improving: To add +2 to Rech Social Standing:

Difficult, Liaison, RSOC, 1 week

Referee: Time spent assumes Geselligkeit attendance weekly. This task fails at any absence, but may be tried again on a successful determination roll without increasing difficulty. Note that time spent is only one morning per week, but attendance must be steady and weekly for task to succeed - the character may use the rest of the week as normal. If there is a hazard, apply damage to

RSOC. Character also gains Survival-0.

Personal RSOC is very ingrained culturally. In all interpersonal **Reaction:** tasks, RSOC is always the primary characteristic used.

structure and the ability to operate in it.

Skill To improve Survival Skill:

Acquisition: Routine, INT, 2 weeks

Referee: Survival-0 is required. The 1 week time represents weekly attendance at *Geselligkeit*. A character may miss one attendance in a row, but the skill is not considered acquired until the task rolled number of weeks attendance have been completed. This task may be performed concurrently with the task above after Survival-0

Higher RSOC indicates more familiarity with Rech social

is obtained.

Geselligkeit Rech Chlorine Filter masks (Cr25, 1 litre, 0.5kg), and a set **Shop** of clothes in local styles (RSOC x Cr200) can be pur-

of clothes in local styles (RSOC x Cr200) can be purchased. This ties in closely with survival necessities on

Rech.

ment. It should be noted that a new *Kanzler* will balance appointing a new Counsellor with the ruptures that dismissing the previous one will cause. This is often a matter of very shrewd political judgement and the first test of leadership for a new *Kanzler*.

The judicial system is entirely a trial by jury system. All inhabitants of the world may be drafted for jury service with a local day's warning only (but involuntary drafting is almost unheard of-see Geselligkeit below). Jurors are generally free to reside wherever they like, but must report daily for any trial they have been drafted to. Failure to report for jury service is an indictable offence itself, leading to immediate trial—and is heard unsympathetically as failing to participate in civic life. Rech citizens will thus rarely fail to report for jury service. Trials are flexible affairs in relation to who governs them, but the rules of trial are rigid. Jury selection and trial procedure are governed by laws set by The Counsellor. The law is commonly known throughout the population through regular recitation at weekly Geselligkeit (see below). Jury selection is biased towards those who regularly attend devotion (see below).

Rech Law: Strict and Conservative

Rech: Law Leve	l-related I	Details	
Overall	10 (A)	Extreme	
Weapons	13 (D)	Extreme	All weapons prohibited, paramilitary law enforcement
Trade	8	High	
Criminal	8	High	Citizen's Arrest routine
Civil	10 (A)	Extreme	Unification of Civil and Criminal procedure
Freedom	11 (B)	Extreme	Travel permits required; guides mandatory for visitors

Law enforcement is carried out by police who are loyal to The *Kanzler*. They must take arrestees before a local Gatherer (a local *Geselligkeit* convenor) who organises smaller juries (up to half a dozen) for details such as bail, confinement and trial, and larger juries (up to 20) for actual trials, depending on the severity of the offence.

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Law is very strict on Rech—and locals being quite conservative have no hesitation in reporting goings-on to local police. In fact, citizen arrests are not rare—a perceived wrongdoer is taken to the local *Geselligkeit* hall for due process. Police are always quick to respond to citizens calling for help in these matters.

Open carry of weapons is completely prohibited, and travellers from off-world will find that government appointed guides are compulsory if they wish to travel outside the major cities of Alternhar and Honnigen. They will also need permission and papers showing this must be carried at all times. Guides come in many varieties. Some are wilderness guides permitted to carry weapons such as the hunting rifle for protection against Iugolo Carnitauros, while others are versed in the differences between Rech natives and off-worlders and guide travellers through local customs.

Geselligkeit: The Religion of Rech

Religion Profil	le: Geselligkeit
God View	Agnosticism: It is impossible to know whether or not there is a god.
Spiritual Aim	Ethical and moral standards are their own reward, regardless of the possibility of heavenly rewards or punishments
Devotion Required	Weekly
Organisation	Rigid Hierarchy with most decisions on a local level
Liturgical Formality	Services are conducted by rote in common languages
Missionary Fervour	Zealous among a limited number of sophont races
Number of Adherents	Millions

The IISS classified *Geselligkeit* as a religion, but it is really a form of public civic life. Weekly devotion includes recitation by rote of standard creeds. Attendees have often grown up attending weekly meetings: the creeds are very well known in the population, and there are many commonly understood allusions to them in daily speech. By way of

comparison, the phrase "the quick and the dead" on 20th Century Earth is an allusion to a Christian creed (the Nicene Creed) although it has lost its original meaning. Similarly the phrase on 20th Century Earth "Haste is of the Devil" is an allusion to the *Qur'an*.

Local congregations are organised informally and can meet in any place, but tend towards halls (small and large) constructed for the purpose of meeting. Generally the larger the city or town, the more formal the meeting place. This is because over time, libraries of the law tend to be stored in these buildings for use in services or for legal research as need arises.

The recitations each week can include matters other than ethics—especially environmental and agricultural science and survival matters. All of these matters overlap with ethics in Rech society. For example, safety procedures for being outdoors are dealt with in a rote recitation that is revised from time to time. This overlaps with ethics because interfering with another person's clothing or breathing apparatus is considered a personal crime. Total time for attendance each week is 3 hours—generally it can be considered to take all morning once a week.

The structure of *Geselligkeit* is derived from early gatherings to ensure exchange of knowledge for survival. This developed into preserving agriculture in a low tech hostile environment, and dealing with environmental conditions such as the chlorine in the atmosphere. Special areas of knowledge preserved in this way include the algal techniques that absorb chlorine from the air in filters and sustaining chlorine-fixing microbial cultures used in the open soil.

Adherents generally decide their own meeting times and places and informally appoint someone to lead the recitation. Children are brought along to learn the extended creed by heart as they grow up—the religion was at first entirely an oral tradition, planet-bound to Rech. Devotees are classified as

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"fervent missionaries" - but this really only reflects the conservative social expectation that Rech inhabitants should "attend Geselligkeit".

Off-worlders may attend but it is considered odd and will receive hostile stares in congregation for at least a few weeks of attendance. Nonhumans cannot attend and if they try they will be asked to leave, and if they refuse, they will be removed by police. After a few weeks of attendance, locals will start to accept a traveler as serious about participating in social life on Rech. Participating in Geselligkeit is considered a social norm and Rech inhabitants encourage each other to come.

The recitations were codified centuries ago. They were adapted over time to also extend basic ethics and survival into recitations of the law as enacted by The Counsellor (see Government, above). The Counsellor is the titular head of Geselligkeit and the process of enacting law is done by distributing it to Geselligkeit leaders (Gatherers—RSOC 10+) across Rech, who then introduce it to congregations in the form of a new reading for recitation. The final confirmation of legislation is, the recitation of the law by local Geselligkeit. The recitation books are effectively the law library in the custody of the local Gatherer. As enacting a law is only confirmed on recitation at Geselligkeit, passage of legislation is slow.

Craft ID: Ground Support Aircraft, TL5, Cr111,065

Hull: 28/70, Disp = 31.11, Loaded = 7 tonnes, Unloaded ("Clean") =

6.02 tonnes, Airframe = Simple, Armour = None

Power: 0.04MW (drawn from engines), Endurance = 6h 20m Loco: 4/10, Basic Propeller, Thrust = 2.02 tons, Cruise = 225kph,

Top = 300kph, Min = 150kph, Agility = 1, Range = 1440km

Commo: Radio = Distant (5km)

Sensors:

Off: Medium Machine Gun × 2, 2000 rds, Hardpoints (4 inboard,

4 outboard, 1 fuselage), Max external stores = 980kg

Def:

Control: Simple Controls, Simple Cockpit Crew = 1 (Pilot), Oxygen Tank and Mask Accom:

Other: Fuel = 960*l* hydrocarbon

Typical load-out 9 × 50kg bombs. Intended to support tanks and APCs

making quick ground for a lightning strike

Being known as "regular at Geselligkeit" can improve a person's social standing. Local Geselligkeit leaders invite regular attendees to lead recitations, which is a great honour in the community (RSOC 8+ required to be approached). Gatherers are selected by local congregations, but eligibility is strictly controlled by The Counsellor (although obviously in a population of almost 60,000,000 it is in reality the public service under The Counsellor who administer it day to day).

Attendees at Geselligkeit sign a roll to prove attendance. This is the primary form of census taking and data collection on Rech. It is from attendance at Geselligkeit that members of juries are primarily drawn. Any adult can be drafted for jury duty but volunteers for needed trials are called for at Geselligkeit and where there are more volunteers than needed, precedence is given to citizens who have attended Geselligkeit more. This generally leads to older citizens taking up jury duty more often. It is considered a mark of wisdom and respect to be chosen for jury service, and those who have served on juries have records kept and are generally recognised community leaders. It is from such people that Gatherers are generally drawn from the local community (subject to an appointment being confirmed by The Counsellor).

In summary, as well as propagating the law, providing a social structure and jury selection, Geselligkeit also helps sustain a generally conservative outlook. The population are open to change and advancement, but only incrementally and only through accepted social structures. Geselligkeit centres also form local law library and population record keeping centres, and report overall results to the central authority in the person of The Counsellor.

Rech: Technology

Rech has maintained a very even spread of technology across the world. The early work by scientists

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and settlers to establish microbial life as a foundation for settlement was continued, but other local technology generally deteriorated.

Rech: Technology Profile		
Area of Achievement		TL
Common	Low	6
	High	6
Quality of Life	Energy	6
	Computer/Robotics	6
	Communications	6
	Medical	6
	Environment	10 (A)
Transport	Land	7
	Water	7
	Air	5
	Space	5
Military	Personal	7
	Heavy	6
Novelty		12

The University of Glees has famously maintained laboratories and microbial life studies that have kept the technology alive for generations. This kind of innovation and maintenance of technology is usually at odds with a conservative attitude. But agricultural and environmental interests are major economic concerns on Rech and the studies of the university are supported and funded in large part by those interests as well as supported by government. Thus, there is agreement between the scientific community whose political expression is The Kanzler, and the land holding class whose political expression is The Counsellor. Through The Kanzler the University of Glees maintains a high profile patron who provides them with political protection.

The environmental tech-level of 10 has resulted from strong scientific institutions developing knowledge in the long-term. It has culminated in the achievement of completely sealing several large cities-every building in Alternhar has been sealed against the chlorine atmosphere with efficient filtering of the atmosphere and comprehensive air conditioning. The city has a series of miniarcologies completely under cover that provide very pleasant open spaces where environmental discipline can be relaxed. This has been a massive exercise in terraforming that has taken decades as the economy begins to expand thanks to trade under the Imperium.

The sealed city is still extending. Roads, passages and walkways have been comprehensively sealed as well, so it is possible to live entirely indoors away from the tainted atmosphere. Established agriculture hundreds of years ago allowed security of food supply and hence the ability for higher technological forms to be maintained, although not to an interstellar level for the most part.

The strong scientific and academic community maintain the advanced bacterial and knowledge crucial for dealing with the local environment. The environmental technology also extends to very advanced models for weather prediction. This has been crucial for the best conditions in which to plant crops that can be subject to extreme weather conditions in very short bursts of time, bearing in mind that in the space of 80 days (less than one Terran season), the complete cycle of seasons takes place. In the most habitable latitudes (hex rows 3 and 4) this is a variation from -5°C on the coldest winter nights to 41°C summer days.

Technology in areas such as weather prediction, placement of living soil cultures, human and animal habitat is at a high level relative to the technology generally in circulation. Crops, plants and animals had to be adapted through genetic engineering and shielded from the environment to adapt to local conditions. The advanced weather prediction also makes practical air transport possible in a stormy atmosphere. Military strategists could also make plans based on the weather-but the need has not yet arisen and military planning is not a high priority for The Kanzler.

Energy is still at tech level 6—the internal combustion engine is the available technology. But having no native life has meant that the planet also has no oil reserves, coal or hydrocarbons available for

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fuel. This has been solved by the use of biodiesel, wind farms, and hydro electric power. There is an enormous hydro-electric at Honnigen, where the Very Big Canyon River flows down from the Ahlberg Mountains. This has been supplemented by algae based solutions for mass fermentations to produce fuel alcohol. Hydrocarbon fuels are a major market here for merchants and fetch a good price as alcohol based fuels and biodiesel are expensive to produce—they require a large area of productive land, which is in short supply on Rech (although unproductive land is not).

The personal military technology of 7 applies to police in general as well as the military. This reflects a relatively sophisticated ability to investigate crime and bring violence to bear.

The mix of technology is typified by Rechian filter masks. They are made of leather with metal rivets and studs, yet contain advanced modules based on chlorine-fixing bacteria that make a filter system practical, even if on occasion sealed breathing systems must be donned.

Craft ID: Armoured Personnel Carrier, TL8, Cr56,714

Hull: 27/68, Disp = 3, Config = 4USL, Armour = 10B, Loaded =

26.82 tonnes, Unloaded = 23.27 tonnes

Power: 3/6, Improved Int. Comb. = 1.6MW, Duration = 21 hours **Loco:** 6/12, Wheels, Max Speed = 111kph, Off-road = 33kph

Commo: Radio = Continental

Sensors: Headlights = 4, Environment Sensor, Magnetic Sensor, Radi-

ation Sensor

Off: Heavy Machine Gun × 2, 1000 Rounds (500 each), Pen/Atten

= 6/3, Damage = 3, Max Range = VLong, Autofire Targets = 2, Danger Space = nil; Signature = Hi, Recoil = Medium, Diffi-

culty As = FCTL

Def: Smoke Discharger

Control: Panel = Enhanced Mechanical × 8, Environment = basic env,

basic ls

Accom: Crew = 3 (Driver, Gunner, Commander), Passengers = 6

Other: Fuel = 2200*l* hydrocarbon

The APC can deliver 6 personnel in a moderately armoured and sealed environment and provide support with two HMGs. Generally two APCs will deliver a squad and anchor each flank of the squad with automatic fire support. Rech military doctrine dictates that Armoured Infantry units have integral tank support for heavier fire. APCs are vulnerable to missiles and higher tech energy weapons.

Note on vehicle designs: As per published *Mega-Traveller* errata, damage points have been multiplied by ten in design evaluations, before rounding.

The Rech Economy

GDP per capita is around Cr4,800, or a total annual GDP of MCr283,680. This means that Rech society is overall quite well-to-do although as with all societies there is uneven distribution of wealth.

Broadly speaking, the scientific and academic elites are tied to The *Kanzler*, while the land-owning class is tied to The Counsellor.

Much of the poorer population is alienated from both classes, although social improvement can come from study and entering the academic world, or attending *Geselligkeit*.

The military budget available is about 1% of GDP. This represents the low priority given to the military and the lack of any real conflict in Rech's settled history.

Trade and Commerce

As an agricultural world, food, textiles, and other plant based products are the major exports. Rechalso has mineral wealth, but it has not yet been exploited. There is some manufacturing industry, but this is largely an import-replacement development rather than a burgeoning export market.

Academic information is also exported.

There is some trade in obscure anthropological surveys and studies of the population. The University of Glees' famous environmental research and development is also a resource.

The prize exports are smoked meats and leather. Rech sausage has a reputation for distinctive flavours, and is exported for use by the finest restaurants. There is even word that Duke Norris himself enjoys a Schosters Rechian sliced, fried and served with yoghurt and bread.

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The most famous sausage is the Stephanie Schoster. It is available in small quantities due to high demand and domination by larger merchant shipping (see Small Cargo on page 32).

Trade and Commerce chart

The Trade and Commerce chart is based on the *MegaTraveller* Trade and Commerce variant published first on CoTI. The nature of the cargo is determined by rolling D666 on the chart (three six-sided dice are rolled consecutively, the first being the hundreds, the second the tens and the third the units).

The base price of the cargo is listed with its description resource type and special handling required—see the *MegaTraveller Referee's Manual*: "Trade and Commerce" on p.46 for more details.

The variance to the *MegaTraveller Referee's Manu- al* in having variable prices accounts for the difference between speculating in gold and in dirt, and adds flavour to the game.

Note that if Rech ATVs (*see design, p.* 22) are rolled, the unit is actual vehicles not displacement tons. Each vehicle is 5 displacement tons to carry in a cargo hold.

The Military

Rech maintains a military for defence of the world and as the ultimate enforcement of law.

As a world where conflict is limited because of a unified popular government, the military is small as a percentage of economic output.

The relatively low technological level combined with the low priority for military spending means that the defence of Rech would not stand up to a determined invasion by an interstellar government. But the local military is sufficient to keep the peace including resisting minor invasions. A full force list is included at the end of this module.

There is a modest nautical force of 1 Light Cruiser and 6 Destroyers. Their mission is to keep the

peace in the waters surrounding Rech's settled continent. Relative to any force likely to be applied on Rech's waters, their firepower is overwhelming. In the event of an invasion, Rech's military would quickly give way to a higher-tech force (TL 9+) even if it were much smaller. Rech's military planners assume that local forces would supplement more capable Imperial or mercenary forces.

In more routine contact with interstellar life, the Rech government is concerned that they are able to repel raiding pirates and smaller mercenary units that may give trouble as well as keep the civilian population secure. Thus, within the constraints imposed by local technology, a small but well-equipped force has been formed.

However, this two-pronged mission gives rise to a military that has seen little real action.

This means that personnel are typically around 45% raw recruits, 35% regulars, 15% veterans and 5% elite quality. It is illegal to recruit to mercenary units here, and public attempts to use recruitment skill will attract attention.

In fact, the government of Rech could initially see little value in maintaining a local planetary army for many hundreds of years. The fourth frontier war, however, lead to Duke Norris of Regina negotiating

Craft ID:	Transport	Aircraft	TIE	Cr957 100
CIAIL ID:	Hansbort	All Clait.	LLU,	V.1007.170

Hull: 160/400, Disp = 178, Loaded = 40 tonnes, Airframe = Simple

(STOL), Armour = None

Power: 0.24MW (drawn from engine), Endurance = 4h 50m

Loco: 4/10 (×6), Basic Propellers = 6, Thrust = 12.12 tons, Cruise =

225kph, Top = 300kph, Min = 75kph, Agility = 0, Range =

1100km

Commo: Radio = Regional (500km)

Sensors: Headlights = 4, Environment Sensor

Off: None Def: None

Control: Simple Controls, Simple Cockpit, Crew Station

Accom: Crew = 2 (Pilot, Co-Pilot), Passengers = 160, Basic Env, Basic

LS

Other: Fuel = 4400*l* hydrocarbon, Cargo = 5.8 tons

The Rech transport aircraft is disigned to move a full rifle company minus its vehicles but with all other equipment and ordnance. It is designed for "frontier" usage with short take-off and landing.

