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CHALLENGE

GDW's Magazine of Adventure Gaming

*Celebrating
10 years of Traveller!*

A Decade of Traveller
by Marc W. Miller et al

Inside an M1
by Harold Martin

Trade in 2300
by Gary Thomas

Incorporating the Journal of the Traveller's Aid Society

TWILIGHT: 2000

By Air or By Sea

Airlords of the Ozarks



Airlords of the Ozarks

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Gateway to the Spanish Main

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CHALLENGE

GDW's Magazine of Adventure Gaming

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Artists in this issue: *Lauretta Oblinger*: p. 3; *Tim Bradstreet*: pp. 12, 23; *D.J. Barr*: pp. 37; *Liz Danforth*: pp. 42, 44; *Rob Caswell*: pp. 28, 29; *Joe Lambert*: p. 36. Cover: Painting by David Martin, cover design by Lauretta Oblinger.

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Submissions: We welcome articles and illustrations for *Challenge*. Please inquire before submitting manuscripts, enclosing a stamped, self-addressed envelope; we will send manuscript guideline and format sheets. Foreign inquiries (except APO/FPO) please include an International Reply Coupon.

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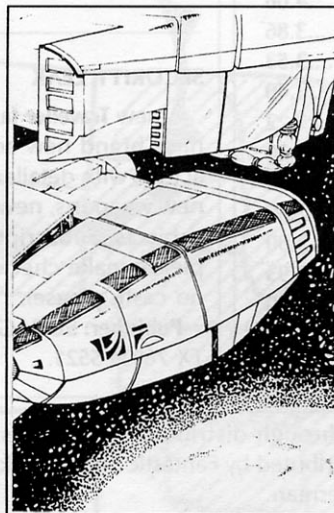
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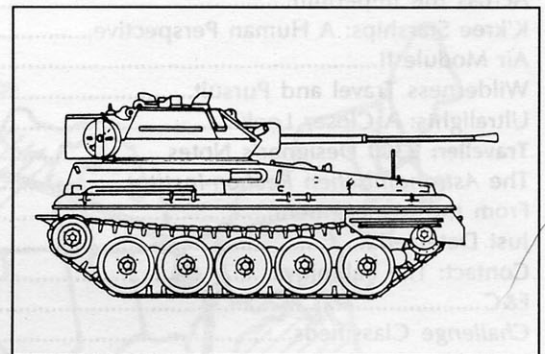
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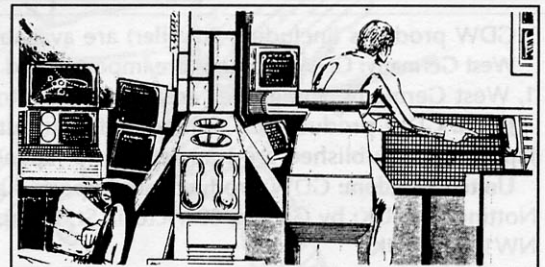
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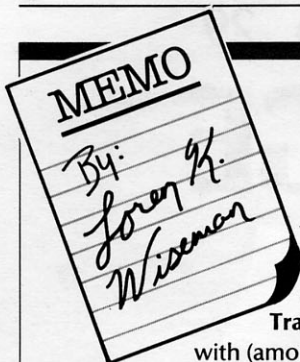
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From the Management

As our cover announces, this year marks the tenth anniversary of **Traveller**. We are commemorating it with (among other things) a collection of essays from past and present contributors. We feel sure that all **Traveller** players will be interested in what they have to say.

In addition, we have printed a little preview of one of our major products-to-come, **MegaTraveller**. Marc discusses the **MegaTraveller** project in his essay, so I won't say any more.

One last note: **Traveller** players will find something particularly interesting in this issue's TNS.

CREDIT WHERE IT'S DUE: LIZ DANFORTH

I made a major error in the last issue. Those of you who look at our covers with more than a casual eye will have noticed that last issue's cover was particularly striking...indeed, many of you did, and noted the fact on your response forms. The cover was the first full-color painting done for us by Liz Danforth, who has supplied us with outstanding art for years. My error was in neglecting (albeit inadvertently) to credit her on our masthead.

—Loren K. Wiseman

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JUST DETECTED

CONVENTIONS

GATEWAY 1987

September 4-7, Los Angeles Airport Hyatt Hotel. Roleplaying, wargames, miniatures, computer and family boardgame tournaments, flea markets, auction, seminars, demonstrations, and exhibitor area. For more information, contact Gateway 1987, C/O DTI, PO Box 8399, Long Beach, CA 90808, or call (213) 420-3675.