Trade and Com	nerce Chart							
D666	Trade Good	Resource	Cor	Fla	Exp Rad	Pe	er	Base Cost
111 - 113	Plants – wood	Natural	11+	9+			11+	300
114 - 121	Plants – bales	Natural	11+	9+			10+	200
122 - 126	Plants – fibres	Natural	11+	6+			9+	400
131 - 133	Plants – herbs	Natural	11+	6+		12+	9+	500
134 - 146	Food Plants (living)	Natural	11+	11+				600
151 - 154	Animals (living)	Natural	11+					300
155 - 164	Livestock (living)	Natural	11+					700
165 - 211	Rare Plants (living)	Natural	11+	11+				800
212 - 214	Rare Animals (living)	Natural	11+					900
215 - 225	Grain	Processed		6+	4+		10+	300
226 - 233	Vegetables	Processed	11+	9+	12+		8+	1200
234 - 241	Fruit	Processed	11+	10+	12+		8+	1000
242 - 245	Meat	Processed	12+				5+	1500
246 - 253	Herbs	Processed	12+	9+	10+		10+	2000
254 - 261	Plant Compounds	Processed	10+	9+	10+		11+	3000
262 - 265	Animal Compounds	Processed	10+	9+	10+		11+	3000
266 - 313	Petrochemicals	Processed	10+	7+	8+			10000
314 - 324	Textiles	Processed		9+			11+	3000
325 - 332	Leather	Processed		8+			10+	4000
333 - 336	Polymers	Processed		9+				7000
341 - 344	Fertilizers	Processed	10+	9+	9+		9+	4000
345 - 352	Plants – lumber	Processed	12+	6+	12+		9+	1000
353 - 356	Plants – paper	Processed		5+			12+	1200
361 - 361	Pharmaceuticals	Manufactured	11+	10+			9+	100000
362 - 365	Preserved Foods	Manufactured		9+			9+	5000
366 - 412	Spices	Manufactured	11+				10+	6000
413 - 413	Gourmet Foods	Manufactured	11+				10+	8000
414 - 414	Flavored Water	Manufactured	10+				12+	1000
415 - 421	Alcoholic Beverages	Manufactured	11+	8+			9+	10000
422 - 422	Consumable Milks	Manufactured	10+				8+	5000
423 - 423	Consumable Nectars	Manufactured	10+				10+	5000
424 - 424	Consumable Syrups	Manufactured	11+				11+	5000
425 - 425	Consumable Teas	Manufactured		11+			12+	5000
426 - 426	Exotic Fluids	Manufactured		8+			9+	5000
431 - 433	Aromatics	Manufactured		10+	9+		11+	5000
434 - 436	Disposables	Manufactured		11+				2000
441 - 443	Clothing	Manufactured		12+				3000
444 - 446	Protective Gear	Manufactured		9+				50000
451 - 451	Weapons	Manufactured		9+	11+			30000
452 - 452	Metal Parts	Manufactured		11+				70000
453 - 453	Tools	Manufactured		11+				10000
454 - 454	Rech ATVs	Manufactured						55000
455 - 455	Appliances	Manufactured		10+				10000
456 - 462	Furniture	Manufactured		9+				10000
463 - 463	Building Supplies	Manufactured		11+				20000
464 - 512	Writings (paper)	Information		8+				1000
513 - 521	2D Still Pictures	Information						2000
522 - 523	Sculpture	Information						3000
524 - 525	Paintings	Information						3000
526 - 531	Exotic Artforms	Information						1Dx500
532 - 533	Audio Recordings	Information						1000
534 - 615	Raw Data/Records (paper)	Information						2000
616 - 616	New Natural Resources	Novelty						1500
621 - 623	New Processed Resources	Novelty						2000
624 - 624	New Manufactured Goods	Novelty						12000
625 - 625	New Information	Novelty						1000
626 - 641	Uniques	Novelty						4000
642 - 643	Artifacts	Novelty						7000
644 - 651	Antiques	Novelty						8000
652 - 663	Original Information	Novelty						5000
664 - 664	Fad Information	Novelty						2000
665 - 665	Fad Manufactured Goods	Novelty						5000
666 - 666	Prototype Manufactured Goods	Novelty						20000

(Continued from page 30)

directly with the local government to ensure a regular standing army.

This upped the government to spending 1% of GDP on armaments that could be manufactured locally, in return for which the Imperium helped improve small-arms technology locally. The Imperium provided technical advice on military structure and technology within local constraints, mainly as a support to any Imperial defence of the system, and able to be supplemented by mercenary forces if needed.

While not as valuable as high population worlds nearby such as Roup or Ruie, Rech is still a reasonably significant agricultural resource. The planet is a net food exporter and has academic facilities worth holding onto.

Many surrounding systems have much smaller populations and are marginally settled, whereas Rech has centuries of development if not the technological progress of other Imperial worlds.

The full military structure can be found at the end of this book. Further, there is a scenario outlining an action that might occur on Rech.

Character Generation

Homeworld characteristics for Rech are: Large World, Dense Atmosphere, Wet World, Moderate Population, Extreme Law, Pre-Stellar Technological Level.

Only humans are native to Rech. Characteristics are rolled as normal. Note, however, that Rech Social Standing is used in place of Social Standing. In general, the two figures are interchangeable for natives of Rech. If a Social Standing of more than 9 is rolled, this indicates that the character is eligible for the Gatherer career (*see p.33*). However, Social Standing off-world is considered to be 9 if Rech Social Standing is more than 9.

All characters with a homeworld of Rech gain Survival-0. On a 2D roll of Rech Social Standing or less, the character gains Survival-1.

Small Cargo

Cargo: Schoster's Smoked Rechian Sausage

Lots: 10 kg - 60 kgValue: Cr 20 / kg

Transport Price: Cr3 / kg (includes refrigeration costs)

Transport Cost: Cr1 / kg in transport packaging (to preserve food)

Market: Rare and famous Culinary item. Export not restricted. +3 DM on Actual Value Table if sale world is

·h

Availability: To find one Lot of Sausage on Rech:

Difficult, Carousing, RSOC, 3 days

Referee: this assumes a full-time commitment searching markets, following rumours. Any mishap damage to be applied to RSOC. Exceptional Success

provides a 5% discount.

Special Handling: Limited shelf life. -1 DM on Actual Value Table for

every 2 weeks from purchase date. Can be limited to

-1 DM if goods

refrigerated. Assume any ship has sufficient refrigeration for up to 20kg

in kitchen area. If ship has passengers, roll 9+ for sausage to be consumed 'by accident' during jour-

ney if this is used.

Players' Information

This spicy sausage is a famous Rechian export and is in high demand. The most famous restaurants on Regina have arranged direct shipping and consume almost all supplies. However, minor lots can generally be found with some effort, and can be directly sold on to smaller restaurants who cannot afford to compete for large shipments.

Referee's Information

The Referee can create adventure situations where the players come across small lots for direct purchase from producers, which will generally be at Cr15/kg, or in return for small favours. The sausage itself may make for a suitable gift or bribe on Regina or other Rich worlds where the delicacy is known.

Roll 1 die:

- 1-4: All is as it seems, the shipment poses no special problems.
- 5: A random crew member 'samples' the sausage, and ruins 1-2 Lots. If there are any Vargr aboard, they will be unable to resist the urge to consume all of the meat, including using violence to get it.
- 6: At the market world, it is intended as a gift for a local notable personage, but the sausages are a bad batch. The players have gained an enemy who presented the gift that was bad, and will want revenge for the 'bad sausage'.

Characters may enter any of the military services. Flyer, Sailor and Army Service means with the local Rech army.

Characters may not take any Gun Combat skills in laser or energy weapons. Grav Vehicle may not be taken, and Wheeled or Tracked Vehicle must be taken instead. Blade Combat must be taken as Dagger or Short Blade.

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Scouts, Navy and Marine service means Imperial service. In these cases, skills are not restricted by Rech as the homeworld.

Law Enforcer, Doctor, Diplomat, Bureaucrat, and Scientist careers are all local to Rech. Bureaucrats will tend to come from The Counsellor's bureaucracy. Scientists will come from one of the eminent academic establishments discussed here, and generally will have pro-*Kanzler* sympathies. These careers face the same skill restrictions as the local armed forces.

Rech inhabitants may not enter the Merchant, Pirate or Belter careers.

Gatherer

The Noble career is replaced with the Gatherer career. Characters who have rolled 10 or more for Social Standing may automatically enlist. Gatherers are a mix between local judge who reports to The Counsellor, pastor, community leader, and noble. They are esteemed on Rech, and their bearing has some acknowledgement off-world.

Benefits include the Rech Law Book. This is a (finely bound in the best Rech leather!) condensed version of the major, long established parts of Rech Law and also deals with Survival. After the second receipt of this benefit, Survival or Instruction skill may be taken instead of a third or subsequent copy.

Free Travel is a common benefit provided to ex-Gatherers. They may board passenger ships and airliners for free for travel across Rech for life.

The Life Tenancy is guaranteed accommodation for life in a serviced apartment in one of the major cities on Rech. These are effectively retirement homes offered to ex-Gatherers. Practically they mean free accommodation whenever a character is on Rech. The Life Tenancy does not pass into the character's estate when they die—the property remains owned by The Counsellor as an arm of the Rech government.

Gatherer					
Career Progression			Table of Ranks		
Enlistment	(Special)	1	Deacon		
Survival	3+	2	Presbyter		
Position	5+	3	Canon		
DM +2 if	EDU 9+	4	Dean		
Promotion	12+	5	Apocrisiari		
DM +1 if	INT 10+	6	Vice Counsellor		
Special Duty	6+				
Re-Enlist	4+				
Career Skill Tables					
Personal Develo	ppment	Service Skills			
1	Physical	1	Gun Combat		
2	+1 DEX	2	Hand Combat		
3	+1 END	3	Environment		
4	Mental	4	Vehicle*		
5	Vice	5	Vice		
6	Hand Combat	6	Survival		
		* must be taken a	s Wheeled Vehicle		
or Tracked Vehicle					
Advanced Education		Advanced Education			
		Only for characte			
1	Survival	1	Science		
2	Medic	2	Computer		
3	Admin	3	History		
4	Instruction	4	Liaison		
5	Steward	5	Jack-o-Trades		
6	Leader	6	Artisan		
Mustering Out					
Material Benefits			Cash		
1	Free Travel	1	1,000		
2	Ground Car	2	2,000		
3	Weapon	3	5,000		
4	Rech Law Book	4	10,0000		
5	Life Tenancy	5	20,000		
6	Rech ATV	6	20,000		
7	Home Estate	7	50,000		
Characters with rank 5 or 6 may add +1 to the Benefits roll. Maximum of 3 rolls					
on the Cash Table. Players with Gambling may add +1 on the Cash Table.					

A Rech ATV is the All Terrain Vehicle listed in this supplement (*see p. 22*). It is intended for taking *Geselligkeit* into the wilderness. Subsequent receipts of this benefit may be taken as Tracked Vehice or ATV skill.

The most coveted benefit is the Home Estate. This represents a substantial property of Rech land as an estate. This remains the character's property and can be used to produce farming income. The estate will produce (on top of any retirement in-

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(Continued from page 33)

come) a net profit of Cr500 × 1D per month (roll every four weeks). It is a very well furnished estate and also provides free lavish accommodation in the form of a mansion. It represents the character becoming one of the landed gentry themselves.

The Rogue profession may be pursued, but a Social Standing of 5 or less is required to enter this profession. Rech inhabitants may not enter the Barbarian career, nor the Hunter career which is replaced by the Rech Guide career.

Guide

Rech Guides are relatively small in number. They specialise in providing escorts for offworlders around Rech. They are a combination of tourist guide, government escort, and wilderness adventurer. They also specialise in helping land-holders deal with unwanted wild life such as the Iugolo Carnitorous.

A guide must choose between Wilderness and Urban environments. A wilderness guide specialises in knowing the Rech landscape very well and is adept at battling the elements. An urban guide is skilled at dealing with the friction that can result from Rech's conservative rural community and interstellar travellers. A Guide may change their Profession at the beginning of a new term—but must successfully roll Enlistment to change. If they fail this roll, they stay with the existing Profession.

Note that Wilderness Guides are generally from rural smaller communities themselves and tend to lean towards The Counsellor and by extension *Geselligkeit*. On the other hand, Urban Guides are keen to ensure off-world relationships proceed smoothly in the interest of technological development and are generally pro-*Kanzler*. The enlistment roll is the same for both and emphasises apparent physical prowess as Rechians are generally a conservative lot and will go for "strapping young men and women" for this kind of work.

Guide					
Career Progression		Table of Ranks			
Enlistment	9+	Rech Guides	do not have rank,		
DM +1 if	DEX 10+	, , ,	on. They are general-		
DM +2 if	STR 10+	ly loyal to The Kanzler, who wishes to			
Survival	6+ (Wilderness)	promote relations with the Imperium and off-worlders.			
	5+ (Urban)		iides must chose a		
DM +2 if	END9+(Wilderness)	profession when they	y start: Wilderness or		
ĺ	EDU7+(Urban)	Urban.			
Special Duty	6+	Wilderness G al +1. Urhan Guides	uides receive Surviv-		
Re-Enlist	5+	ut +1. Groun Gutues	receive Liuison 1		
Career Skill Tables					
Personal Development		Service Skills			
1	Physical	1	Gun Combat		
2	+1 DEX	2	Hand Combat		
3	+1 END	3	Environment		
4	Mental	4	Environment		
5	Gun Combat	5	Profession		
6	Vice	6	Vehicle**		
		* must take as Whe	eled Vehicle,		
		Tracked Vehicle , or Small Water Craft			
Advanced Education		Advanced Education			
		Only for character			
1	Mechanical	1	Medical		
2	Electronics	2	Computer		
3	Commo	3	Profession		
4	Profession	4	Economic		
5	Environment	5	Jack-o-Trades		
6	Instruction	6	Academic		
Material Benefit	Mustering Out				
		Cash	F 000		
1	Free Ship Travel	1	5,000		
3	Weapon	2	5,000		
4	Weapon Weapon	4	10,000 10,0000		
5	Rech Ground Car	5	20,000		
6	Rech ATV	6	30,000		
	ACCII / AT V	7	50,000		
		,	50,000		

Once a profession is chosen, Wilderness guides receive Survival skill. This can be in addition to the automatic Survival-1 that can be earned by any Rech inhabitant. Urban guides receive Liaison-1.

Whenever the cascade skill Profession is rolled, Wilderness Guides may choose from Survival, Hunting, Diving or Mountaineer. Urban guides may choose from Liaison, Carousing, Survival, Admin or Legal.

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Note there are two survival rolls. The lefthand roll is for Wilderness Guides, and the right-hand roll is for Urban.

In mustering out benefits, Free Ship Travel means that the character has free passage onboard ship to travel over Rech's oceans.

Any personal weapon up to TL7 may be taken on the first receipt of Weapon; subsequent Weapon rolls may be taken as additional weapons or skill in a weapon already received. Note that although Rech's high law level forbids carrying of weapons, Wilderness Guides are generally exempt from this when carrying out their duties in the wild. They are partially enforcers of the law in this situation. Former Wilderness Guides are known for keeping weapons under lock-and-key and act as unofficial sheriffs in many smaller towns and villages.

The Rech Ground Car and Rech ATV are receipt of one or other of those vehicles. The full evaluations are within this module. Further receipt of these vehicles must be taken as either Wheeled Vehicle or Tracked Vehicle skill respectively.

Amber Zone: Shipwreck in the River

This adventure is adapted from *Journal of the Travellers' Aid Society* Issue #2, "The Ship in the Lake" by Loren Wiseman.

In the course of seeking employment at the local capital, Regina, the players are contacted by a representative of Sternmetal Horizons, LIC.

It has long been suspected that Rech contains substantial mineral wealth for exploitation. The history of Rech, however, has seen a conservative landowning class rise to prominence on the back of agriculture, who do not wish a challenge to their way of life. However, Sternmetal sponsored a very quiet expedition to the Ahlberg Mountains. Satellite imaging suggested valuable minerals might be found there. The expedition used local transport and guides for the most part. The team apparently com-

pleted their survey and were making their way back via river transport to Alternhar. The steamer was wrecked in deep waters. The river runs through a rift caused by the two diverging continental plates that make the landmass of Berg. Sternmetal suspects the steamer was deliberately sunk as the expedition were using Guides sympathetic to the Counsellor.

The steamer has never been located. Local government is reluctant to speak about it. The *Kanzler* and his bureaucracy are wary of stirring up the conservative countryside represented by The Counsellor who are opposed to mineral exploitation in Rech. Sternmetal and The *Kanzler* wish the situation to be resolved very quietly.

Sternmetal Horizons LIC will pay MCr2 for the recovery of the lost report, or Cr100,000 for the location of the wreck of the steamer. They provide the following additional information: The Rech government wishes to expand its economy and seek the

Craft ID: Tank, TL6, Cr257,605

Hull: 27/68, Disp = 3, Config = 4USL, Armour = 26B, Loaded =

94.54 tonnes, Unloaded = 89.48 tonnes

Power: 3/6, Improved Int. Comb. = 1.6MW, Duration = 21h, Intake

Air Filter

Loco: 6/12, Tracks, Max Speed = 55kph, Off-road = 16kph

Commo: Radio = Continental

Sensors: Headlights = 4, Environment Sensor, Magnetic Sensor, Radi-

ation Sensor

Off: Heavy Machine Gun × 2 (Stabilisation Gears), 1000 Rounds

(500 each), Pen/Atten = 6/3, Damage = 3, Max Range =

VLong, Autofire Targets = 2, Danger Space = nil; Signature =

Hi, Recoil = Medium, Difficulty As = FCTL

14cm Hi-Velocity CPR Gun (Stabilisation Gears), RoF = 5, 100 Rounds, Max Range = Distant (24km), Signature = Medi-

um, Difficulty As = FCTL HE shells, Pen = 20, Damage = 18

KEAP shells, Pen = 35, Damage = 14

Def: Smoke Discharger

Control: Panel = Enhanced Mechanical × 39, Environment = basic env,

basic ls, airlock

Accom: Crew = 3 (Driver, Gunner, Commander)
Other: Fuel = 3000*l* hydrocarbon, Cargo = 1.6 tons

The tank is designed as a lower-tech 'can opener' and is one of the few vehicles on Rech tough enough to stand up to higher-tech forces. Even so, casualties among the five tank battalions would be high. The tank also supports advancing armoured infantry with HE load-outs and HMGs, while using KEAP ammunition for vehicle stopping power.

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exploit mineral wealth. However, there are locals who are bitterly opposed to this development. Sternmetal suspects they are behind the sinking of the steamer and have the sympathy of some sections of the government. The *Kanzler* is taking steps to conceal the internal conflict in order to make Rech attractive for both tourism and mineral exploitation. Over recent years, the need for Urban and Wilderness Guides to travel with off-worlders had been relaxed. In the light of these tensions, offworlder guides have been re-introduced for everywhere except the area immediately around Alternhar. Since this capital city is a series of mini-arcologies, passage in and out of the city is easy to control through set check points.

Locally available transport includes cars, ATVs, trucks (*see designs through this module*), river steamers, and animals similar to Terran mules. Guides are mandatory and cost Cr100 per day. Equipment may be hired at 1% of purchase price per week.

It will be impossible to bring in weapons due to Rech's very high law level. Sternmetal has arranged for a quantity of weapons to be smuggled on-planet (one VRF gauss gun and 2000 rounds of ammunition, plus one ACR with 300 rounds of ammunition and 10 HE RAM grenades per member of the group). A small radio direction finder keyed to an encrypted transmission is issued on acceptance of the mission to find the weapons cache. The party may retain the weapons after the mission is complete, but are responsible for getting them off-planet.

Sternmetal will describe the probable nature of the container of the report.

Referee's Information

The players will need two Guides; both are detailed here. Franz is necessary because they will be travelling into the relative wilderness in Rech. Andreas is compulsory for assisting the players deal with the local community. Andreas is also essential

Craft ID: Utility Transport Truck, TL6, Cr25,901

Hull: 45/113, Disp = 5, Config = 4USL, Armour = 1B, Loaded =

20.25 tonnes, Unloaded = 14.61 tonnes

Power: 3/6, Improved Int. Comb. = 1.6MW, Duration = 21h, Air In-

take Filter

Loco: 8/16, Wheels, Max Speed = 92kph, Off-road = 27kph

Commo: Radio = Continental

Sensors: Headlights = 4, Environment Sensor, Magnetic Sensor, Radi-

ation Sensor

Off: None

Def: Smoke Discharger

Control: Panel = Enhanced Mechanical × 4, Environment = basic env

Accom: Crew = 1 (Driver), Passengers = 9

Other: Fuel = 2200*l* hydrocarbon, Cargo = 26.46 tonnes

The utility transport truck is a variant on the troop transport. This truck is designed to carry a 14cm howitzer and 800 rounds of ammunition and the 9 Howitzer crew. The truck, gun and crew make one artillery squad.

for helping the players get along with Franz. Both have been broadly briefed to assist the players travelling in Rech, but neither know of the precise nature of their mission.

The wreck is located on the river flowing through The Very Big Canyon (*see world map, p. [XX]*). The players must be accompanied by a guide. The steamer was sunk in about 50 metres of water where the river substantially widens. The location of the wreck is about 600km upstream from Aremburg. The weapons stash is located about 200km northeast of Aremburg in the middle of the desert. It has a radio beacon with a 5km range. So long as players follow directions, they will be able to find the stash of weapons. They will need to convince the guides to make a detour, and plan for travelling off-river if they have decided to use the river for transport.

The players' first task will be to locate the stash of weapons. Depending on the transport organised by the players, they will need to deal with the guides who will react badly to advanced weaponry being produced. On the journey there is the possibility of animal encounters. The eventual production of weapons by the players will shock Franz to the point of leaving the party, and Andreas will need to be persuaded with a Negotiation task (see *MegaTraveller Referee's Manual* p. 45) of Difficult.

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Bribery is also possible, but Andreas will not be open to cash (*but see character details here*). He will also need assurances that the players are not out to deliberately harm the Rech community.

From the point where Franz abandons the party, he will guide Rech army elements back to the players in 1D+3 weeks. The referee should adjust the size of the returning attackers with the size of the party. An all-out attack on them is out of the question as The *Kanzler* would not allow off-worlders to be attacked, but on the other hand an arrest is not out of the question either. The army element will not call for backup, but Franz will get away from any attack (he is a hunter, not a soldier after all) and guide back another element in 1D weeks, and so on *ad infinitum*. He is calling on conservative elements who lean towards the Counsellor, but there are not many of these in the army, and hence there will not be an all-out attack.

After arriving at the reported location of the wreck, one of the following tasks must succeed:

To locate the steamer wreck manually: Formidable, Diving, INT, 1 day (hazardous) To locate the steamer with sensors: Routine, Sensor Ops, INT, 1 day

ANDREAS VOGLER (URBAN GUIDE)

Andreas Vogler 669685 Age 30 Cr40,000

3 Terms Rech Guide (Urban)

Survival-1 Wheeled Vehicle-1 Liaison-2 Mechanical-1 Commo-3 Carousing-1 Computer-1 Revolver-1

Revolver (see page [xx]), Free Ship Travel

Andreas grew up in Aremburg on the Very Big Canyon River, and always had an interest in amateur radio and broadcasting. His contact and familiarity with technology led him towards being an Urban Guide after school. He is friendly, but defers to Franz as the older, tougher man. He remains calm in awkward situations, and is well versed in the common ways that off-worlders trip up on Rech. His sympathies are broadly to The *Kanzler*, but will not want to get mixed up in anything illegal. His one weakness is technology, and would be open to higher-tech non-weapon equipment as a bribe.

FRANZ WEXLER (WILDERNESS GUIDE)

Franz Wexler 9BA878 Age 34 Cr20,000

4 terms Rech Gude (Wilderness)

Survival-2 Hunting-3 Electronics-1 Recon-1 Small Blade-1 Rifleman-2 Animal Handling-1

Hunting Rifle (see page [xx]), Free Ship Travel

Franz grew up in a rural community and always loved the outdoors. He was brought up with regular Geselligkeit attendance and is distrustful of off-worlders. He specialises in hunting the Iugolo Carnitorus, which he sees as a major threat to Rech villages, farms and livelihoods. The story of their introduction is infamous and he will rail against city-scientists if given half a chance. He gets along very well with rural Rech communities and is very sympathetic to The Counsellor. When travelling, he will always dutifully seek out the local Gatherer and introduce any companions he has. This is an outwardly friendly gesture and will always ease contact with local communities. But it is also a surveillence method: it results in all people he is with being known to authorities. He dislikes keeping a "low profile" in relation to Rech people, and will regard anyone who wishes to do so with incredulity and then suspicion.

Referee: Using a combination of diving equipment and sonar, metal detection or other relevant equipment, roll the second task, but use the best Sensor Ops and Diving skill, and either skill will prevent a penalty for no-skill applying. The task becomes hazardous, but only characters actually doing any diving are affected.

Once the wreck is located, the report may be recovered on success of the following task:

To recover the report from the wreck:

Difficult, Diving, INT/DEX, 1 day (hazardous)

Referee: Raise difficulty to Impossible if there is no diving equipment available.

The referee may devise a more detailed approach using a sunken deck-plan as appropriate, if desired.

If the party returns to Alternhar with the arms they will be arrested unless they have taken measures to conceal them. Some means of explaining the absence of Andreas (if he has been killed) will have to be devised before the Rech government will permit the players to leave.

Rech Military Organization

Note: all soldiers are equipped with Cloth Armour, a Dagger, and a Respirator Mask and a Backpack. Officers and NCOs are always additionally equipped with an 11.5mm revolver and 6 magazines of ammunition $(2 \times 1000 \text{ kg})$ x HE, $2 \times 1000 \text{ kg}$ Flechette) plus $6 \times 1000 \text{ kg}$ hand grenades.

	Somm revolver and 6 magazines of ammunition (2 x si		•	
	Ground Forces		Close	Orbit and Aerospace Control
Unit	Composition	Unit		Composition
Rifle Squad	10 soldiers each with an Assault rifle, 5	Flight		4 Attack Aircraft or 4 Fighter Aircraft (see
	magazines of ammunition and 6 hand gre-	Ü		designs)
	nades (3 x HE, 3 x smoke)	Squadron	ı	3 Flights
Weapon Squad	5 teams of two. Three teams crewing Medi-	-	r Battalior	
	um Machine Guns, each with five belts of	_		of Attack Aircraft and 3 Wings of Fighter
	ammunition. Two teams crewing Light As-		resent on	
	sault Guns each with 6 magazines.	_		50 aircraft (see design) each capable of car-
Howitzer	One 10cm Howitzer, 800 rounds of ammu-			rying 160 passengers and 7 tons cargo/
	nition, a utility transport truck (see design),			equipment. These are used for transporting
	and ten soldiers (a truck driver plus crew			personnel as required, and are capable of
	for the Howitzer)			lifting a whole company without their vehi-
Command Team	Two teams of three. The Commanding			cles.
	Officer equipped with SMG plus 5 maga-	Security I	Battalions	2 Rifle Battalions are assigned to protect the
	zines SMG ammunition, a radio man	security 1	Juliunons	Rech Airbases
	equipped with TL6 Radio (V Distant - 50k)	Air Bases		In addition to the starport facilities that
	and a revolver with 6 magazines of ammu-	THI DUSCS		have military vehicle uses, there are two air
	nition, and a ground car (see design) with a			bases dedicated only to Rech COACC forc-
	driver. The second team is the Senior NCO			es. They are protected by 15 Heavy AAA, 30
	with radio man and driver / ground car.			Medium AAA and 110 Light AAA each.
Rifle Platoon	Command Team, 3 Rifle Squads, 1 Weapon			Nautical Force Command
Time Timoon	Squad, and 2 Transport Trucks.	Unit	1	Composition
Rifle Company	Command Team and 3 Rifle Platoons		.i	-
Artillery Battery	Command Team, 10 Howitzers, 1 Rifle	Light Cru	iisei	There is one Light Cruiser (see Wet Navy
minery battery	Squad, 1 Transport Truck.	Destruction		Challenge Magazine article series)
Infantry Rattalion	Command Team, 3 Rifle Companies, 1 Ar-	Destroye		Six Destroyers make up the rest of the Rech
miantry Dattanon	tillery Battery			Nautical forces. There is little cause to ven-
There are 82 Infant	try Battalions. Note that all infantry battal-	C	D . ((. 1°	ture far by sea in Rech.
ions are motorised	•	Security i	baπamons	2 Rifle Battalions are assigned to protect the Rech Nautical Bases
Armour Platoon	5 Tanks, 1 Transport Truck (tank command-	Na	D	
Alimoul I latoon	ers include one officer and one senior NCO)	Nautical 1	bases	There are two militarised ports, protected
Armoured Infantry				by heavy guns in addition to the rifle battal-
Aimoured imanity	ground cars), 3 Rifle Squads, 1 Support			ions.
	Squad, 8 APCs			
Armoured Compa	•	Craft ID:	Ground C	Car, TL6, Cr12,091
Aimoured Compan	APC, 1 Armour Platoon, 3 Armoured Infan-	Hull:	9/23, Disp	o = 1, Config = 4USL, Armour = 1B, Loaded = 5.65
			tonnes, U	Inloaded = 4.77 tonnes
Aumoured Dausti-	try Platoons	Power:	1/2, Impro	oved Int. Comb. = 0.4MW, Duration = 9h, Air Intake
Armoured Battalio	. 9		Filter	
Thomas are 20 A	APC, 3 Armoured Companies	Loco:		els, Max Speed = 134kph, Off-road = 40kph
	ured Battalions. Note that Armoured Com-	Commo:	Radio = D	
panies integrate a	tank platoon for heavy support up close,	Sensors:	Headligh	ts = 2

	try Platoons	Power:	1/2, Improved Int. Comb. = 0.4MW, Duration = 9h, Air Intake					
Armoured Battalio	n Command Team (no ground cars), 1	1 ower.	Filter					
	APC, 3 Armoured Companies	Loco:	2/4, Wheels, Max Speed = 134kph, Off-road = 40kph					
There are 20 Armor	ured Battalions. Note that Armoured Com-	Commo:	Radio = Distant					
panies integrate a t	ank platoon for heavy support up close,	Sensors:	Headlights = 2					
instead of artillery	support as for Infantry Battalions.	Off:	None					
Tank Company	1 Command Team in 2 Tanks, 5 Armour	Def:	None					
. ,	Platoons	Control:	Panel = Enhanced Mechanical × 2, Environment -= basic env,					
Tank Battalion	Command Team (no ground cars), 1 APC, 3		basic ls					
	Tank Companies	Accom:	Crew = 1 (Driver), Passengers = 2					
	1	Other:	Fuel = 230 <i>l</i> hydrocarbon, Cargo = 200kg					
There are 10 Tank	Battalions, the ultimate strike force on the	The grour	nd car is used for civilian and military transport purposes.					
ground on Rech.								

(Continued from page 37)

It is impractical to sell the weapons on-world, although they may be cached at some place, and the radio transmitter left with the cache as before for later retrieval. Any attempt to sell the weapons will be immediately reported to a local Gatherer who will assemble sheriffs to arrest the players.

The time on Rech is of rising tensions between The *Kanzler* and The Counsellor. The *Kanzler* wishes to diversify the Rech economy including exploitation of mineral wealth and possibly tourism. The Counsellor is a conservative influence and wants the agricultural land-holding class to retain its preeminent position—even at the price of not expanding the Rech economy. The skills and equipment needed to retrieve the report from the steamer wreck exist locally. But Sternmetal feels they cannot trust Rech inhabitants with this information because of the political situation.

						An	ima	al Encou	nters	and Eve	nts
Riv	er Alternhar a	and The	Very :	Big Canyon					Ter	raformed Zo	ne -
_	Encounter	Mass		Weapon	Dmg	Armor		Action	2D	Encounter	M
2	2 Carrion Eaters	200kg	6/7	Thrasher	3	None	0	A7 F7 S3	2	1 Flying Hijacker	1k
3	thick mud. C			storm reduces visib s slowed to one qu	-		_		3	Rainstorm:	Grou
4	hazardous. 2 Reducers	100kg	5/6	Claws	2	None	0	A4 F3 S2	4	3 Flying Intimidators	3k
1 5	1 Hunter	12kg	6/2	Hooves	2	None	0	A1 F6 S1	5	3 Eaters	50
6	1 Flying Grazer	100kg	5/5	Thrasher	2	None	0	F1 A4 S2	6	1 Flying Grazer	3k
7	Giant Horn- back Turtle	200kg	9/4	Horns	3	cbt +4	6	F0 A4 S2	7	1 Flying Intermittent	1k
8	Giant Horn- back Turtle	200kg	9/4	Horns	3	cbt +4	6	F0 A4 S2	8	1 Grazer Iugolo	10 16
9	1 Chaser	200kg	3/7	as Blade	3	Jack	(1)	Am F8 S3		Carnitauros	
10	Intense Chlo surface anklo		sts: an	eerie green-yellov	w mist	accumu	lates	on the		Chlorine M 4 Flying	ists: 1k
11	1 Flying Chaser	1kg	1/0	as Pike	1	Jack	(1)	Am F4 S2	12	Chasers 1 Flying	1k
12	1 Pouncer	200kg	11/4	Claws & Teeth	3	Jack	(1)	As Fs S1		Chaser	
Ter	raformed Zon	ie - Fores	st						Cł	ılorine Mist	s ar
2D	Encounter	Mass	Hits	Weapon	Dmg	g Armor		Action		hours (Inte	
2	1 Carrion Eater	1kg	1/0	Claws	1	Jack	(1)	A9 F7 S1	ate	ely don sea ffer Atmosp	led
3				torm reduces visib s slowed to one qu	-	urns the	grou	nd into		To don bre	eath
4	2 Intimida- tors	6kg	1/0	Claws	1	None	0	A4 F6 S2		Referee: 1	Mis
5	1 Flying Gatherer	1kg	1/0	Claws	1	Jack	(1)	A5 F3 S2		instorm: A	suc
6	3 Filters	1kg	1/0	Claws & Teeth	1	Jack	(1)	F8 Ap S0		y). Ground	
7	1 Inter- mittent	3kg	1/1	Horns & Hooves	1	None	0	F7 A5 S1		quires succe	ss a
8	1 Inter- mittent	25kg	2/3	Horns & Hooves	2	None	0	F7 A8 S1		To naviga Difficult,	Wa
9	2 Killers	1kg	1/0	Teeth+1	1	Jack	(1)	A6 F4 S2		her terrain:	
10	Chlorine Mi	sts: an ee	erie gr	een-yellow mist g	athers	in hollov	ws ar	nd holes	1.1	pes, roll 9+ i	
11	Vehicle Trac	ks: track	s of a	vehicle cross the p	arty's	path. If t	he p	arty fol-	If	is represent hexes furthe imal are trea	er a
12	1 Trapper	1kg	1/0	Claws+1 & Teeth+1	1	Jack	-1	As F5 S0			

Terraformed Zone - Plains / Prairie													
2D	Encounter	Mass	Hits	Weapon	Dmg	Armor		Action					
2	1 Flying Hijacker	1kg	1/0	Thrasher	1	None	0	F8 A8 S1					
3	Rainstorm: A	sudden	rainst	torm reduces visil	oility t	urns the	grou	nd into					
	thick mud. G	round tr	avel is	slowed to one qu	ıarter.								
4	3 Flying Intimidators	3kg	1/1	Hooves	1	None	0	A7 F4 S1					
5	3 Eaters	50kg	5/6	Claws	2	None	0	A1 F5 S1					
6	1 Flying Grazer	3kg	1/1	Horns	1	None	0	F4 A7 S2					
7	1 Flying Intermittent	1kg	1/0	Thrasher	1	None	0	F8 A6 S1					
8	1 Grazer	100kg	6/5	Horns & Teeth	2	None	0	F0 A6 S2					
9	Iugolo Carnitauros	1600kg	13/8	Claws & Teeth	7	None	0	Am F4 S2					
10	Chlorine Mis	sts: an ee	rie gre	een-yellow mist g	athers	in hollov	vs ar	nd holes					
11	4 Flying Chasers	1kg	1/0	Claws	1	Jack	(1)	Am F9 S2					
12	1 Flying Chaser	1kg	1/0	Claws	1	None	0	Am F8 S2					

Chlorine Mists and **Intense Chlorine Mists**: Visibility limited to 50m for 1D hours (Intense limits to 20m for 2D hours). Characters must immediately don sealed breathing (filter masks would be overwhelmed) or suffer Atmosphere Exposure.