DRAGON CON '87

October 2-4, 1987, Atlanta, Georgia. The Southeast Fantasy and Gaming Convention will be held in the Pierremont Plaza Hotel and Conference Center. Guests include Michael Moorcock, Gary Gygax, Richard "Lord British" Garriott, Robert Asprin, Lynn Abbey, Brian Herbert, and Steve Jackson. Pre-registration is \$20 Fan and \$25 Game through 4/15/87, \$25 Fan and \$30 Game through 9/15/87 (Game registration includes four tournament entries). Strategic, FRP, and computer gaming in over 75 featured tournaments, panels, dealers' room, masquerade, video room, auction, and more! Send self-addressed stamped envelope to Dragon Con '87, Box 148, Clarkeston, GA, 30021, or use your Visa or MC to charge your advance memberships by calling toll-free 1-800-554-1162 (in Georgia, call 404-441-3045).

MAGAZINES

SECURITY LEAK

A new **Traveller** fanzine from SORAG Laboratories. They promise brand new adventures (each loaded with intrigue and action) with detailed background, floorplans, new technology, new weapons, new medicines, and columns on a diversity of subjects. Subscriptions are \$12 for four issues, \$4 per issue; please make checks and MOs payable to Gregg Giles (send no cash, please).

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West Germany: GDW products are imported and distributed by Fantastic Shop, Konkordiastr. 61, Postfach: 3026, 4000 Dusseldorf 1, West Germany. Some titles are translated into German.

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Weather

An easy way to make your **Twilight: 2000** campaign more realistic is to add in weather. It adds an interesting feel to the game if the weather is as predictable as it is in real life; for example, if it rains on the dawn of the raid you were about to pull, or if a snowstorm covers your retreat. This article will explain where to find sources of weather information and the effects of weather on the conduct of a campaign.

As **Twilight: 2000** modules stretch out to cover more and more of the globe, you may need weather information for a larger set of places around the globe. Your sources may need to become a combination of those listed here instead of any one source. Fortunately, most of the sources are easy to find, particularly for adventures taking place in the U.S.A.

For a realistic weather pattern that is as varied as the real thing, use the real thing. Any current source of weather information will do.

DAILY RECORDS

Not everyone has the Weather Channel on cable TV, but if you do, watch and take notes. They show weather maps of Europe, so you can track weather fronts as well as temperature in the area of your campaign.

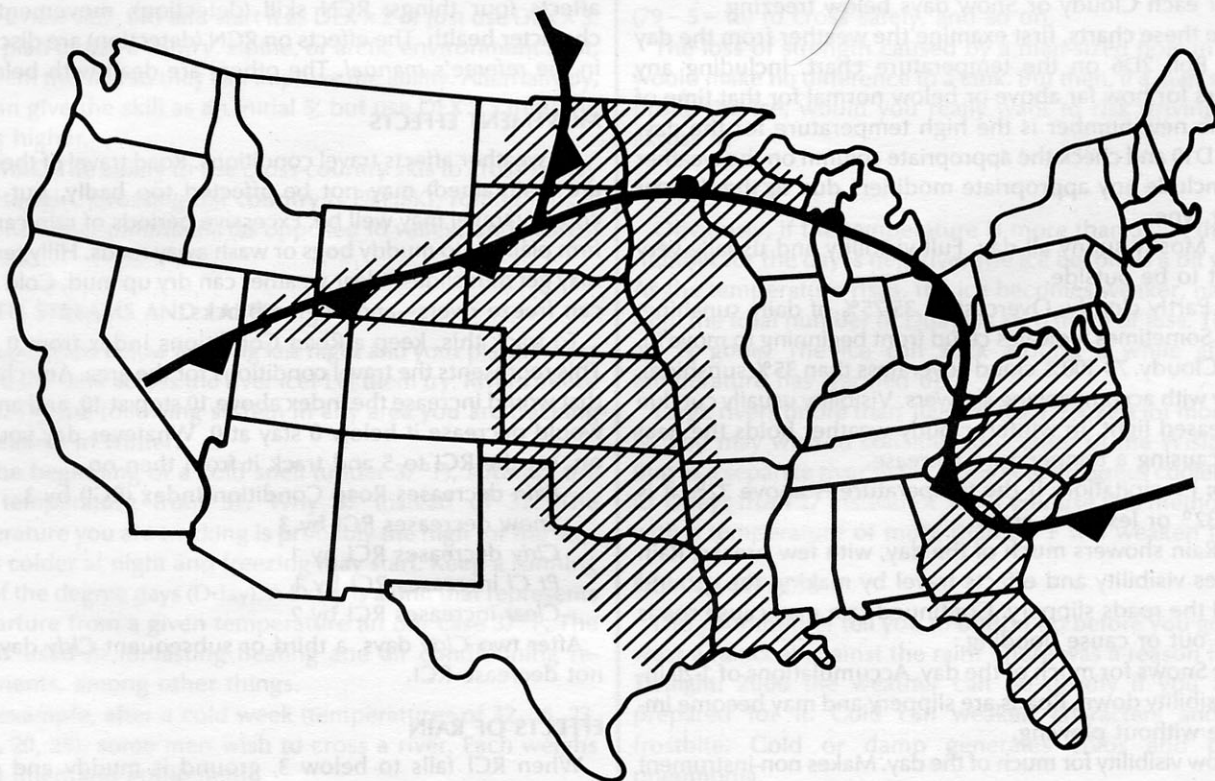
For those of us without cable television, any major city paper's weather section includes national and international weather. Other cities in the U.S.A. are listed with the temperature and weather. Europe is usually well-covered by city. Most listings include many of the following: Athens, Belgrade, Berlin, Bonn, Copenhagen, Geneva, Helsinki, London, Moscow, Oslo, Paris, Rome, Sofia, Stockholm, Vienna, and Warsaw. Other parts of the world are covered in varying degrees, depending on the paper.