To don breathing equipment:

Routine, Survival, Dex, 2 seconds (hazardous, unskilled OK)

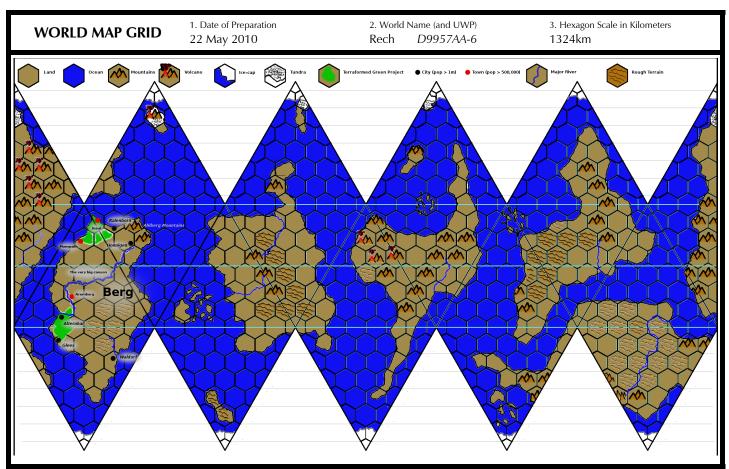
Referee: Mishaps indicate injury due to failure to don equipment correctly or in time.

Rainstorm: A sudden rainstorm (lasting 1D × 10 minutes) reduces visibility to 50m and turns the ground into thick mud (for 1D km of journey). Ground travel is slowed to one quarter. Travelling 250m by boat requires success at the following task:

To navigate 250m of river by boat in a rainstorm:

Difficult, Water Craft, Dexterity, 20 seconds (hazardous)

Other terrain: Most of Rech is arid. In hexes adjacent to these terrain types, roll 9+ if an animal (not event) is rolled for the encounter to occur. This represents some animals venturing beyond the terraformed project. If hexes further away, use Plains/Prairie chart, but results indicating an animal are treated as 'no encounter'.



IS FORM 21 World Map Grid (Large)

Rech Temperatures by Season and Hex Row

Row 1 is next to the equator, Row 11 is the pole

Base Temperature	Latitude Modifier	Base for Latitude	Axial Tilt Effects	Summer Base	Winter Base	Summer Day	Summer Night	Winter Day	Winter Night	Spring/ Autumn Day	Spring/ Autumn Night
15	21	36	0	36	36	51	29	51	29	51	29
15	14	29	0	29	29	44	22	44	22	44	22
15	7	22	0.25	25.9	15.5	40.9	18.9	30.5	8.5	37	15
15	0	15	0.5	22.8	2	37.8	15.8	17	-5	30	8
15	-7	8	0.75	19.7	-11.5	34.7	12.7	3.5	-18.5	23	1
15	-14	1	1	16.6	-25	31.6	9.6	-10	-32	16	-6
15	-21	-6	1	9.6	-32	24.6	2.6	-17	-39	9	-13
15	-28	-13	1	2.6	-39	17.6	-4.4	-24	-46	2	-20
15	-35	-20	1	-4.4	-46	10.6	-11.4	-31	-53	-5	-27
15	-42	-27	1	-11.4	-53	3.6	-18.4	-38	-60	-12	-34
15	-49	-34	1	-18.4	-60	-3.4	-25.4	-45	-67	-19	-41
	15 15 15 15 15 15 15 15 15 15 15 15	perature Modifier 15 21 15 14 15 7 15 0 15 -7 15 -14 15 -21 15 -28 15 -35 15 -42	perature Modifier Latitude 15 21 36 15 14 29 15 7 22 15 0 15 15 -7 8 15 -14 1 15 -21 -6 15 -28 -13 15 -35 -20 15 -42 -27	perature Modifier Latitude Effects 15 21 36 0 15 14 29 0 15 7 22 0.25 15 0 15 0.5 15 -7 8 0.75 15 -14 1 1 15 -21 -6 1 15 -28 -13 1 15 -35 -20 1 15 -42 -27 1	perature Modifier Latitude Effects Base 15 21 36 0 36 15 14 29 0 29 15 7 22 0.25 25.9 15 0 15 0.5 22.8 15 -7 8 0.75 19.7 15 -14 1 1 16.6 15 -21 -6 1 9.6 15 -28 -13 1 2.6 15 -35 -20 1 -4.4 15 -42 -27 1 -11.4	perature Modifier Latitude Effects Base Base 15 21 36 0 36 36 15 14 29 0 29 29 15 7 22 0.25 25.9 15.5 15 0 15 0.5 22.8 2 15 -7 8 0.75 19.7 -11.5 15 -14 1 1 16.6 -25 15 -21 -6 1 9.6 -32 15 -28 -13 1 2.6 -39 15 -35 -20 1 -4.4 -46 15 -42 -27 1 -11.4 -53	perature Modifier Latitude Effects Base Base Day 15 21 36 0 36 51 15 14 29 0 29 29 44 15 7 22 0.25 25.9 15.5 40.9 15 0 15 0.5 22.8 2 37.8 15 -7 8 0.75 19.7 -11.5 34.7 15 -14 1 1 16.6 -25 31.6 15 -21 -6 1 9.6 -32 24.6 15 -28 -13 1 2.6 -39 17.6 15 -35 -20 1 -4.4 -46 10.6 15 -42 2.7 1 -11.4 -53 3.6	perature Modifier Latitude Effects Base Base Day Night 15 21 36 0 36 36 51 29 15 14 29 0 29 29 44 22 15 7 22 0.25 25.9 15.5 40.9 18.9 15 0 15 0.5 22.8 2 37.8 15.8 15 -7 8 0.75 19.7 -11.5 34.7 12.7 15 -14 1 1 16.6 -25 31.6 9.6 15 -21 -6 1 9.6 -32 24.6 2.6 15 -28 -13 1 2.6 -39 17.6 -4.4 15 -35 -20 1 -4.4 -46 10.6 -11.4 15 -42 -27 1 -11.4 -53 3.6 -18.4 <td>perature Modifier Latitude Effects Base Base Day Night Winter Day 15 21 36 0 36 36 51 29 51 15 14 29 0 29 29 44 22 44 15 7 22 0.25 25.9 15.5 40.9 18.9 30.5 15 0 15 0.5 22.8 2 37.8 15.8 17 15 -7 8 0.75 19.7 -11.5 34.7 12.7 3.5 15 -14 1 1 16.6 -25 31.6 9.6 -10 15 -21 -6 1 9.6 -32 24.6 2.6 -17 15 -28 -13 1 2.6 -39 17.6 -4.4 -24 15 -35 -20 1 -4.4 -46 10.6 -1</td> <td>perature Modifier Latitude Effects Base Base Day Night Winter Day Night 15 21 36 0 36 36 51 29 51 29 15 14 29 0 29 29 44 22 44 22 15 7 22 0.25 25.9 15.5 40.9 18.9 30.5 8.5 15 0 15 0.5 22.8 2 37.8 15.8 17 -5 15 -7 8 0.75 19.7 -11.5 34.7 12.7 3.5 -18.5 15 -14 1 1 16.6 -25 31.6 9.6 -10 -32 15 -21 -6 1 9.6 -32 24.6 2.6 -17 -39 15 -35 -20 1 -4.4 -46 10.6 -11.4 -31</td> <td>Perature Modifier Latitude Base Effects Base Winter Base Summer Night Winter Day Night Winter Day Night Autumn Day 15 21 36 0 36 36 51 29 51 29 51 15 14 29 0 29 29 44 22 44 22 44 15 7 22 0.25 25.9 15.5 40.9 18.9 30.5 8.5 37 15 0 15 0.5 22.8 2 37.8 15.8 17 -5 30 15 -7 8 0.75 19.7 -11.5 34.7 12.7 3.5 -18.5 23 15 -14 1 16.6 -25 31.6 9.6 -10 -32 16 15 -21 -6 1 9.6 -32 24.6 2.6 -17 -39 9 15 -28</td>	perature Modifier Latitude Effects Base Base Day Night Winter Day 15 21 36 0 36 36 51 29 51 15 14 29 0 29 29 44 22 44 15 7 22 0.25 25.9 15.5 40.9 18.9 30.5 15 0 15 0.5 22.8 2 37.8 15.8 17 15 -7 8 0.75 19.7 -11.5 34.7 12.7 3.5 15 -14 1 1 16.6 -25 31.6 9.6 -10 15 -21 -6 1 9.6 -32 24.6 2.6 -17 15 -28 -13 1 2.6 -39 17.6 -4.4 -24 15 -35 -20 1 -4.4 -46 10.6 -1	perature Modifier Latitude Effects Base Base Day Night Winter Day Night 15 21 36 0 36 36 51 29 51 29 15 14 29 0 29 29 44 22 44 22 15 7 22 0.25 25.9 15.5 40.9 18.9 30.5 8.5 15 0 15 0.5 22.8 2 37.8 15.8 17 -5 15 -7 8 0.75 19.7 -11.5 34.7 12.7 3.5 -18.5 15 -14 1 1 16.6 -25 31.6 9.6 -10 -32 15 -21 -6 1 9.6 -32 24.6 2.6 -17 -39 15 -35 -20 1 -4.4 -46 10.6 -11.4 -31	Perature Modifier Latitude Base Effects Base Winter Base Summer Night Winter Day Night Winter Day Night Autumn Day 15 21 36 0 36 36 51 29 51 29 51 15 14 29 0 29 29 44 22 44 22 44 15 7 22 0.25 25.9 15.5 40.9 18.9 30.5 8.5 37 15 0 15 0.5 22.8 2 37.8 15.8 17 -5 30 15 -7 8 0.75 19.7 -11.5 34.7 12.7 3.5 -18.5 23 15 -14 1 16.6 -25 31.6 9.6 -10 -32 16 15 -21 -6 1 9.6 -32 24.6 2.6 -17 -39 9 15 -28

Each season (summer, autumn, winter and spring) is approximately 21 days in length, the local year being 85 standard days.

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IS FORM 23 Detailed World Data

(Continued from page 39)

Local Rech Personal Weapons										
Description	Ammo	Rds	Pen/Atten	Dmg	Max Range	Autofire Targets	Danger Space	Signature	Recoil	Difficulty As
7mm x 37mm Light Assault Rifle	Slug	30	3/2	3	Long	2	-	Med	Med/R	Rifle
11.5mm x 23mm Revolver	Slug	6	3/1	2	Med	-	-	Med	Med/R	Handgun
	HE	6	1/2	3	Med	-	-	Med	Med/R	Handgun
	Tranq	6	1/2	-	Med	-	-	Med	Med/R	Handgun
	Flech.	6	2/1	3	Med	-	-	Med	Med/R	Handgun
20mm x 40mm Assault Gun	Slug	5	6/4	9	V Long	-	-	Hi	Hi	TL7 FC
	HE	5	1/4	11	V Long	-	1.5	Hi	Hi	TL7 FC
	Flech.	5	3/4	12	V Long	-	1.5	Hi	Hi	TL7 FC
14mm x 37mm Hunting Rifle	Flech.	3	2/3	15	V Long	-	-	Med	Med	Rifle

Ammunition							
Description	TL	Length	Volume	Unloaded Weight	Price	Ammo Weight	Ammo Price
7mm x 37mm Light Assault Rifle	7	0.9	3.5	3.7	715	1	16
11.5mm x 23mm Revolver Slug	7	0.27	1.4	1.4	174	0.3	5
HE	7	-	-	-	-	-	9
Tranq	7	-	-	-	-	-	9
Flech.	7	-	-	-	-	-	15
20mm x 40mm Assault Gun Slug	7	1.5	6	32.7	4660	2.6	77
НЕ	7	-	-	-	-	-	140
Flech.	7	-	-	-	-	-	328
14mm x 37mm Hunting Rifle Flech.	7	1.2	5	11	2410	0.7	35

Bauler

This minor world in the Rech system is mainly a worthless ball of ice, and thus will not be treated in as much detail as Rech itself.

Planetary Characteristics

Bauler is a typical cold small ice-body in an outer orbit. Temperatures never get above -43, and nights are regularly cold enough to freeze oxygen and nitrogen.

The surface gravity is only 0.02G, and the planet itself is only 644km across—the total diameter is less than one map hex of Rech itself. There is no atmosphere, and only a few scattered lakes.

This unremittingly hostile cold world is the site of Rech's interplanetary prison colony, the only life on Bauler. It is serviced irregularly by chartered merchant ships.

The People of Bauler

The prison of around 40,000 inmates and staff is housed in air-tight buildings heavily insulated against the cold. As Bauler has no atmosphere there is nothing to conduct the heat away, but insulation is necessary against heat radiating into space.

The basic environmental technology reflects the triple-layer walls used to build the prison. The outside two layers are made of thick bricks of local ice quarried from the planet. The inside walls are imported rough-hewn rock. Between the middle and inside layer is an air pocket to help trap heat inside.

Even with this insulation, the prison is harshly cold. Death rates from exposure are high. Prisoners are put to work in manufacturing consumables such as furniture or on the arduous tasks of maintaining the prison itself as a matter of survival.

(Continued on page 44)

WORLD DET	AIL SHEE	1. Date of 215-11	f Preparation 04		2. World UWP Bauler - Rech	Syste	em - 2112 Lant	h / Spinward N	Marche	s GS0056A-5
SIZE RELATED	3. Diameter 644km	4. Density 0.3			Primary Mass (star)		, , , , ,	9. Orbital Period (p 132.14 days	lanet)	
10. Rotation Period 18 hours 13 minutes	11. Axial Tilt 25 degrees	12. Or 0.02			ss 14. Asteroid Bel		15. Primary Mass (N/A		Nbr (Sat.)	17. Orbital Period (Sat.) N/A
ATMOSPHERE R	ELATED	18. Atmosphe None	re Composition		19. Surface Pressu 0.00	re 20. St 0.45		21. Orbit Factor 591.385	22. Energ	gy Absorption
23. Greenhouse Effect 1.00	24. Base Temperatu 213 K / -60 C	ire	25. Orbital Ecc. M 0.75 C		atitude Temp Effect	s	27. Axial Tilt Effe 0.00=2- 0.2	ects 25=3 0.50=4	0.75=	5 1.00=6+
28. Daytime Plus +6	29. Nighttime Minus -182	30. Native Life ☐ Yes ☑			ric Terraforming? No original:		2. Greenhouse Effect I Yes ☑ No ne			edo Terraforming? s ☑ No new:
34. Atmosphere/Temperatu Summer plus = 15, V	re/Terraforming note Vinter minus = -	s: 25, Rotation	-Luminosity Fa	ctor = 0.71						
HYDROSPHERE		35. Hydrograp			36. Hydrosphe Solid ice	re compo	osition			37. Nbr Tectonic Plates
38. Hydrosphere Terraformi ☐ Yes ☑ No origina		errain Terraformi es ☑ No	ng?	40. N 1	lbr major continents	41. NI 0	br minor continents	42. Nbr major is 0	lands	43. Nbr Archipelagoes 0
44. Notable Volcanoes On major continents:	5							45. Weather Co ☐ Yes ☑ N		
46. Natural Resources None					47. Processed Re None	sources		•		
48. Manufactured Goods Durables, consumab	les				49. Information Documents					
POPULATION RE	LATED			51. Local Custo See Custon	ms ns on Bauler al	oove.				
52. Primary cities (list name Bauler, 39,400, G	e, population, starpor	t / spaceport)	•							
55. Social Outlook - Progressiveness Attitude Action Radical Enterprising Expa Progressive Advancing Unag Conservative Indifferent Reactionary Stagnant 58. Representative Executive 59. World Government Description The Prison Council of Bauler are the effective legislature, and the executive are the				istic	Action Militant Neutral Peaceable Conciliatory Judicial	[[] Ruler	57. Social Outlook - Global Monolithic Harmonious Discordant Fragmentee	Interst Xend S Frier Aloo Xend Xend S Several C	ophilic ndly f ophobic Councils	s Demos
prison guards with or LAW RELATED	62. Uniformity of	f Law	Executive 🗖 Le	63. F	Reliaious Profile	Ruler	□ Elite Cound	Several C	Jouncils	1 Demos
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IS FORM 23 Detailed World Data

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As the ice-planet of Bauler is tiny, the city of Bauler covers a substantial portion of its small surface. Although there are incidental outliers to the city, it is essentially one community that is tightly regulated by the Prison Council.

Government and Law on Bauler

There are three arms to the prison government of Bauler. The supreme body is The Prison Council of Bauler who are appointed by The Counsellor on Rech. They construct the rules of the prison, which are expected to be carried out by the executive arm, which is an arm of the Rech Military. Prison guard duty is considered a wretched assignment, and the executive arm including the committee of officers and personnel defer to the Counsellor-appointed prison government.

There is one Gatherer who is the final arbiter of the law on Bauler. He also doubles as the sole spiritual adviser and counsel on Bauler, and is generally a harsh character, who sees his spiritual charges in need of stern correction before being returned to Rech society (if they survive). Corporal punishment is the norm for Bauler.

The Bauler Gatherer and the Prison Council of Bauler are both loyal to The Counsellor and rule the prison with an iron fist. Law is absolute, and prisoners have no rights. Prison guards have little more.

Customs on Bauler

Prisoners employed in maintaining the structure of the prison itself must live in field shelters outside the prison walls. These field shelters are built to withstand the harsh environment and are more or less self-securing: there is no option to run away anyway because the outside is a completely hostile environment with no air and freezing cold. The prisoners who work to maintain the walls are worked very hard and must cope with micro-gravity, bulky vacuum suits and long working hours to take advantage of the daylight before their air supply freezes solid

after sunset. The Prison Council of Bauler is an especially privileged posting for those bureaucrats who serve The Counsellor. It is considered the height of loyalty to run the prison harshly and is generously rewarded within Rech system government.

All prisoners on Bauler are tattooed on their forearms with a symbol that marks them as having been sentenced to Bauler for life. This tattoo attracts social stigma on Rech, and is kept covered if the prisoner ever returns.

The harsh conditions breed close relationships among the prisoners as a matter of survival. Older prisoners benefit from younger ones physically assisting them, and the young ones in turn benefit from the experience of the ones they help. It is quite common for the older prisoners to 'adopt' younger ones and name them for relatives and children they remember on Rech.

The majority of staple food is grown hydroponically. The results are basically nutritious but not very appetising. What food is imported is reserved for the prison administration and then the guards. Locally grown food is generally a brown porridgelike substance, and is baked into hard biscuits, very bland in flavor and hard enough to break teeth. Prison cooks bake them into chains-"chain cake". A superstition has arisen among prisoners about chain cakes. The cooks sometimes put food colouring in them, one day in celebration of an annual festival. However, the prisoners refused to eat the strangelycoloured food, and since then any brightly-colored batch will not be eaten. A taboo has become attached to coloured chain cake, and the cooks, in complete understanding of the tradition, sometimes play up to it by baking them coloured when they can.

Trade and Commerce

The Rech government is willing to pay normal interstellar rates for a trip out to Bauler with supplies and prisoner transfers. If a ship owner selects

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Bauler as destination, roll as normal for a population 4 world for freight and passengers.

The world of Bauler also exports some durables such as furniture from prison labour, and odds and ends. Freight, cargo and passengers may be rolled for as normal if the destination is Rech. Treat Bauler as Non-Industrial and Non-Agricultural for the purpose of resources.

Adventures on Bauler

The government of Rech is fairly desperate to keep the prison world of Bauler viable. Its reputation as a freezing hell-hole represents the ultimate enforcement of law.

This means that anyone with a ship will almost certainly be asked to make merchant runs there if they are looking for cargo. It also means that desperate prisoners may be "passengers" paid for by the government. This can lead to desperate approaches to escape or be taken out of system.

The weakness of using Bauler as a prison planet is that the Rech government has no Navy or system defence of any kind. They rely completely on Imperial Navy fleets for independence. This means that security on Bauler for an armed ship (even a lightly armed merchant) is truly laughable. A determined raid could easily assist in releasing prisoners.

In fact, this is precisely how pirates recruit within the Rech system. They must be careful of Imperial Naval forces showing up, but a lightening raid can provide grateful recruits, some of whom are ready to vent their anger on the planet of Rech.

This security concern provides the background as to how Rech security forces are geared—to deal with pirate commercial raids aimed at theft.

A possible military adventure might include a raid upon Bauler to gain recruits, and then train and take them onto the planet for a raid on wealth. Obviously this would be vigorously opposed by the government.

Critics' Corner

Reach Adventure 2: Theories of Everything

Reviewed by Megan Robertson (on rpg-resource.org.uk, Jan. 2018)

Reach Adventure 2: Theories of Everything. Martin J. Dougherty. Mongoose Publishing https://www.mongoosepublishing.com 33pp., PDF

US\$8.99/UK£6.90

This adventure starts at Marduk (where the first adventure of this series took place) and involves a lot of time spent in Jump as the party travels to the Borite system. Although shipboard skills are useful there's plenty for everyone to do aboard the laboratory ship *Insight III*. If you did play *Marooned at Marduk*, this could be something the party does to pass time/earn some credits whilst their newly-acquired ship gets a well-needed refit. If you haven't, there's a suggestion for a compelling reason why the party

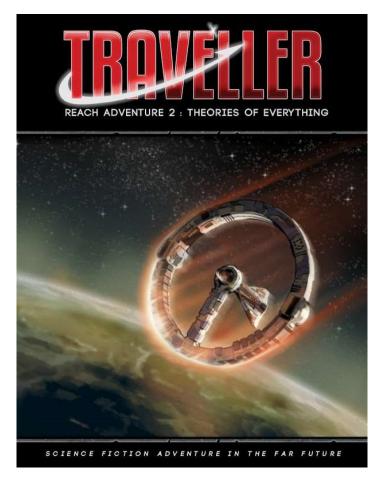
might abandon their existing ship and take up this opportunity, or if they don't have a ship this presents an interesting job opportunity with good pay.

The Referee's Information provides background about the Sindal subsector, Marduk, and Borite. Most of this can be discovered by the party if they trouble to do any research in the library data or talk to the right people; it's up to you how much you want to share. We then find out about the *Insight III*, which is built as a ring and is incapable of landing on a planet—they have their own pinnace for that purpose. The reason for the ring structure is to generate some gravity when they are running an experiment that might be affected by the usual artificial gravity generation methods. It is Jump-capable however. Crew requirements are at least one pilot, a navigator, a medic and two engineers, but there's some wiggle-room in precisely what you have—in many

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Critics' Corner

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such ships one of the scientists is capable of filling the role of medic, for example. A full specification and deck plans are provided.

The *Insight III* is joint-owned by the scientists aboard, many think that's the only reason that they've stayed together this long. Certainly, the ship is disorganised and its residents a quarrelsome bunch. There are four scientists, an engineer (who also cooks) and a pilot (who owns the pinnace) aboard when the party encounters them. Full details of each individual are provided, and just reading through them is entertaining—a diverse bunch! Between them they can just about manage to operate their ship, but only at the expense of pulling people away from their studies. Treat this as a 'flying ivory tower' and you get the picture.

The adventure begins when the party encounter one of the scientists—who has written a popular book about Jump which they may even have read—and offers to buy lunch if they will listen to a propo-

sition. Basically, he'd like them to join the *Insight III* for a few weeks as they travel the area conducting their experiments. In return for helping out around ship, they'll get board and lodging, pocket money, and passage back to Marduk (if wanted) as well as either a cash sum or purchase of the spares they need if they need to have their ship repaired. Assuming they accept, they'll be taken up to the research ship to meet the others and learn more about the mission—they've been hired to do some surveying in the local area beginning with studies here on Marduk (ocean life and geology), then they intend to go to Borite to do more geology and explore some ruins, thence to Noricum for more geology and archaeology, and ending at Thebus. The eclectic nature of the studies reflects the scientists' diverse interests.

There will be several weeks of Jump travel, in which the main interest will be the dynamics between the scientists who are a quarrelsome lot at times—it makes for interesting role-playing, especially for the Referee! For each location visited, there are ideas for how the investigations might pan out with plenty of opportunity for the party to get involved in the action... and of course there is something else thrown in which disrupts the entire schedule and makes this into a proper adventure for anyone, not just those who enjoy pottering around exploring ruins and taking samples. This involves a tricky rescue of a badly-damaged spacecraft... with, of course, added complications. Real edge-of-the-seat stuff!

Possible outcomes and consequences are laid out clearly, but there's potential for several tense scenes along the way and it's possible to end this in a bloodbath if things don't work out amicably. A sneaky adventure that turns out as a moderately peaceful interlude and ends with a nail-biting scramble to survive! There's also potential—if you like more unusual styles of adventure—of continuing with the laboratory ship or even of using the scientists (or your own ones) as player-characters.

Jottings #6: Calendars

By Jeff Zeitlin

Calendars are such a routine part of life that we don't normally think about how they work. However, when you're doing worldbuilding and culture building, they can become an important part of what establishes the 'feel' of your work.

This article discusses/describes the various types of calendars. It does not discuss converting between calendars, nor does it actually define any particular calendar for a particular world.

The phrase "metaphysical significance" is used as shorthand for indicating that something has significance to a culture for reasons other than grounded in real, measurable phenomena. As an example, the seven-day week of most modern cultures is ultimately based on no more than the creation legend in scripture; thus, 'seven' has metaphysical significance. On the other hand, the year being 365 days is based on the measurable time over which the stars progress around the sky to return to the same position; this is not metaphysical significance.

"Day" and "Year" refer to both the calendar periods and the rotational and revolutional periods (respectively) of the world; where it is necessary to distinguish, a phrase such as "solar year", "calendar year", etc., will be used.

"Week" and "month" are used to refer to multiday periods on the calendar; generally, the "week" is ten days or less; the "month" is 20 days or more; periods in the gap are defined on a case-by-case basis. Where the orbital period of a natural satellite is referenced, it will be called a *lunation*.

"Month-date dating" refers to uniquely identifying a date within the year using subdivisions of the year ("months"), and the day within the month. This is the "conventional" model for most calendars in current use. "Month-date dating" may place the month and date in either order (e.g., "1 January" or "January 1"); the important feature is that both are

required. In *Traveller*, the Solomani, Zhodani, and K'kree calendars use this method.

"Serial dating" refers to uniquely identifying a date within the year by simply counting days from the beginning of the year. In *Traveller*, the Imperial, Vilani, Aslan, and Hiver calendars use this method. The Mayan "Long Count" can also be considered serial dating (on a non-annular calendar).

Types of Calendar

Fiat Calendars

Fiat calendars are calendars that are established by law or edict, and do not have any necessary connection to astronomical phenomena or metaphysical significance on the world(s) they apply to. The Imperial calendar may be a *fixed* or *solar* calendar for Sylea, but is a *fiat* calendar for any other world in the Imperium. Fiat calendars may have any of the structures discussed in this article.

Fixed Calendars

Fixed calendars do not change based on astronomical phenomena, and do not have any necessary connection with them. Examples of fixed calendars are *Traveller's* Imperial, Vilani, and K'kree calendars, and the Mayan *Haab* and *Tzolkin* calendars. If based on a solar year, fixed calendars still do not intercalate (even if a true solar calendar would). Most known fixed calendars were intended as solar calendars, but were defined under conditions where it was not clear that intercalation would be needed, or was considered undesirable or inappropriate.

Haab-style calendars are named for the Mayan civil calendar of that name. They divide the year into a number of shorter periods ('months', for this article's purposes) of exactly equal numbers of days. If this leaves a deficit as contrasted with the number of days in the year, the remaining days are left as a period not part of any month

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("Uayeb" or "Wayeb" for the Mayan *Haab* calendar), or, rarely, as a "short month".

Haab-style calendars use month-date dating. The number of months in such a calendar may, but need not, have metaphysical significance; the number of days in the month is defined by the number of months—though the number of months *may* be chosen to make the length of the month close to the lunation.

Tzolkin-style calendars, named for the Mayan religious calendar of that name, are based on two cycles of days, whose numbers are mutually prime. Both cycles increment daily; each day on the calendar is a unique combination of positions in the two cycles, and a year on the calendar consists of a number of days equal to the product of the lengths of the two cycles. An example of how a Tzolkin-style calendar works can be easily illustrated; assume that the two periods are five and three days respectively. The five-day cycle names the days, "Red", "Yellow", "Orange", "Green", and "Blue"; the three day cycle simply counts the days. A year on such a calendar consists of the dates, in order, Red 1, Orange 2, Yellow 3, Green 1, Blue 2, Red 3, Orange 1, Yellow 2, Green 3, Blue 1, Red 2, Orange 3, Yellow 1, Green 2, Blue 3. The lengths of the two cycles may be chosen for their metaphysical significance, or to be as close to the length of the solar year as possible within the mutual-primality constraint. Either or both cycles may use names instead of numbers, and the naming of the days may place either cycle first (e.g., "1 Red" could be the name of the first day in the previous example).

Solar Calendars

Solar calendars use the Solar Year as their fundamental period. The Calendar Year is as close as possible to the Solar Year, to an integral number of

days. Intercalation will generally amount to one day every few years, unless the calendar is modified to accommodate numbers or periods that are significant from a social or religious perspective (which may lead to longer intercalations at different intervals). The Gregorian calendar commonly used today is a solar calendar (and remains one for Terra as the Solomani calendar used in *Traveller*, though it is a fiat calendar for the rest of the Solomani Confederation), as are the Zhodani and Aslan calendars; many other regional calendars in use today are also solar calendars. A solar calendar can be structured as a Haab-style calendar; in such a case, intercalary periods, when needed, would be included in the Uayeb-equivalent period.

Lunar Calendars

Lunar calendars use the lunation as their fundamental period. The calendar month is as close as possible to the lunation, to an integral number of days. Lunar calendars may be observational, with the new month beginning when the first bit of crescent moon after the new moon is visible, at a specified location, or they may be calculated, with the new month beginning when the new moon would be 'observed' at a specified location under ideal conditions, regardless of actual observation. A calendar year is some fixed number of months, approximating the solar year, but without regard for long-term accuracy (no intercalation, no Uayeb-equivalent period, etc.). The Islamic calendar is an observational lunar calendar; Islamic calendars printed in advance for planning purposes are calculated lunar calendars.

Lunisolar/Hybrid Calendars

Lunisolar (or hybrid lunar/solar) calendars use the lunation as the fundamental period, as the lunar calendar does, and may also be observational or calculated. Normally, the calendar year is a fixed number of months, but long-term accuracy is considered,

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and when the deficit from the fixed number of months accumulates to the point of being equal to or greater than an entire lunation, an additional month for that year will be added to the calendar. The Jewish (often improperly called Hebrew) calendar is a calculated lunisolar calendar; intercalation of an additional month happens in 7 years of each 19. The traditional Chinese calendar is also a lunisolar calendar. The additional month may be added in a fixed location within the calendar, as with the Jewish calendar, or in a varying location as defined by multiple factors, as in the traditional Chinese calendar.

Tracking years

In general, a calendar counts years from a real or stipulated "epoch". There are several ways of defining the Epoch:

- 1. *Regnal Epochs*: Dating from the beginning of a monarch's reign. This is common in ancient documents, e.g., "In the sixth year of the reign of Katsandogs...", and in east Asian pre-modern historical documents; it is still practiced in Japan (other east Asian countries have abolished their monarchies).
- 2. (Stipulated) Creation of the World: Several current calendars use this, the best known being the Jewish calendar; no two seem to use the same date as the epoch date. The Mayan Long Count also stipulates that 13.0.0.0.0 (corresponding to 11 August 3114 BCE in the proleptic Gregorian calendar) was the creation date of the world.
- 3. Stipulated or actual date of a significant event in the life of a significant person: The Julian and Gregorian calendars use this, dating from the stipulated brit milah (ceremony of circumcision) of Yeshua ben Yosef of Nazareth, held to be the Messiah in Christianity.
- 4. Stipulated or actual date of a significant event in the culture: The Romans used this, dating "Ab urbe condita", "from the founding of the city [of

- Rome]". This is also common in Science Fiction, where a local calendar is often dated "A.L.", "After Landing", or in some older SF, "A.E.", "Atomic Era" dating, usually considering the epoch to be either the first detonation of an atomic weapon, or the activation date of the first atomic pile. The Islamic calendar, dating from the Hejira (flight of Mohammed from Mecca to Medina), and the short-lived French Revolutionary calendar also used this model.
- 5. Mesoamerican cultures—most notably the Aztec and Maya—didn't number their years; instead, they used the Haab and Tzolkin calendars in conjunction. A "calendar round" was the period between two successive occurrences of the same date pairing on the two calendars; this interval was approximately 52 years. Within the 52-year calendar round, every combination of a Haab date and a Tzolkin date was unique. Where greater accuracy was required, the calendar round date would be coupled with the Long Count for the date.

Counting Days

The most common way of counting days within a year or month is to simply increment (generally from 1) throughout the period. The Romans, however, used an inclusive decremental system, counting down toward one of three significant days during the month: *Kalends* (the first day of the month, sometimes *Calends*), *Ides* (one day before the middle of the month), and *Nones* (eight days before the *Ides* of the month). In an inclusive decremental system, one counts the day itself as 'one', and counts backward to it—so that if the Ides of the month falls on the 14th of the month, the 12th was called "the third day before the Ides of ...". An *exclusive* decremental system would make the 12th "the *second* day before ..."

Intercalation

Many solar (and lunisolar) calendars have origins in agrarian societies; as a result, certain seasonal

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events take on an outsized importance-for example, the ancient Egyptians were focussed on the annual flooding of the Nile River; many cultures placed high importance on the solstices and equinoxes. Where a solar year is not comprised of an integral number of days, the calendar year will gradually get out of synchronization with the solar year. To resynchronize the two, one or more days may be added to a calendar year. These days are called intercalary or embolismic days; the process of adding them is called intercalation. The rules for where intercalary days are added to the year will vary depending on culturally-significant factors of many types; while the most common model is to add the additional days at the end of a period, or between periods, there are recorded instances where the days were inserted within and interrupting a period—for example, the intercalation on the Gregorian calendar is sometimes called the bisextile; this is because when the practice was instituted with the Julian calendar, the intercalary day was inserted as a repeat of the sixth day before the kalends of March (see "Counting Days", above). At one point, when intercalation of the Roman calendar involved adding an additional month, this month was also generally inserted between the sixth and seventh days before the kalends of March.

Wrapping It All Up

The interaction between culture and calendar when you're doing worldbuilding can be complex, and influences can go in either direction—or both. As mentioned earlier in this article, you needn't restrict yourself to a single calendar; two (or more!) can exist for various reasons, and can be considered in isolation (as, e.g., an interstellar fiat calendar and a local solar calendar), or can interact in culturallysignificant ways (as, e.g., the Haab and Tzolkin). You could have multiple lunar or lunisolar calendars on a world with multiple moons, or multiple solar calendars for a world in a polystellar system. Intercalation can be nothing more than an "accounting entry" (more-or-less how the intercalation of the Gregorian calendar is treated), or it can take on cultural significance (as in Olympiad Day and Double Olympiad Day on the Zhodani calendar). You decide the limits!

Confessions of a Newbie Referee

A Column by Timothy Collinson

35: Sabbatical

[This was originally written prior to TravCon/UK for 2018, and refers to that con as "upcoming".—Ed.