Odds are that the exact area of your campaign is not covered by these sources of information. However, by

tracking a set of cities in the area of your campaign, you can track major weather fronts as well as the general conditions. You can approximate the weather by averaging between the registered places and taking the terrain into account.

What does a weather front look like if you do not have a map— just a set of readings? That depends on the season. In anything but winter, it looks like a line of rain, usually accompanied by a drop in temperature of ten degrees or more as the storm passes through. In winter, the temperature drop may not be as noticeable, but you will see a moving line of snow followed by clear weather.

After a week or two of tracking weather in an area, you get a feel for the general pattern and direction of the weather. Berlin, Copenhagen, and Stockholm often have the same weather a day before it reaches Warsaw. A day before that, the same weather is often in Oslo. This tells you the direction and



approximate speed of the weather front.

THE ALMANAC APPROACH

But you don't want to collect the daily weather data for Europe, eh? Okay, try method two. Get a listing of the average weather by season for the area. An almanac or encyclopedia or other study of the area in question should have such a listing. Fodor's Guides have such a listing. This gives you average seasonal temperature and precipitation for the area. You can use the charts below to make up your own weather. I have made one for Poland, as an example.

TEMPERATURE

POLISH CLIMATE

2D6 Change	If Clear	If Pt Cl	If Cldy	If Precip
1 -15°	1 Clear	1 Clear	1 Clear	1 Clear
2 -10°	2 Clear	2 Clear	2 Clear	2 Pt Cl
3 -7°	3 Clear	3 Clear	3 Pt Cl	3 Pt Cl
4 -5°	4 Clear	4 Pt Cl	4 Pt Cl	4 Pt Cl
5 -3°	5 Pt Cl	5 Pt Cl	5 Cldy	5 Cldy
6 -1°	6 Pt Cl	6 Pt Cl	6 Cldy	6 Cldy
7 None	7 Pt Cl	7 Cldy	7 Cldy	7 Cldy
8 +1°	8 Cldy	8 Cldy	8 Cldy	8 Cldy
9 +3°	9 Cldy	9 Cldy	9 Precip	9 Precip
10 +5°	10 Precip	10 Precip	10 Precip	10 Precip
11 +7°				
12 +10°				
13 +15°				

Weather Type Modifiers: July to October -1, March, April +1.

Temp Modifiers: +1/-1 for every 5° below/above normal for the area.

-5° for each day of Rain.

+3° for each Cloudy or Snow days below freezing

To use these charts, first examine the weather from the day before. Roll 2D6 on the temperature chart, including any modifiers for how far above or below normal for that time of year. The new number is the high temperature for the day.

Roll a D10 and check the appropriate column on the weather chart. Include any appropriate modifiers due to the date or weather type.

Clear: Mostly sunny all day. Full visibility and usually very pleasant to be outside.

Pt Cl: Partly cloudy. Overcast or 35-75% of daily sunshine, no rain. Sometimes indicates cloud front beginning to move in.

Cldy: Cloudy. 70-100% cloud cover (less than 35% sunshine), possibly with accompanying showers. Visibility usually cut due to decreased light. In winter, cloudy weather holds the heat better, causing a temperature increase.

Precip: Precipitation. If the temperature is above 32°, it is rain. If 32° or less, it is snow.

Rain: Rain showers much of the day, with few breaks. Rain decreases visibility and effects travel by making the ground soft and the roads slippery. Continued rain may cause roads to wash out or cause flooding.

Snow: Snows for much of the day. Accumulations of 1-20 inches. Visibility down. Roads are slippery and may become impassable without plowing.

Fog: Low visibility for much of the day. Makes non-instrument flying dangerous.

Tstrm: Violent thunderstorms. Treat as rain except for the slight chance (2 consecutive 00 rolls on a D100) of being hit

by lightning. This chance can be increased by being near a tall object.

It is worth noting that each of these is a general description of the weather during the day. Rain can be either a day-long drizzle or a torrent of an inch or more in a few hours. Snow can come down gently, an inch or two falling all day, or it can snow more than an inch an hour. All this is left up to the referee, but, the general effects hold true. Even a gentle rain over several days will cause soft ground and flooding.

Fog and thunderstorms are not listed on the weather charts, but they do occur at rare intervals, at the referee's option.

When you are approximating the local weather, take the local terrain into account. High mountains will drop the temperature. A mountain range in the way of a weather front will cause the snow or rain to fall on the mountains and drier weather on the other side of it. A neighboring large body of water will increase the precipitation but moderate weather changes.