It's at this time of year I'm normally writing about the stress and nerves of the upcoming TravCon whether I've spent a year working on an adventure in preparation (as I did for *Second Scions' Society* and *Generation X*), just a month (as I did for *Into the Unknown* and *See How They Run*), or very little time by taking something I'd previously written and hoping it would be 'good enough' (as I did for *Three Blind Mice* and *Ashfall*).

For the record, this is what I've run each year:

- 2012 *Portents and Signs* (published by Mongoose as *Into the Unknown*) (twice)
- 2013 The Second Scions' Society (twice)
- 2014 Ashfall (twice) and Three Blind Mice (TBM published by 13 Mann¹)
- 2015 *Generation X* (in tandem with Stephen Ellis running *Rendezvous with Karma*) (twice)
- 2016 Ashfall II (twice) and Ashfall III
- 2017 *See How They Run* (published by March Harrier Publishing²)

^{1:} http://www.13mann.com/index.php/en/download/category/52-traveller-adventures

^{2:} http://www.drivethrurpg.com/product/227745/See-How-They-Run (Continued on page 51)

Confessions of a Newbie Referee

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Seems something of an achievement when I put it altogether like that. I had no idea in 2011 that TH's gentle encouragement about my plot idea on the way home from TravCon would start quite such a ball rolling.

But after six years of refereeing at TravCon, I've decided that this year I'm going take a sabbatical seventh year. Particularly as I'm physically very low at present thanks to the Chronic Fatigue. I think it's been the right choice. I might take a bunch of characters along with me and the vaguest of plots just there are slots to fill in an emergency. Or the *Traveller Customizable Card Game* would probably fill one pretty nicely.

I feel guilty that I'm letting Andy the organizer down by not filling a couple of slots; I hope I'm not disappointing those who would like to have played something new that I might have come up with, and there's a bit of me that feels stupid for missing a once a year opportunity to have six or twelve *Travel*-

ler enthusiasts engage with a creation of mine as they've done so encouragingly in previous years.

But a Sabbath rest was an important feature of Old Testament teaching and indeed we still have seven day weeks thousands of years later. (I believe Revolutionary France and Communist Russia have tried ten day weeks but found productivity took a nose dive.) In academia and religious life, as well as elsewhere no doubt, 'sabbaticals' can be important times of rest, recuperation and recharging batteries, as well as opportunities to try something new.

I wish all the best to referees who will be filling the 25 slots of TravCon this year and I'll support them as best I can by playing as enthusiastically as strength allows, but I'm enjoying not feeling pressured about final preparation and I'll perhaps have the opportunity to experience a few more refereeing styles and skills that I might have missed otherwise. Hopefully, next year, I'll be back with something new and bigger and dare I dream better?

Doing It My Way

Origin-Based Trade for Mongoose Traveller

by Jason Barnabas

Introduction: The Two Trade Systems

The trade system in Classic *Traveller* Books 1-3, based on pricing specific trade goods ('Goods-Based Trade', 'GBT' henceforth), had some advantages over the trade system introduced in Classic *Traveller Book 7: Merchant Prince* (which was based on characteristics of the origin world, henceforth 'OBT', for 'Origin-Based Trade') and carried into later versions of *Traveller*. Of the 36 possible Trade Goods specified, most were worth more than the trade goods available in OBT. On a ton for ton basis, fifteen were worth kCr100 or more and four of those four were worth MCr1 or more! Even someone in a Type S

could make bank on those. On average the value of speculative goods were over eight times as great in GBT as in OBT.

In most respects I prefer OBT. I was instrumental in convincing Marc that if you are buying from a primary producer you can probably buy as much as you want to buy, which is why there were no quantity rolls in OBT; however, I missed some aspects of GBT. Trading in *Traveller* today has become a workaday job performed in a perfunctory fashion. You know before you arrive what you can get and how much you'll pay for it. There is never a trading rea-

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son you'd need to stay in a starport beyond the six days allowed for your initial landing/docking fee.

The Mongoose system is basically an expansion of GBT. However, like the original GBT, not everything is covered. Can you imagine how many tables would be needed to cover all the possibilities? Even in generic groups the minutia would be staggering.

That's one of the reason OBT was created. Using it, we don't need to detail every possible trade good or even every trade category, and if new products are added, we don't need new tables. However, it has no luck involved on the buying end and getting ahead in life requires a few lucky breaks.

The Origin-Based Trade System

For those who only have Mongoose, the OBT system is reproduced here (modified very slightly for Mongoose). The High Tech and Low Tech codes are omitted from these tables, as Tech Level is accounted for directly.

The factors that affect the price of goods, both for purchase and for sale, are the starport class, the tech level of the world, and the world's trade codes. Any of these may influence the cost in either direction.

For our example worlds, we will use two TravellerMap worlds, Miidkhim (Fornast 0217, C899487-A Ni) and Kaskii (Core 3218, A300A98-F Hi In Na Va Cp). Note that, as presented, Kaskii's status as a subsector capital (Cp) has not effect on trade.

Step 1: Determine the Cost of Goods

Goods are priced by the ton. Calculate the total cost modifier for goods purchased on the world by summing the values given for each of the world's trade codes on the Starport and Trade Class Cost Modifiers table (this result is allowed to be negative). Add 4 to the result, and multiply by 1,000. This represents the trade-code cost of goods. It must be modified by the world's tech level. Multiply the tech level by 100, and add the two results. This gives the final cost of goods.

Starpor	Starport and Trade Class Cost Modifiers													
Port Code	Cost Mod	Trade Code	Cost Mod	Trade Code	Cost Mod	Trade Code	Cost Mod							
A	-1	Ag	-1	Hi	-1	Ni	1							
В	0	As	-1	Ic	0	Po	-1							
С	1	De	1	In	-1	Ri	1							
D	2	Fl	1	Lo	1	Va	1							
Е	3	Ga	-1	Na	0	Wa	0							
X	5													

For our example worlds, the purchase cost modifiers on Kaskii will be starport A (-1), Hi (-1), In (-1), Na (0), and Va (1) for a total of –2. Add 4 to this (= +2), and we find a base trade-code cost of Cr2,000 per ton. The tech level on Kaskii is F (15), so we add 15×100, or 1,500, to the base trade-code cost, and get a final purchase price of Cr3,500 per to. Note this as A-F Hi In Na Va 3500, where A is the starport code, F is the tech level, Hi In Na Va are trade codes of the source planet, and 3500 is the cost per ton in credits.

For Miidkhim, the modifiers are starport C (1), Ni (1), for a total of 2, +4 for a trade-code cost of Cr6,000, and a TL of A (10) adds another Cr1,000 for a final cost of Cr7,000. Note this as C-A Ni 7000.

Step 2: Determine the Base Sale Price

Sale prices are also set by the ton. Calculate the price modifier for the goods by summing up the modifiers for each combination of trade codes from source and market world on the Sale Price Modifiers table. For each trade code from the source world, find the modifier under each trade code for the destination world. Values of "-" are treated as 0. This sum is also permitted to be negative. Add 5 to the result. This is the trade-code price factor. As a separate calculation, subtract the tech level of the market world from that of the source world. This result is also allowed to be negative. Multiply this number by the trade code price factor. This result is the tech factor. To determine the base selling price of the cargo, multiply the trade-code price factor by 1,000, and the tech factor by 100, and add the two results.

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Sale Price Modifiers														
	Market Code													
Source Code	Ag	As	De	Fl	Ga	Hi	In	Lo	Na	Ni	Po	Ri	Va	Wa
Ag	+1	+1	+1	_	+1	+1	+1	+1	+1	_	_	+1		_
As		+1	_	_	_	_	+1	_	+1	_	_	+1	+1	
Ba	+1	_	_	_	+1	_	+1	_	_	_	_	_	_	_
De	_	_	+1	_	_	_	_	_	+1	_	_	_	_	_
Fl	_	_	_	+1	_	_	+1	_	_	_	_	_	_	_
Ga	+1	+1	+1	_	+1	+1	+1	+1	+1	_	_	+1	_	_
Hi	_	-	-	-	-	+1	-	+1	-	-	-	+1	_	-
Ic	_	_	_	_	_	_	+1	_	_	_	_	_	_	-
In	+1	+1	+1	+1	+1	+1	+1	-	-	+1	+1	+1	+1	+1
Lo	_	_	_	_	_	_	+1	_	_	_	_	+1	_	-
Na	_	+1	+1	_	_	_	_	_	_	_	_	_	+1	_
Ni	_	_	_	_	_	_	+1	_	_	-1	_	_	_	_
Po	_	_	_	_	_	_	_	_	_	_	-1	_	_	_
Ri	+1	_	+1	_	+1	+1	+1	_	+1	_	_	+1	_	_
Va	_	+1	_	_	_	_	+1	_	_	_	_	_	+1	_
Wa	_	-	-	-	-	-	+1	_	-	-	-	+1	-	+1

For our example worlds, if we are selling goods from Kaskii on Miidkhim, we look for the values at the intersections of Kaskii's trade codes of Hi, In, Na, and Va (in the leftmost column of the table) with Miidkhim's trade code of Ni (in the top row of the table). That gives us Hi/Ni (0), In/Ni (+1), Na/Ni (0), and Va/Ni (0), for a total of +1, to which we add 5, for a trade-code price factor of 6. For the tech factor, we subtract Miidkhim's tech level of A (10) from Kaskii's F (15), giving 5, which we multiply by the trade-code factor of 6, giving a tech factor of 30. Our base selling price is given as 6×1000, plus 30×100, or Cr9,000 per ton. This is not necessarily the price you will actually sell for; it is the starting point for determining the actual price.

If we are selling goods from Miidkhim on Kaskii, the process is similar, but we look for Miidkhim's trade code of Ni in the leftmost column on the table, and take the values from Kaskii's trade codes of Hi (0), In (+1), Na (0), and Va(0), for a total of 1, plus 5 is a trade-code factor of 6. The tech factor is A (10) - F (15), yielding –5, multiplied by 6, for a

tech factor of –30. The base selling price is 6×1000 + (-30)×100, or Cr6,000 — Cr3,000 or Cr3,000.

Final Sale Price			
2D	Price Multiplier	2D	Price Multiplier
2	40%	9	120%
3	50%	10	130%
4	70%	11	150%
5	80%	12	170%
6	90%	13	200%
7	100%	14	300%
8	110%	15	400%

Once you have determined the base selling price, roll on the Final Sale Price table to determine what kind of a deal you can actually make to sell your goods. You may hire a broker to assist; the broker's skill gives you a DM +1 for each level, but you must pay him 5% of the final purchase price for each skill level as a fee. This fee also applies if you act as your own broker; the fee goes into your personal wealth, not the trading accounts. You may also resort to bribery; each *two* levels of bribery skill gives you a DM +1. The people you bribe receive a kickback of a flat 7% of the final sale price, regardless of DM.

Variant Rules

Refusing Sales

You may decide that a trader is not required to sell at an unsatisfactory offering price. Under this variant, the trader may wait a week and try again, incurring a cumulative DM of -1 per prior attempt (that is, the second attempt is at -1, the third is at -3, the fourth at -6, and so on).

Value Multiples

Just by reading though the available equipment and supplies lists it is obvious that most things you could buy as speculative trade items will not be worth the prices calculated using OBT. Some would be worth less and others worth more, sometimes much more. Some things would be worth over GCr1/ton. Of course those would be extremely rare.

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With GBT it was possible to make payments on a Free Trader on speculative trade and carrying paid passengers and freight was just a sideline to your main business of trading in speculative goods.

So, how do we modify OBT to allow it as well? Simple, introduce a price multiple and/or change the wording from price per ton to price per unit and have variable unit sizes. For example, the unit size for most pharmaceuticals would not normally be a ton (not that you couldn't buy pharmaceuticals by the ton, but that they would be worth a whole lot more than a few kCr per ton).

In GBT there were cargos that weren't worth your time to carry so you might actually wait in port a week to see what else might be available. This OBT system, as written, doesn't allow for that; adding a random factor on purchase could do so.

I finally decided to leave the wording the same and introduce a value multiple. When PCs land/ dock the brokers and other representatives of local business concerns will be there waiting. The PCs post to the desired cargo boards and will be approached by various representatives to sell what they have. They can always accept a standard offer or leave the port and look for something better.

Arra will take somethi cost the Roll on time. DM: -1/level of broker.

anging for a standard purchase	Search Time	
te a day or less, but searching for	2D	Days
ing better will take 3–6 days and		3
	5– 6,7	4
e same as a ton of standard cargo.	8,9	5
the Search Time table to find the	10+	6
M. 1/lovel of broker		

At the end of the search, roll 3D* on the Value Multiplier table with a DM of +1/level of broker and -1/previous search period. The * in 3D* means "open ended", sometimes called "exploding sixes". To make an "open ended" roll, take the sum from the initial roll, reroll any 6s, and add the new rolls to the total. If any of the rerolled dice come up 6, reroll them as well (after adding them to the total). Continue adding and rerolling 6s until no 6s are rolled

Value Multiplier Table			
3D*	Value Multiple	DM	3
12-	1	NA	f
13-18	d9	+1	i
19-24	d9×10	+2	t
25-28	d9×100	+3	ľ
29,30	d9×1,000	+4	C
31-33	d9×10,000	+5	a
34-42	d9×100,000	+6	ϵ
43+	1,000,000	+8	f

or you reach whatever level you want (probably 43+). If the final roll is 12- no better cargo s available. One can always ake a regular cargo and move on, or search for another week and try again. The cost for each extra week is the same as the irst try.

Assuming that you've found a better cargo (that is, your 3D* roll was 13+), you now must determine the value multiple. This is written as 'd9 × «power-of-10»′, and is read from the same row as your 3D* roll.

The d9 indicates a range of 1 to 9, in a linear distribution (that is, equal probability of any result). Since there is no such thing as a nine-sided die, you'll need to improvise. The two simplest ways are (1) roll a d10, rerolling any 0s or 10s (whichever your die is marked with), or (2) roll D66 on the D66-to-D9 Conversion table to find the needed multiple.

D66 to D	9 Conversion
D66	D9
11-14	1
15-22	2
23-26	3
31-34	4
35-42	5
43-46	6
51-54	7
55-62	8
63-66	9

Now that you know what the value multiple is you need to find the minimum purchase (or lot size) in tons to make the deal. If the value multiple is 1 then the lot size is 1 ton; otherwise, roll 2D on the

Lot Size table (DM +1 per level of broker skill, plus the value from the DM column on the row of your 3D* roll on the Value Multiplier table), then roll D9 as above, to determine the lot size. The amount you buy must be a whole number (no frac-

Lot Siz	e		
2D	Minimum		
	Purchase		
4–	d9		
5-8	d9/10		
9-12	d9/100		
13-17	d9/1,000		
18+	d9/10,000		

tions or decimals) multiple of the lot size, but need not be a whole number of tons.

If we decide to search for a better deal than standard on Kaskii (A-F Hi In Na Va 3500) and find it during the first week, we would pay Cr3500 for

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the search, and then start rolling dice. Our 3D* roll is 23, which gives us a Value Multiplier of d9×10, and a DM of +2. We now roll a D9 for 4, meaning our value multiplier is 40. Our per-ton cost for this cargo is Cr3500×40, or Cr140,000 per ton. We note this cargo as C-A Ni 3500×40. We roll 2D+2 on the Lot Size table for 8 (lot size D9/10 tons), and another D9 for 5, meaning that we can buy lots of 5/10 tons, at Cr70,000 per lot.

When we get it to Miidkhim (C-A Ni 7000), the value multiplier and lot size still apply, but to Miidkhim's base price as determined earlier (Cr9,000), or Cr9,000×40 or Cr360,000 per ton (or Cr180,000 per lot). Even a lousy roll would provide a nice profit. Of course not all markets are as advantageous as this, and good traders watch these things.

If you allow this variant, you should also probably allow players to keep track of good buys they've found and to check back with those suppliers to see if they have more of the same. The better the find, the less likely they'll have a surplus at any given time. However, contacts are part of what the trading game is all about.

On the Value Multiple table a roll of 43+ is a once in a century deal, the ultimate strike. 34+ is a once a decade deal. You'll get 31+ every five years or so. 29+ is about every other year. 25+ you should find annually. 19+ comes around every quarter. 13+ with a 2+ on the d9 will show up every other cargo or so.

If you hit a 43+, let's hope you have enough capital or good relations with your banker!

Critics' Corner

Other People's Toys

Mindjammer: The Roleplaying Game

Reviewed by "kafka" (on rpg.net, Sept. 2014)

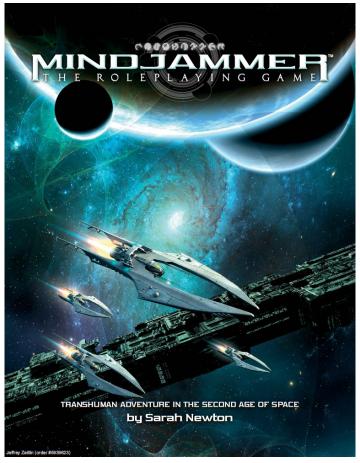
Mindjammer: The Roleplaying Game. Sarah Newton.

Modiphius Entertainment https://www.modiphius.com
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Editor's Note: Since this review was first written, Modiphius has released a version of Mindjammer for Mongoose Traveller.

Every so often there comes a SFRPG that breaks the mould of copying a license or emulating *Traveller*. *Mindjammer* is one of those SFRPGs that straddles both of these worlds by creating a wonderful toolkit for modern Science Fiction gaming, yet, provides an interesting backdrop for adventures. It is a mammoth toolkit like *Traveller*⁵; it aspires to be the first and last word in FATE roleplaying, just as *Traveller*⁵ does for 2D6 mechanics. However, it begs the obvious question: does the already tiny SFRPG market need another toolkit?

I am happy to report this book changed the way that I look at SFRPGs. For there is a proliferation of



settings, but really few games are trying to break

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Critics' Corner

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new ground and incorporate what is truly new – "out there" – short form for the frontier edges of human knowledge. Both in terms of developments in Science and improvements in Fiction. Ms Newton has combined this with a great set of easy-to-follow rules that can be translated into most other games and created the book that I wish that *Traveller*⁵ could have been had it been more organized.

And, I say that as long time Traveller grognard -Traveller5 was an abysmal disappointment, yet, it was the reinstatement of the Classic Traveller formulae. Mongoose which has been tweaking the Classic Traveller formulae has run against the walls of Traveller being grounded in the so-called Age of Sail and Golden Age of Science Fiction. And, as great as those novels (and films derived from them are great) - Science Fiction has come a long way since 1977. And, the Grand Old Game/Dame (Traveller) in its Traveller⁵ incarnation, like all Prima Donnas, ought to have been a diva, but ended up as an obese opera singer, leaving the field for younger and more agile competitors. Mongoose Traveller has done much in bringing the excitement back to Traveller but is limited by the grounded settings, and the OGL severely limits what can be published. Thus, it is here that Mindjammer comes in to forge a new path.

As the subtitle suggests, it takes SFRPGs to the Transhuman frontier, yet, retains lots of the crunchy parts of previous eras of Science Fiction. It can be easily adapted from Space Opera to Hard SF with handwavium given to certain concepts that we do not fully understand yet. While I am not completely comfortable with Transhumanism, I do recognize that it asks vital questions of our time, and gaming is one way to explore those questions before one can tackle them on a societal basis. *Mindjammer* does this in a friendly and approachable matter. For the milieu that Newton has managed to create with Commonality Space is very much the "European Union in Space" (as contrasted with *Traveller's* "Yanks in

Space"), yet at the same time, it retains some of the rugged individualism of the Anglo American traditions of a small band of heroes rising above the call of duty to change the galaxy. Hence, one of the biggest driving conflicts in this milieu is cultural conflict. That said, there are a number smaller conflicts that drive the system forward, including an adversary that has almost a Warhammerish drive toward racial purity and cultural homogeneity. The Commonality is a celebration of diversity in all its forms - and this book makes ample use of uplifts (called xenomorphs), synthetics (organic or mechanical forms of life), and the multitude of human forms (either in the appearance of a different culture or radical alteration of the human genome) not to mention the discovery alien life (flora, fungi, fauna and intelligent/sophont) that now populate the stars. With the basic premise that as the human race moves to the stars, we adapt ourselves to life "out there" and "out there" adapts and changes the human condition, Mindjammer shows humanity as constantly changing, just as individuals are - yet, the essentials stay the same.

The rules are powered by the FATE Core rules system. It uses dice for resolving randomized events, in this case 4dF, or FUDGE dice. You can use 4d6 and translate the numbers over, or just directly use 2d6 as d6-d6. The rules work just as easily with either, or even both, but Fudge dice give results between -4 and +4, while d6-d6 give results between -5 and +5, changing the dynamic of your game. What is nice about FATE is the whole process of creating your character. There's no dice rolling here, just choosing from a list of skills and extras etc., as well as race, species and physical description. And the rules are fairly straightforward and allow you to do many things. The emphasis here is on narrativist roleplaying, rather than roll playing. And, FATE does a great job conveying that - but so could most other systems, for it is not the rules that make the

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Critics' Corner

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game, but the players (and similarly the adventure is created by the Referee/Gamemaster). However, how the rules are laid out may either facilitate or hinder the imagination. These days, I am strictly narrativist as opposed to random, in my style of play. I would be happy to run a game in which no dice are ever rolled and characters merely took the role to heart. And FATE is very much conducive to building a crunchy bunch of statistics that can help the Gamemaster realistically describe a fantastical situation without getting bogged down in details. Gearheads, however, are likely to not like this game, as a result. Ms Newton provides lots of examples of how the rules may be applied, and because this is essentially a toolkit, Gamemasters and Players take what they need. However, it is not Old School where one or two lines of stats are sufficient to run with the character - and indeed that is where Traveller is superior. (So my quest goes on for a simple system that also has narrative appeal. Thus, far, I am fairly resigned that BRP does it best.)

The universe setting is believable. It is both familiar and alien at the same time; it is not grounded in our time (and indeed makes scarce reference to 20th or 21st century events) but in the Far, Far Future. With this present era being so imaginably distant because when Humanity left the Earth, a whole new era was created and then there was the inevitable crash and rebirth. As the great wheel of history turns, Earth's destiny is insignificant compared to the countless worlds "out there". There is a natural frontier and Core worlds, worlds containing Lost Civilizations just waiting to be recontacted, and evil Empires, wilderness worlds and such strange things, my dear Horatio, that you would scarcely believe.

And with FATE, one can do real or fake worlds and it blows out of the water the notion of a habita-

ble zone, as the recent discoveries of exoplanets are uncovering – most of the seminal works on planet building in RPGs have been bad or old science.

The writing throughout is vibrant, pure, amusing and laconic. The artwork is phenomenal and while ships are a little on the bleh side, supplements can quickly correct that - but even with the 'bleh' ships, they were smart enough to contain deckplans for boarding actions. A job very well done. There is ample purple prose to break up the text, and it is like reading the segue into a novel which Ms Newton has indeed penned for this setting. So what is wrong with this book? Not much, save that it is thus far one mammoth tome of information without any quick start rules. And, the indexing can be improved upon. But these are nitpicks. It really boils down to what you want in a SFRPG: do you want to play a license and forever be at the mercy of someone else's imagination - or do you want to create your own universe of shared meanings? If you want to bring a universe up to speed with the latest in SF, then this most certainly is your game. Even if you do not like FATE, there is enough here to power a dozen other systems, but you will have to wade through lots of rules. It is not so much that one has to find gems in the rough - this book is venerable dragon's treasure trove of ideas and concepts just waiting to be plucked out. But, even if you do not play FATE, this book is bound to set the gold standard for the creation of new SFRPGs. This book was a surprise, and I did not originally plan on reviewing the game, but, instead the novel (which eventually, I will review). Sarah Newton, with World War Cthulhu: the Darkest Hour and Chronicles of a Future Earth, is certainly a writer that I want to see more of. She has managed to capture the grit of RPGs and transform them into beautiful settings. I cannot wait for your future offerings. Thank you for a job well done!

Misjump

by Marc Kuhl

Capital/Core 128-1118

Asirihan discarded the start to his memoirs for the fourth time.

He had never imagined it could be so difficult a task. He paused again to gather his thoughts. Twenty-four years ago he would never have guessed he would be asked by the emperor, himself, to write memoirs of a mission gone wrong. He had lived the experience but still could not believe what he had seen. The retired scout had never considered himself a hero but now the title of hero had been thrust upon him. Sighing, Asirihan Sirhanisirerem sat again and reactivated the interface for his computer. It was time to try again.

Lendisa/Hinterworlds 317-1094

I was completing the 20 year survey of this sector. Five others assigned to this survey had resigned due to boredom. I had finished my study and found three friendly systems that were willing to discuss alliances with the 3rd Imperium. Lendisa is at the far end of this sector so I had a long way to go to reach home. Home to me was a Rich Water world in the Glimmerdrift Reaches. Those of us that live there call the world Esmerelda's Heart but most listings just call it 0635-B88A873-C.

I joined the scouts so that I could go far away from my backwater home on the edge of the Imperium as I could. I specifically requested an assignment away from the Glimmerdrift Reaches. They assigned me to Vleeman in the Old Expanses. I served four years of running messages across the sector and conducting surveys of the non-Imperial worlds there. I heard constant rumors of Solomani threats that never materialized. I did well enough for my superiors to assign me to survey the Hinterworlds. They instructed me to survey the trailing/rimward quarter and then report back to the scout base on my home

world for re-assignment. With 115 systems, many of them hostile, it had taken me over four years to complete the survey mission. Now I was ready to head for home and start my third term.

I prepared my scout courier for the jump to Cyveel. This should have been a standard fourparsec jump. I had completed my refueling and moved to a position to make the jump. I signalled the starport of my intentions to depart. They responded with a go-ahead signal. Then it happened. A flotilla of lancers, probably from Pru-pasch, arrived in the system. A squadron of Solomani Destroyers and destroyer escorts also arrived. The lancers first took a course toward the merchant ships near Lendisa's orbiting high-port but they soon turned to confront the Solomani fleet. I became caught in the middle of a shooting match and had to take evasive maneuvers to stay alive. As the action heated up and lancers started shooting at me intentionally, I realized I would have to jump if I was to escape. So I raced away from the gas giant until I had reached the safe distance for jump and I triggered my jump-drive. With their drives limited to Jump-2, the lancers had no chance of catching me.

I had misjumped 3 times in the last 8 years. I spent my week in transit trying to prepare my ship to orient itself when I came out of my jump. My ship's sensors easily found my position but they also found conflicts with the known data. The star *positions* matched what was known for the spinward/rimward part of the Hinterworlds, but the star *types*—and the system data—did not match. The giant and super giant stars all matched but the Main Sequence stars did not match at all. Places that my library said should have white dwarfs had vibrant yellow stars and parsecs that should have had one star had two or three. The sensors had me positioned in the Irdikur system. The number and type of plan-

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ets matched my library data but instead of a G4 star, I was reading a K2. Communication traffic suggested a type B starport, with an early stellar technology and a minor scout base. My communications gear analyzed the data and did not find any recognized languages from the current library. I had it scan the archives and it came closest to matching a version of Anglic used during the Rule of Man. Had I misjumped backwards in time? The star positions said I had not.

Four destroyers spotted me before I could hide. They identified themselves as the *Cumberland*, *Niger*, *Seine*, and *Danube*. They also identified themselves as belonging to the "Earth Alliance". They asked me to identify myself. I froze. How was I supposed to answer?

When they signaled me again, I responded that I was Asirihan Sirhanisirerem of the Imperial Scout Service. I told them I was on independent assignment for the 4th Old Expanses Squadron. The captain of the *Niger* identified himself as Commander Jiao and explained that they did not recognize my ships markings or my government so would I allow them to escort my ship to the starport for routine security checks and other "First Contact" dialogues that may be appropriate. Still uncertain of what exactly had happened, I agreed.

The destroyers were wedge-shaped and looked as if they mounted bay weapons—three each—and turrets—ten each. Two of them maneuvered like they had experienced crews aboard. They were mostly gray with blue highlights and an emblem consisting of a circle with sixteen stars decorated each ship. I saw similarities to the Terran Confederation Seal but the differences were enough for me to attribute these similarities to chance.

I landed my ship at the starport and was escorted to a conference room. The guards carried weapons that looked like improved versions of the gauss rifle commonly used by mercenary troops. I noticed,

too, that these weapons were designed to have a bayonet attached to them, which I thought odd for a high-stellar civilization. I did not inquire, though.

The guards took me to a conference room that had a table made from real wood. A large screen on the wall displayed a three dimensional map of "Known Space". A nearly circular territory marked "U.E.A." dominated the center. Some of the sector names looked familiar but I noticed they were not where they should be. It took me a moment to realize the map was upside-down as compared with what I was familiar with—coreward was to the bottom, rimward the top, spinward to the right, and trailing on the left.

I could see that the Earth Alliance occupied about nine sectors. Other states spaced around it were colored either green, yellow or red. The larger ones were marked with names, such as Draconia, Mentar, Sauria. A good portion at the bottom, which I knew as Imperial territory, was a red area marked "The Combine". Several clusters of small to medium sized territories were shaded red and marked "The Hive".

A map key allowed me to select from several conflicts, including the Saurischi border war, the Trilarian War, the Frontier war and the Hive war. Selecting a conflict displayed the area covered by the conflict and provided a summary as far as colonies established, colonies lost, colonies gained and the ultimate winner. The largest of these was the Hive War. This conflict covered almost one third of the map, including the Alliance capital, Sol. The colonies lost by both sides were staggering. Five major territories and almost all the smaller green territories took part. The Combine fought the Hive but also fought the Earth Alliance, and the other races involved in the conflict. The Hive and the Combine ended the war as the two losers. The Human Alliance wound up on top. The Saurischi fared the

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worst of the winning side. Nearly two-thirds of their colonies were lost. This war lasted for over 250 years! According to the date in the lower right corner of the map, this war had ended at a time just before the Second Frontier War occurred in my own universe.

My own universe. It finally sank in what had happened. My ship had misjumped into another universe! Here, my race and history did not exist. I suddenly felt very much alone.

Three officers entered the room. The first I recognized as Commander Jiao. The second was a woman wearing what looked to me to be similar to a Psi helmet. The third was a very big African man wearing a uniform with different and more elaborate rank symbols than Commander Jiao's. I saluted him when I recovered from the shock of my situation. He returned my salute and asked me to sit, then introduced himself as Commodore Nasqa and his aide, Commander Naguma. He also reintroduced Commander Jiao.

Commodore Nasqa tried to assure me that this interview was not meant to make me uncomfortable. They just had to do this for their colonies' security. I told him I understood and I would answer any questions.

They asked me about who I was and where I was from. I sighed and told them I was Asirihan Sirhanisirerem of the Imperial Scout Service. I was on a survey mission in the Hinterworlds when I misjumped and I wound up here. They asked me about the Imperium, the Hive Federation, the Solomani Confederation and the various client states that were between their borders. Commander Naguma watched me intently as I spoke. All three of the officers took notes.

When the interview was over, Commodore Nasqa asked me to wait while they reviewed their findings. The guards escorted me to a cell, where I spent the night. It felt like I spent a good part of the next day there as well. I thought about that map on the wall of the interview room. I could not remember all of the territories displayed but I think that 16 were important enough to be named. This more than doubled the seven major races of my own universe. The curiosity that caused me to join the scouts made me want to see more of this universe and meet these other people.

Commodore Nasqa returned by himself. He told me they believed my story, as astounding as it was. He told me that the alliance did not currently have the technology required to send me home but they might develop it in time. He also told me the only reason I was being released so soon was that Commander Naguma had done a deep scan on me and determined I was not a threat. With no other reason to hold me, I was being allowed to go. He said that they would need to keep my ship so they could copy it to try and recreate my ordeal. I wanted to protest but he assured me that I would be paid the full market value for my ship so that I could either by a new ship or use the money to establish a life her while their scientists tried to figure out how to send me home. I realized I had no choice but to accept. Nasga asked if they could make use of the data in my ships computer to try and recreate the experiments required. I thought about it and agreed because I knew that any information they extracted would not be of use to them. He handed me an ID card. It looked much like my own Imperial ID card. The commodore explained that security could not allow a "ghost" to be travelling their space lanes. He also told me that since nobody heard of the Third Imperium, most people would assume I was an "Outie", from a human colony that lost contact with Earth during the Hive War. He recommended a hotel that would give me enough of a personal storage space to keep my personal belongings while I sought a permanent place to stay or arrange transport out of the system.

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I returned to my scout. I would spend one last night aboard it before cleaning out my personal items. I would pack them into the air raft and either go find a new ship or hire myself on as a navigator to a free trader—if there was such a thing here.

Beatrice/(Spica) 326-1094 (Earth Alliance date)

I located the hotel recommended by Commodore Nasqa. I moved my personal belongings and then turned my attention to finding employment. I found several lists of employment possibilities and went about investigating them. I reached dead ends with all of them. I went to a cantina near the hotel to take a break. I asked the bartender if he had any advice for finding employment. He asked what sort of employment I sought and when I told him about looking for work on a free trader, he told me he knew a subsidized freighter that was looking for a navigator. The ship's medic was a friend of his. He said she usually came in the afternoon and that I should come back around 1500. He told me that working for a big corporation, like Terran Industries, might not be my style but the benefits were great so maybe I should come talk to her. I told him that I would. Since this would give me two hours, I decided to go back to the hotel, take a shower and hope to make the best first impression that I could. I also used the terminal in my room to learn about Terran Industries. From the information available, they seemed a decent enough company. Given the small amount of time available, I did not have time to research them as thoroughly as I would have liked, but at least I didn't find anything bad about them in the time I had.

I returned to the cantina shortly before 1500. I sat near the bar and waited. The place was busy enough that I could not watch everybody that came through the door. I saw an Asian woman in a yellow and black jump suit enter, but I soon lost track of her. I found her again when she stood next to my stool and said "I hear you're looking for work."

This woman had a face that even a Zhodani telepath could not make me forget. I guessed her to be about forty. When I managed to bring myself back to my senses, I extended my hand and introduced myself. I told her it was an pleasure to meet her. She told me that she would give me a short interview and then take me to meet her ship's captain if I was interested.

The woman's name was Laura Tanaka. She was the medic aboard a merchant ship subsidized by Terran Industries. They usually followed the established trade routes in the frontier sectors but occasionally travelled back to the Sol Sector. Joseph Kessler was the ship's captain. He had worked for Terran Industries for over 25 years. If I were to hire on I would have to agree to work for Terran Industries. I told her that I would be willing to work for them, if they would accept me.

Laura asked me about my past. Remembering my last encounter with Commodore Nasqa, I told her I was an Outie and that we called our territory the Third Imperium. I told her about working for the scouts and my survey mission and my misjump. I left out the interuniversal travel. My answers satisfied her and Laura asked me to accompany her to the ship.

We talked as she piloted my air raft to the docking bays. Laura went to Terran Industries Merchant Academy and excelled in the medical fields. As much as she enjoyed being the medic for the *Tom Bowline*, she hoped to someday be a ship's doctor on a passenger ship or even a hospital ship. I wondered about the name *Tom Bowline*. It seemed such and odd name for a ship.

The first officer was an Ursan—not quite the same as the Ursa I knew—named Korj. Laura advised me that no matter how fierce Korj looked, he was really just a big teddy bear. JNR-0506 was the sales manager. Laura told me that "Jenner" looked like a robot but still had flesh and blood under her

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exoskeleton. Her race was actually little more than a head and four tentacles. They were almost wiped out by the Hive. When the Alliance made contact with them, by accident, the cyborgs changed the shapes of their exoskeletons out of thanks for saving them and because they hoped that humans would find them less alien. The last crew member was a Cetaci named Hesperia. She handled ship security and fired the weapons when the ship had to defend itself. Laura also warned me that Hesperia, like most Cetaci noble women, was a psionist. Laura told me that Hesperia doesn't read minds very often because she doesn't like to. She only reads minds when she is curious and that if I was alert, I would notice a symptom, unique to me as a person, that would tell me when Hesperia, or anybody else, was trying to read me.

A flood of relief swept over me when I saw that her ship looked nearly identical to an Imperial "fat trader". It was mostly yellow with black highlights. The most prominent emblem consisted of sixteen planets connected by lines and surrounded by a solar corona. I felt a bond form between me and that ship before I even got to meet the captain.