However you figure it out, lay out your weather a few game days in advance. It can help you shape your own scenarios. You can figure out any effects on NPCs before the fact. Remember, the rain falls on everyone. Consider the effect on deciding to escape from Krakow by helicopter in a rain storm: do your characters want to chance it? Is an NPC pilot willing to fly into the teeth of a raging thunderstorm? Also, if prepared beforehand, you can quickly resolve Meteorology (MET) skill use.

WEATHER EFFECTS

Great, you're saying. Now I can figure out the weather. What of it, besides adding a touch of reality to the game? Weather affects four things: RCN skill (detection), movement, and character health. The effects on RCN (detection) are discussed in the *referee's manual*. The others are dealt with below.

MOVEMENT EFFECTS

All weather affects travel conditions. Road travel (if the roads are maintained) may not be affected too badly, but cross-country travel may well be. Excessive periods of rain can turn firm plains into muddy bogs or wash away roads. Hilly territory may get mudslides. Clear weather can dry up mud. Cold snaps can freeze rivers—and engine blocks.

To track this, keep a Road Conditions Index from 0 to 10. This represents the travel conditions for the area. Any changes that would increase the index above 10 stop at 10, and any that would decrease it below 0 stay at 0. Whatever day you start on, set the RCI to 5 and track it from then on.

Rain decreases Road Condition Index (RCI) by 3.

Snow decreases RCI by 3

Cldy decreases RCI by 1

Pt Cl increases RCI by 1

Clear increases RCI by 2

After two *Cldy* days, a third or subsequent *Cldy* day does not decrease RCI.

EFFECTS OF RAIN

When RCI falls to below 3, ground is muddy and cross-country travel speeds are reduced (by ¼ or ½ depending on severity, referee's choice).

When RCI falls to 0, roads may wash out, be covered by

mudslides, or flood. The usual roadside trenches are too full or clogged to drain properly. All travel speeds are reduced to half. Trenches are difficult to dig or maintain in the mud.

Note that a couple days of rain followed by cloudy weather can keep the ground muddy enough to impede travel for days after the rain has stopped.

Modern combat aircraft are not hindered by light rain. Consider heavy rain or a weather front moving through as a DIF:RWP task.

EFFECTS OF WINTER

In winter, the effects are a bit different. Tracked vehicles get about in snow fairly easily. Wheeled vehicles simply do not do as well. Cut cross-country speeds for wheeled vehicles by $\frac{1}{4}$. Mishaps include skidding off the road, immobilizing the vehicle on an icy spot, or a slippery hill that cannot be climbed.

It is also worth noting that just plain clear weather (if the temperature remains below freezing) will not clear snow-clogged roads. When RCI falls to 0 due to snow, roads can remain impassable until the snow thaws or someone actively plows a road.

Cold weather without snow renders ground hard (frozen). It does not affect travel. However, digging trenches or foxholes becomes extremely difficult. Better use explosives.

Snow has some effects on flesh-powered transport. Men on foot or horseback travel at half speed. Men using snowshoes move at normal speed. Men using cross-country skis travel at one-and-a-half times normal speed (Tr of 30/30). Combat move speeds are normal in skis, except that you cannot crawl. You cannot move faster than a trot in snowshoes.

This brings up the question of who can use skis. You can create a new skill, SKI and start it as $DEX \times 2$ or just use $DEX \times 3$. If you plan to use a wintry, alpine, or arctic environment a lot, give them the skill so they can improve the ability. Alternatively, you can give the skill as an initial 5; but use $DEX \times 3$ until the skill is higher.

SKI MBE: The ability to use cross-country skis to cross snowy or icy terrain. Crossing flat country is ESY:SKI; rolling hills is AVG:SKI; sheer mountains (as opposed to valleys and passes) is DIF:SKI.

FROZEN STREAMS AND LAKES

So it dropped below freezing last night and your players want to drive the tank across the river ice? Let them try. Rivers freeze slowly. Try the following system in any area you are tracking the weather in winter.

At the beginning of a cold spell (under 37°F), subtract the daily temperature from 37. Why 37 instead of 32? The temperature you are tracking is probably the high for the day. It gets colder at night and freezing may start. Keep a running total of the degree days (Dday). A Dday is a unit that represents a departure from a given temperature (in our case 37°F). The term is used in forecasting heating and air conditioning requirements, among other things.

For example, after a cold week (temperatures of 32, 28, 23, 21, 23, 20, 25), some men wish to cross a river. Each weighs 110 kg (men and equipment).

$$37 - 32 = 5$$

$$37 - 28 = 9$$

$$37 - 23 = 14$$

$$37 - 21 = 16$$

$$37 - 23 = 14$$

$$37 - 20 = 17$$

$$37 - 25 = 12$$

$$5 + 9 + 14 + 16 + 14 + 17 + 12 = 87, 87/110 = .791$$

Roll a D100. On a roll of 79 or less, the ice holds. If the chance of the ice holding is more than 1 (100 percent), the ice holds automatically.