Laura introduced me to each member of the crew. Korj looked like a giant teddy bear that was about to lose his temper. He was the tallest member of the crew. I still believe that he could have taken on the rest of the crew in a wrestling match.

Jenner was the shortest of the crew. Her shiny exoskeleton with pink overtones resembled a feminine humanoid robot. She spoke with a gentle synthesized voice. The lenses of her eyes changed colors as she spoke. They presented a soothing visual experience and I suspect that contributed a great deal to her success as a sales manager.

Hesperia took me by surprise. I expected her to be a lizard person but instead she looked like an elf. She was almost as tall as Korj. She had blue gray skin and lavender hair. She proved her ability as a psi by telling me that no, she didn't look like a lizard, and I wasn't the only one that said she looked like an elf. Her hair color was real and she didn't think her race was related to the Daryen. She also suggested to me that I tell Korj he looked like a teddy bear that was about to lose his temper.

So I turned back to the Ursan and told him "I hope that doesn't offend you." He glared at me and said, "no, it doesn't, but that's a *Theodore* bear to you, mister!" Then Korj laughed. So did Hesperia and Laura. Jenner had a synthesized "Ha! Ha! Ha!" that passed for laughter.

I suddenly felt better about Korj, but Hesperia gave me the creeps. I tried to remember what I had felt to see if I could identify my unique sensation. I decided it must have been the itchiness I felt in my eyes. I recalled feeling that also during my interview with commanders Jiao and Naguma. It frightened me to think that psionics seemed to be so accepted here.

Laura took me away from the ship to a starport lounge to meet the captain. The lounge had a dark ceiling with small lamps lighting the individual booths. Laura inquired if Joshua Kessler had arrived. The waitress answered that he had and took us to a booth in the back of the lounge. A middle aged man with greying hair scrutinized a readout on a notebook sized display screen. He looked up as we approached and gestured for us to sit across from him.

"Hello, Asirihan." He extended his hand in greeting. "I'm Captain Kessler of the *Tom Bowline*. Would you like something to drink?"

"Thank you," I answered him then turned to the waitress. "What do you have that is really good?"

"We got some new stuff in yesterday, a spice pop. A Gnolam brought it in on his ship and sold a whole cargo hold of it. The owner said it's really good."

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"I'll try that," I told her. "I'll try it, too," Laura said. The captain shook his head. "I'm all set." The waitress nodded and went off.

Captain Kessler put his screen down and looked me straight in the eye. "I understand that you are looking for a job as a navigator. Is this true?"

"Yes, sir, it is," I answered him. The waitress returned with the beverages. The herb-flavored sodas came in green bottles with twist-off tops. The flavor reminded me of the Glimmerdrift sodas I used to drink back home. This made it easier for me to relax during the rest of the interview.

Captain Kessler asked me about my past, what I had done for the scouts, and how I got to be here. I told him as much as I could, leaving out the part of being from another universe. My answers seemed to satisfy him. After two hours, the captain stood up and extended his hand to me. "You've convinced me," he said. Turning to Laura, he told her, "Take Mr. Sirihanisirerem back to the ship and have Korj assign him some quarters. I want you, Korj, and Hesperia to help him load his belongings and find whatever other equipment he might need. Jenner and I are going to go and get our next assignment. I'll see you all back at the ship," and then he was off.

This seemed simple enough. I couldn't believe that it was over so fast. I held my breath long enough to thank whatever deity had suddenly taken upon itself to watch over me.

Laura, Korj and Hesperia helped me get my few belongings to my quarters. I had only brought my personal effects so there was no trouble getting my stuff all into the quarters.

Korj examined my laser carbine and commented that it appeared to be a bit fragile. "Would you like to get it exchanged for a sturdier weapon?"

I seldom had need to fire the carbine so I agreed to their suggestion. We returned it to the air raft. Since they already had the full allotment of ship's vehicles, there would not be room to keep my air raft so I agreed to sell this, too. I had to laugh to myself a little. I may have been a man without a home, but at least I was approaching the status of being a wealthy man without a home.

Korj took the air raft; Laura, Hesperia and I rode the rocket tubes. This mode of transport got us there so quickly that we passed Korj as he sped along the transit tubes. He parked the raft in from of a transportation dealer near the exit of the rocket tubes. We took the slidewalks to the dealer and joined up with Korj, who had already rejected the dealer's first offer. Korj argued as to the quality and unique alien manufacture of the particular air raft. The salesman claimed his son could produce a better made up alphabet. Korj looked directly at the salesman and dared him to check the VIN in his computer. The salesman took bet and scanned the VIN with his datapad. The query returned the complete information about my air raft, including the manufacturer and the world it was manufactured on. This surprised me as I would not have expected their system to be able to correctly translate the codes. The salesman looked back to Korj. "Okay, if this is a phony, it's a good one." He quoted a second price. Korj rejected it and named his own price. They haggled until Korj got the full list price for my air raft when it was new. I could now understand how he got to be the first officer. I wondered how he compared with Jenner at haggling.

Korj handed me my updated credit chip.

The arms dealer seemed fascinated by my laser carbine. He regretted, though, that there would probably be no market for such a fragile weapon here. He suggested that we offer it to a museum. The right museum should be willing to pay good money for it. We agreed to his suggestion. Not wanting to lose any business he asked if we were interested in buying any weapons to replace the laser carbine. I asked him to show me what he had available.

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The salesman explained that since Beatrice was a frontier world that did not get full access to the best technology, most of what he had for sale were slugthrowers. He had gyroslugs, needlers (chemical and gauss), tanglers, gauss slugthrowers, and a single force beam rifle. The force beam rifle fascinated me. It hurled a "kinetic fist" at its target, knocking down even an armored soldier and breaking its targets bones (if it had any). I did not know of any Imperial weapon that could compare to it. I purchased this and a gyroslug pistol, which fired rocket ammunition like a accelerator rifle but was easier to fire accurately. I chose that weapon because I could use it in a vacuum or under water. Then he started showing me the melee weapons they had for defending oneself at close quarters.

He had vibro weapons, electric weapons and force weapons. Nothing the Imperium had compared to these weapons. I had to ask why anybody would create so many hi-tech melee weapons. They gave the standard answer about being easy to hide and being legal on all but the most strict worlds. But they had two other reasons that my universe did not have: the Saurischi and the Hive.

The Hive and the Saurischi lived underground. They were masters of ambush. Soldiers that fought either often had only their wits and daggers to protect them at close range. That also explained the bayonet fittings on the guns. The Ursans, and almost everybody else, used fast assault shuttles to breach the walls of enemy ships or stations and soldiers would board the vessel to capture or cripple it. If the boarding happened quickly enough, the defenders did not always have time to prepare so these actions often occurred at close range as well. It sounded reasonable but I wondered how often armies really clashed at such close range. The only close range fighting I had ever done was in tavern brawls where I used my fists. Occasionally fights with melee weapons occurred but not with the frequency they seemed to here. I tried several weapons and proved myself incompetent with all of them. I finally settled for a vibrodagger, since I at least showed enough proficiency with it that Hesperia, Laura and Korj felt they could train me to use it better.

We made several other stops. Here we purchased a variety of small personal items to improve my personal comfort on the ship. Probably the best item we got was an interactive history chip that would allow me to learn fully about this universe and the histories of the people in it. I only hoped that it would be as fascinating as the symbols on the map had promised.

Now we returned to the ship. Captain Kessler and Jenner had not returned yet. Laura contacted the captain and learned they would be out for several more hours. They had not found enough cargo to fill the hold yet. Jenner was negotiating with somebody to transfer some ore to an industrial world we would stop at after two more jumps.

"What do we do while waiting for them?" I asked.

"We just wait," Korj answered.

"Well, I am going to get some sleep." Laura stretched and went to her quarters. I decided this would be a perfect time to read the history crystal.

I went to my quarters and put the crystal into the viewscreen. It was time to learn about my new home.

TravellerCON/USA 2018

TravellerCON/USA 2018 is happening the weekend of 5-7 Oct 2018 at the Lancaster Host Resort. This year's theme is "Solomani". The Kickstarter (see http://kck.st/2vhyXt2) has been fully funded; register now and join the fun! More info can be found at Kickstarter and at the TCUSA web site

(http://www.travellercon-usa.com).

Come play with us!



Up Close and Personal

Puulani Meagher

profiled by Sam Swindell

Puulani Meagher 33B697 Age 46 Cr34,000 7 terms Navy Lieutenant (Rank 2), Pension Cr14,000 Ship's Boat-6, Laser Pistol-2, Laser Weapons-1, Mechanical-1, Ships Tactics-1, Turret Weapons-1, Vacc Suit-1, Forward Observer-0, Jack-of-all-Trades-0, Leader-0, Wheeled Vehicle-0 Laser Pistol, Mechanical Tools, MilStd Vacc Suit Member, Travellers' Aid Society

(Homeworld: StarPort C, Size=Med., Atmos=Thin, Hydro=Wet, Pop.=High, Law=Mod., Tech 8)

Puulani is a small, dark woman with a mixture of a graceful appearance and a halting, tremulous manner. She wears her hair cropped close, from long shipboard habit. Being the oldest in a broken home led her to develop an almost fanatical work ethic early. She started as a Star Cadet in a poor community of a TL 8 system, but her initial aptitude, enthusiasm, and some good luck got her a place in the fighter squadrons of the sector navy. It was there that she married a slightly older naval pilot, who was killed not two years later. She was, because of her demonstrated ability as a fighter pilot, commissioned much later into the Imperial Navy. She was happy to make Lieutenant in her last few years in the IN, and to have flown dozens of combat missions in *Ramparts*.

She has a deadpan stare that is unnerving to some, and speaks very little. Indeed, she may go through an entire formal dinner without uttering a syllable. This manner and her nickname, "Diamond Butt", belie her genuine concern for any subordinates, obvious through her actions but never speech or affect. She

Freelance Traveller Goes Multilingual

Although the PDFs will remain English-only, we have had offers—and will entertain others—to translate selected (by the translator) articles into other languages. Each translation will link to its English original in our website, and each language will have its own index page listing all articles translated into the language. If you speak a language other than English fluently, and are interested in translating for us, please email the editor at editor@freelancetraveller.com

speaks very little because she is actually both shy and intellectually unsure of herself. She only truly came into her own in the pilot's seat; in her *Rampart*, she flew like she was invulnerable and in total control of her battlespace. Though she was never able to inspire others in speech or larger leadership initiatives, her flight were dedicated to her, just because she was a flying virtuoso who worked harder than they or any of their superiors did. While not a risk-taker, Puulani was essentially fearless in the cockpit, but terrified by the prospect of small talk. Romance is completely out of the question in her mind, and she treats any suggestion of this or any social overture as distasteful distractions, like the flying parasitic insects of her homeworld.

She enjoys tinkering mechanically with ships, but will stick to the minor systems and knows she is no engineer. She will spend long hours on such minor tasks as servicing life support or working to find and fix the squeak in an older iris valve. Puulani has been spending the first six months of her mandatory retirement using up TAS middle passages, and taking the odd working passage. She is not a fish out of water, but rather stuck in the shallows; she longs to be back in the pilot's chair again, and is hoping for a chance. She would ideally like to sign up with some mercenary force or private security concern. In the mean time, she is willing to take small boat piloting jobs.

Your Input Helps

Freelance Traveller is always looking for new material to include. Please email us with submissions and ideas at the main editorial address, editor@freelancetraveller.com.

Size matters to us, not to you. Concentrate on making your article the best it can be. We'll offer suggestions that we think can fill gaps or improve an article; please take them in the spirit intended—we're *not* saying your writing is bad; we just want *Freelance Traveller* to be the best *it* can be, too!

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- Forums:

Traveller Fanzine section of SFRPG: http://www.sfrpg-discussion.net/phpBB3/viewforum.php?f=36
Lone Star at Citizens of the Imperium: http://www.travellerrpg.com/CotI/Discuss/forumdisplay.php?f=13

Note: you must be registered with the forums to be able to use this method.

Traveller on the Internet

IRC: The #Traveller and #LoneStar channels

Freelance Traveller sponsors channels for Traveller fans on the Undernet and Otherworlders IRC networks, and the two channels are "bridged" so that if you're visiting either, you can see what's going on in the other, and talk to people there. For more information about both channels, see our informational pages at http://www.freelancetraveller.com/infocenter/travnet.html#IRC and http://www.freelancetraveller.com/infocenter/travnet.html and http://www.freelancetraveller.com/infocenter/t

You can also run "play-by-IRC" game sessions in either channel; please stop in and ask the channel operators (FreeTrav) to schedule it, so we can ensure that the 'bridge' and the 'bartender' are set into a nondisruptive mode.

Please watch the Traveller Mailing List, the Mongoose Traveller forum, and the Lone Star section of the Citizens of the Imperium forum for announcements of Topical Talks!

News About Traveller

Recent Traveller Releases

July/August 2018

- **FSpace Publications** has released Vanity Rose yacht ship plans sheet, BSL10T15LF-A1 Light Fighter ship plans sheet, Moontrader 100ton trader ship plans sheet, BSL35T Modular small craft ship plans sheet, Far Encounters: space counters 1, Feraerfon atmospheric shuttle ship plans sheet.
- **Alphecca Publishing** has released *Mako Strike Fighter*.
- **Michael Brown** has released *Past Prologue*, *The Sounding*, *Planet of Storms*, *The Dangard Experiment*, *The Sea of Tranquility*.
- Fat Goblin Games has released Publisher's Choice—Science Fiction: Greenmen of Belzar, Publisher's Choice—Science Fiction: Imagion.
- Colin Dunn has released Journal of Comparative Xenobiology: Issue 1, Edge of Space: Robots.
- Gypsy Knights Games has released Hercules-class Heavy Freighter.



Submission Guidelines

Content

Freelance Traveller supports Traveller in all of its incarnations, rulesets and settings, both. However, there are some limitations on the combination of ruleset and setting that we will enforce:

We refer to the rules defined in Classic *Traveller*, *Mega-Traveller*, *Marc Miller's Traveller* (T4), *Traveller*⁵, and both editions of Mongoose *Traveller* as "Classic Compatible" or "2D6". This includes Sceaptune Games' *Hyperlite*, and Samardan Press' *Cepheus Engine*. For these rulesets, any setting, whether official, commercially-published-but-unofficial, or house setting, will be supported. A partial list of published settings supported under 2D6 *Traveller* includes the Third Imperium setting (including polities other than the Third Imperium proper), Reign of Discordia, Clement Sector, Hyperlite, Twilight Sector, Orbital, 2300AD, Foreven Sector, Mindjammer, and I'm sure I've missed others.

Other rulesets, such as *GURPS* Traveller, Traveller²⁰/SF20, FATE, Hero System, and so on are different enough from 2D6 Traveller to make conversion more difficult, and will only be supported for the Third Imperium setting (including polities other than the Third Imperium proper)—we feel that combining these rulesets with a non-Third Imperium setting makes the game something other than Traveller. The Third Imperium setting includes all eras and polities of the Third Imperium, however, so mixing (for example) the "Milieu Zero" Third Imperium with FATE rules would be fair game, as would be playing out some of the Zhodani core expeditions using SF20.

Send us any type of article-house rules and rulemixes; animals you've created for encounters; adventures (both long form and short); after-action writeups of conventions or your gaming night; equipment; vehicles; starships; other consumer goods; character profiles (NPC or PC); reviews of Traveller products, of products for other games that you feel can be "mined" for use in Traveller, of fiction (or non-game nonfiction) that "feels" like Traveller, or presents ideas that would be of interest to Traveller players or referees; new races or organizations or societies; artwork; or pretty much anything else you can think of. Articles on real-world science are of interest, when accompanied by rules for applying that science to Traveller. Tools and techniques you use for preparing for a session or a game are also welcome. We're also compiling a "Freelance Traveller Cookbook"; quick and interesting recipes for snacking before, during, or after sessions go here.

Published *Traveller* has generally been kept to a rating approximating the MPAA "PG-13" rating, or the ESRB "T" rating, and *Freelance Traveller* respects that, but does not draw a hard line. Mature themes may be addressed, but explicit or excessively violent/bloody material will not be accepted for publication.

Where To Send It, and What To Send

Except in very rare cases, all submissions must be through email, sent to either editor@freelancetraveller.com or submissions@freelancetraveller.com. All submissions should include the submission itself and a full name and valid contact information for the submitter. If you wish the material published under a "handle", please give the preferred handle and explain why publication under your real name is not acceptable—we prefer to publish under the real name, but realize that this can be a problem in some cases.

Rights

By submitting material, you grant *Freelance Traveller* a non-exclusive perpetual right to use the material in our PDF magazine and website (and mirror sites authorized by us), with minor editing for space and other suitability issues. While we generally will only use an article once, if we feel it appropriate, we'll reprint it.

The right applies to *Freelance Traveller* magazine itself, not to specific individuals associated with it. If the current management of *Freelance Traveller* finds it necessary to withdraw from association with the magazine or the *Traveller* community (not gonna happen as far as we can see), and others take over the operation of the magazine and website, the rights granted above stay with the magazine and permit the thencurrent operators to exercise those rights.

Formats

Text material can be submitted in any common textual or word-processing format, but we prefer (in no particular order) Microsoft Office, Open Office or one of its forks (we currently use Libre Office), RTF, minimally-formatted HTML, Markdown (including CommonMark and Github-flavored) or plain text, all with full Unicode support. Our readership is principally English-speaking, however, so foreign languages and scripts should be used sparingly, and if not intended as purely decorative, an English transcription of pronunciation (and possibly a definition in English as well) should be included.

Graphics should be submitted in an appropriate format for the subject matter—in most cases, that will be GIF, JPEG, or PNG at 100dpi or higher. If it's principally line-drawing material, it may be more appropriate to submit it in a vector format; most common vector formats can be imported by our tool of choice, CorelDRAW! X4 or X6. Please try to leave some space around the edges for cropping, especially for covers. We publish in PDF in US Letter and ISO A4 sizes, and columns in the magazine are roughly 3.5 inches (actually a little more) wide.

Avoid submitting in XPS or PDF format; these are generally seen as "output-only" formats, and trying to extract material in usable form from these formats is problematical.