The same ice is now asked to hold mounted men: 500 kg for each horse and rider: $87/500 = .174$

Roll a D100 for each rider. Those rolling 17 or less are safe—the ice holds. Those rolling over 17 break the ice and had better make a DIF:SWM roll to avoid sinking beneath the ice. Those mounted on top of something (like a horse or vehicle) can try to leap clear (AVG:DEX). Perhaps the group should consider waiting another day or so...

Lakes: A lake is standing water. Because it does not move as much (not as much molecule-to-molecule friction), it freezes faster. Consider a lake to freeze twice as fast as a river. To simulate this, double the degree days when figuring if the ice holds. For the cavalry squad to try crossing a lake in the same area as the river used above: $87 \text{ Ddays} \times 2 = 174, 174/500 = .348$

Roll a D100 for each rider. Those rolling 35 or less are safe—the ice holds. The odds are better for crossing the frozen lake.

Once the ice has broken, it is weaker. For each subsequent object of a similar mass, subtract an additional 5 percent for each break. This is cumulative. For instance, say that an infantry squad charges across the river used above. The second man rolls an 82 and falls through the ice. The third man must roll a 77 or less ($79 - 5$) for the hole weakening the ice). The fourth man rolls a 92 and falls through. The fifth man must roll a 67 ($79 - 5 - 10$) to cross safely, and so on.

The loss of strength caused by a man-sized hole in the ice would make no difference to a tank. But then, if a man's weight broke the ice, would you really want to risk driving a tank across it?

MELTING ICE

Obviously, if the temperature is more than 37°F , the Dday number for the day is negative. The ice becomes a bit weaker. As the temperature rises, the ice becomes weaker, naturally, until the total number of Ddays is zero more or less. Then the ice is gone. The ice can stick around a while after the temperature has warmed up.

Large rivers (more than 100m across) freeze a lot more slowly. You may wish to consider the center of the Wisla or the Bug as a separate river that freezes at ten degrees cooler (figure its Ddays from 27 instead of 37). If you use this method, days with a temperature of more than 27°F will weaken the ice.

HEALTH EFFECTS

Did your mother tell you to button up before you go out or wear a raincoat against the rain? There was a reason for it. In **Twilight: 2000** the weather can be deadly if you are not prepared for it. Cold can weaken characters and cause frostbite. Cold or damp generates colds and possibly pneumonia.

COLD WEATHER CLOTHING

The defense against the cold is (obviously) heat. Standard

fatigues are fine down to about 50°. The **Twilight: 2000** equipment list includes some items for winter use: thermal underwear, parkas, and portable heaters. Listed below are what these protect against, with some additional equipment: civilian winter coats, gloves, sweaters, and the winter combat suit.

Light Gloves: Light leather, synthetic, or wool gloves. Protects hands against frostbite to 30°. Wt: .2 kg \$15 (C/C)

Heavy Gloves: Heavy winter gloves or mittens. Protects hands against frostbite down to 10°. Wt: .5 kg \$45 (S/S)

Sweater: Synthetic or wool sweater. Protects against 20°. Wt: .5 kg \$30 (C/C)

Winter Combat Suit: Insulated combat suit, usually white (called overwhites in the army). Includes winter boots. Protects against 40°. Wt: 5 kg \$300 (R/S)

Thermal Fatigues: Woolen fatigues for winter use. Includes socks and boots. Protects against 25°. Wt: 6 kg \$100 (S/S)

Thermal Underwear: Worn under fatigues or winter combat suit. Includes socks. Protects against 15°. Wt: .5 kg \$30 (S/R)

Parka: Worn over fatigues. Cannot be worn over winter combat suit. Includes boots. Protects against 35°. Wt: 3 kg \$150 (C/C)

Civilian Winter Coat: Worn over fatigues. Protects against 30°. Wt: 3 kg \$100 (C/C)

Sleeping Bag: Only for sleeping in. Protects against 30°. Wt: 4 kg \$50 (C/C)

Assume that a character can withstand 50°F with no ill effects wearing just summer fatigues and a jacket. To survive cooler weather, one needs to wear heavier clothing or begin to suffer exposure as extra fatigue.

For example, a sweater protects against 20°. When worn with fatigues, a character can withstand 30°F with no ill effects (50°-20°). Thermal underwear protects against another 20°. Yet, if the weather drops to 0°F, a character wearing fatigues, sweater, and thermals still suffers an additional fatigue.

The most obvious problem of cold weather is heat loss. For each four-hour period a character is exposed to weather he is inadequately dressed for, add one fatigue level for each 20 degrees for which he is unprepared. The longer the character remains exposed to the cold, the weaker he becomes, because his body expends more energy just to replace the heat lost to the environment.

If any characteristic reaches 0 due to added fatigue from weather, the character passes out. If this occurs while the character is still exposed, the character may continue to be sapped of strength. When CON and STR reach 0, the character freezes to death.

For example, if a character stands outdoor guard duty dressed in fatigues (50°), and the weather drops to 35°, the fatigue level increases to hard from easy, and he suffers a fatigue level loss (all that shivering!). If he has somewhere warm to go to after his shift, he'll recover the fatigue level normally.

Note: The effects of weather are in addition to those of starvation and heavy work. Obviously, someone fighting in winter with inadequate food or clothing will not last long.

To recover from exposure requires only resting in a warm place and eating warm food while you recover from the fatigue. If the exposure has become hypothermia, the character must make a DIF:CON to keep homeostasis so that the body's own systems recover. Hypothermia then becomes exposure. If not, the character does not recover.

FROSTBITE

Frostbite is the freezing of exposed skin and flesh. If left untended and merely brought into a warm place, the frozen flesh dies and begins to rot. Obviously, the longer left in the cold, the more flesh is frozen. In game terms, treat frostbite as damage to the extremities. For every four hours a character is exposed to the weather with unprotected extremities, each limb may "catch" frostbite and take 1D3 of damage.

Transmission: Exposure of the extremities. Infection number 10. (Include only the equivalent of fatigue levels for exposure of the extremities as detailed above).

Symptoms: Numbness or white patches on exposed hands/feet.

Diagnosis: ESY.

Treatment: Careful rewarming of frozen flesh; removal of dead tissue.

Course of the Disease: *Incubation:* immediate. *Phase I:* D3 of damage to each exposed limb each four hours of exposure. *Phase II:* begins when wounds become serious. *Base Recovery Number:* 150.

Post-recovery Debility: Total damage taken from disease must heal normally in any event. Failed recovery requires amputation of extremities (from fingers and toes to the whole limb). Figure it as needed recovery—adjusted die roll divided by five.

For example, say a character with a CON of 12 took a total of 9 points in his left arm due to frostbite after 16 hours of exposure. A medic with MED 45 looks after him. The character rolls a 32 for recovery (+45 for MED, +60 for CON) for a total adjusted roll of 137. It fails. $150 - 137 = 13$; $13/5 = 2.6$ rounds up to 3. Three points of damage is permanently subtracted from the character's left arm. The referee may decide this is the loss of a couple of fingers, and then subtract a point of DEX from the character as well.

And there is the additional problems of infection during amputation or excision. And if excision fails, gangrene sets in...

MAINTENANCE EFFECTS

The weather can cause special maintenance problems. Anyone with a car knows that starting a car that has sat in the cold or rain can be a trying experience. Most of the vehicles of **Twilight: 2000** are far from factory fresh.

For every four hours a vehicle is left exposed to heavy rain or sub-freezing temperatures, add 5 percent to its failure percentage (starting problems). For every 20° below 30°F, add another 5 percent. For example, a HMMWV with a wear value of 7 that sat overnight exposed to 25°F weather would have a 22 percent chance of failing to start the next morning ($7 + 5 + 5 + 5 = 22$). This can be modified by a MEC roll.

Characters can avoid this by measures such as running it for 20-30 minutes every few hours or parking it in a protected place.

LAST WORDS

Finally, do not let these rules bind you into weather that you do not want. If your scenario requires a raging thunderstorm, have one. But include the rest of the touches: a raging thunderstorm produces mud. Men running around in a cold rain catch colds if not protected. A natural, thick fog does not appear from nowhere at noon of a sunny summer day. These little things will add a great deal to your adventures.

—Mitchell K. Schwartz

*"The race is not always to the swift,
nor the battle to the strong,
but that's the way to bet."*

Damon Runyan



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Inside an M1

Today's battlefield is the most deadly in history. Weapons are accurate, fast, and quite varied. One of the most potent of these is the M1 Abrams tank. It was introduced to the Army's arsenal in late 1981, and has gained respect among tankers around the world. I began my training on the M1 at Ft. Knox, Kentucky, in May 1982 in Armor Officer Basic Class 82-11. I had been selected as one of the 12 members of my class to train on the M1, the remaining 58 trained on the M-60. This was the second class to be trained on the Abrams. I have served as Platoon Leader, Executive Officer, and Company Commander since then.

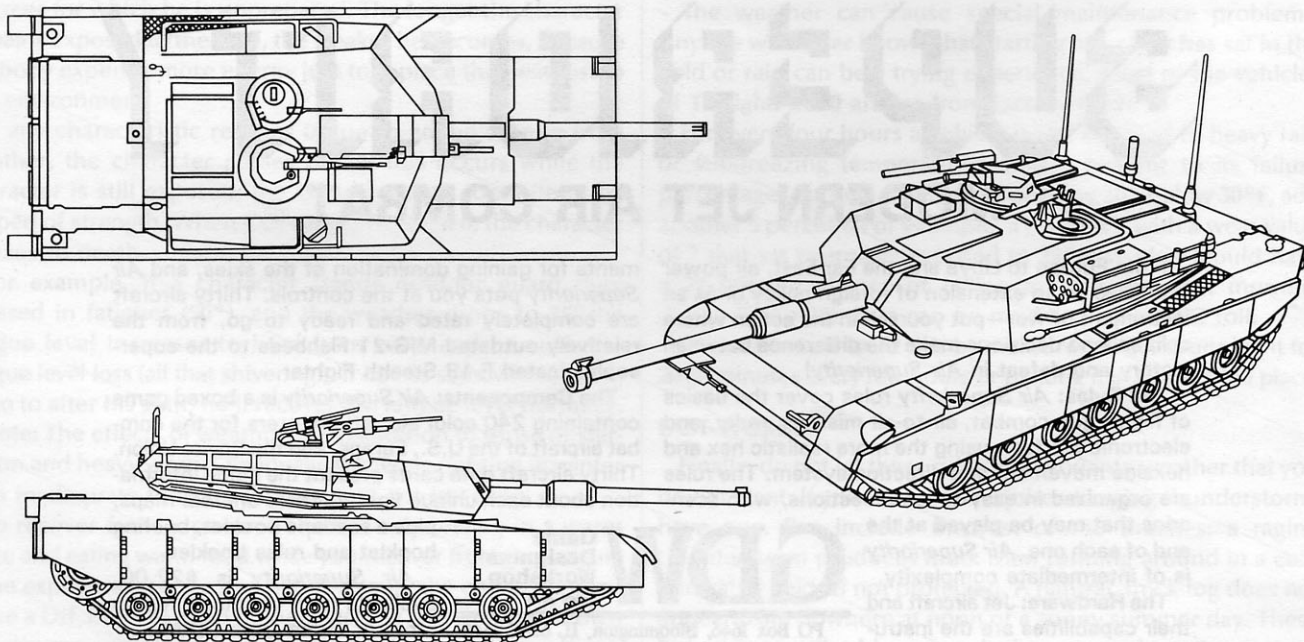
The M1 is the fastest tank on the battlefield, with the best fire control and protection, and has now (with the 120mm gun) the equivalent killing power of any other tank. The turbine engine needs little maintenance and can be changed in less than half an hour. It is quiet and capable of rapid acceleration, but does use a lot of fuel (1½ gallons to a mile); it still has a range of over 300 miles per refueling. The early problem with dust and dirt has been solved by a dual air filter system. It is a highly reliable engine. I have only thrown a track once, and that says a lot considering the hard operations I've put the M1 through! The

engine is an Avco-Lycoming AGT-T 1500 HPC gas turbine which develops 1500 hp at 3000 rpms. The length is 9.77 m (32 ft) (gun included), height is 2.89 m (9 ft, 1 in), and weight is 54,432 kgs 119,050 lbs or 60 tons). It can cross a vertical obstacle 1.24 m (4 ft) or trench 2.74 m wide (9 ft), climb a 60° slope, and ford water 1.22 m deep. (Note: with fording kit it can cross water 2.36 m deep.)

The hardest adjustment for anyone to make to the M1 is to realize the speed and mobility of this 60-ton vehicle. My tank (#0010, the tenth production vehicle) did not have a governor, and I obtained speeds in excess of 50 mph easily over flat terrain, and 45 mph over moderate terrain. I could easily navigate rough terrain (ditches, etc.) at 35 mph. This is a vast improvement over the M60 which operates at about half the speeds in similar terrain. This meant that I had to exercise extreme care not to overrun objectives during assaults. I had been used to navigating on foot or in a M113, and it was very different. The vehicle has independent suspension for all road wheels, and a paddle-wheel-like driver wheel in the rear. The excellent shock absorbers and torsion bars allow the ride to feel like a surfboard trip when crossing even the roughest of terrain. The

acceleration is also amazing, easily reaching top speed in less than a minute from a standing start. The vehicle has an automatic transmission, and a turbine engine. This allows the vehicle to move rather quietly, making less noise than a jeep (moving or stationary)! This too is quite unlike the noisy M60, or any other tank. Anyone familiar with tanks will remember the loud diesel engine and clanking of regular tanks. When any other tank heads uphill, it slows down and black smoke pours from the exhaust as it labors up the hill and downshifts to climb (like a semitrailer truck on an upgrade). The telltale cloud of black smoke is one of the classic signatures of tank movement, but is not a problem for the Abrams. It glides up the hill with very little loss of momentum, automatically shifting when necessary, and its turbine engine is virtually smokeless.

The tank has high-speed track that does not match any other track links in the Army inventory. The fender skirt armor and paddle wheel drivers keep the track on, even at very high speeds. It is a lot harder to throw the track off, but it can be done if you make a pivot-steer turn (locking up one track) at high speeds, or turn on top of a log or other hidden obstacle in the mud. While it may



be harder to throw a track, it is also a lot harder to break track (separate the treads during maintenance, for realignment over the road wheels) when you have to. The final drive and engine are a lot more expensive than other tanks, so if you tear out the final drive or lock up the engine doing a high-speed pivot steer, it can become a real disaster (financially for the Army, and careerwise to you)! The tank can actually spin out (lose traction as the tread spins) when you gun it to take off, like a drag racer. The pictures showing the Abrams jumping in the air like a daredevil's motorcycle are real...I've done it with no damage. Overall the M1 is the fastest and most mobile tank in the world today. I once maintained 65 mph while going downhill on a road, and the tank can accelerate from a stop to 20 mph in less than six seconds...not bad for a 60-ton tank!

THE GUN

The weapons system has been called by experts the most sophisticated tank fire control design in the world! It is capable of tracking on a target regardless of the tank's movement, and the gun is slaved to the sight. This means that the gun follows the sight and not vice-versa. The gun has a 95% + kill rate out to 4000 yards. The gunner must select the round being fired on a selector switch, then sight the target, press a red button on the wheel (or catalacs) which will activate a laser to give the range to the target at the speed of light, then fire the weapon. The laser and sights are unaffected by weather, smoke or distance out to 4000 yards. The laser is accurate to within inches of the actual distance, as a major error would, at the least, make a difference between a kill or a peripheral hit. The entire firing process with a normal crew takes between four and six seconds (which is less than half the time for the average Pact tanker). A good crew (such as the Canadian Cup Competition crews) can achieve three kills in 12-14 seconds! This is very significant as the time flight of anti-tank missiles is between 8-12 seconds for each round at 2000+ yards; so if you see them fire, you can kill the missile gunner or disable him before he can guide the missile home.

At the beginning of each day, the gunner must enter the barometric pressure and temperature into the main gun computer, which is relayed down from the Battalion HQ. The tube standing up on the back of the turret is a wind sensor. The small pointer on top of the end of the barrel is a barrel droop sensor needed because the barrel can actually droop from temperature changes between the top and the shady bottom of the barrel, or simple weather temperature changes. Thus, when you fire the gun after tracking a target for at least one second, the main gun computer figures lead, distance to target, wind correction, barrel droop, temperature and barometric correction, weapon cant, and round selection! The backup system is simple optics, and the last resort is bore sighting. (Bore sighting is the act of looking through the gun breech and barrel to sight the weapon on target.)

It is no problem to fire while stationary or on the move; the gun stabilization system is so complex that you can do more than the Soviets can. You can fire while on the move at a target that is moving. This shows that we are a full generation ahead of the Soviets in gun fire control systems. They may fire on the move, but only at stationary targets, or at targets moving while they are stationary. The biggest liability of Soviet tanks is the speed of their turret rotation, limiting them so that they

cannot track targets moving across their front that are going over 30 mph and less than 1000 meters away! The turret in the M1 can do a full revolution in about three to four seconds.

The first M1s had a 105mm rifled gun, and the M1A1 has a 120mm smooth bore gun. The M1 carries 55 rounds of ammo, while the M1A1 carries only 40. The only tank rounds now carried on the M1 series are APDU (armor-piercing, depleted uranium), APDS (armor-piercing discarding sabot), and HEAT (high explosive antitank). APDU and APDS are only effective against tanks or helicopters, because they are non-explosives and only hole other targets. HEAT is used for personnel carriers, soft-skinned targets, bunkers, troops, etc. HEAT can be used against tanks, but is mainly used for the high-explosive effect replacing the HEP round (high-explosive plastic). Flechette rounds are not carried; they cause too much wear and tear on the barrel, and they are often not fully effective (in Vietnam they usually only dispersed about half their darts, and then without a good pattern) and the M1 carries three machine guns for use on troops. The WP smoke round is also not carried; it must be stored standing up and all the M1s' ammo racks are horizontal. (The round will suffer a chemical reaction that will deteriorate the smoke marking ability if stored level for any long periods of time.) The complaint over the lack of killing power of the 105mm gun was eliminated by the new 120mm gun (same gun as the Leopard 2) on the M1A1. The 105mm can kill *any* tank on today's battlefield, but the 120mm gun should provide killing power through the year 2000 at least. The M1 tanks have now proven their effectiveness by winning the Canadian Cup Gunnery Competition several times. (The Canadian Cup is a tank gunnery competition held in Europe by NATO.)

The M1 carries three machine guns, a 7.62mm coaxial (mounted in turret gun housing next to main gun), a 7.62mm loaders machine gun, and a .50 caliber commander's weapon. The coaxial machine gun is selected by the gunner on his ammo switch, and is targeted by the main gun computer. It is very accurate, as it is sighted by the laser and the fire control system. The coaxial MG has 4800 rounds in the ready ammo belt storage (loaded). A total of 11,400 rounds of 7.62mm ammo is carried inside the tank. The loader has a 7.62mm gun that can be removed and placed inside, or mounted on a slide mount on the turret top to the left of the tank commander (or TC). He can load belts of 100, 200, or 300 rounds in his machine gun. This weapon is sighted by the loader looking down the barrel and over the sight. The coax is mainly used against troops and soft-skinned vehicles. The loader's MG is used likewise, but is the principal weapon for engaging aircraft, as it has a much greater elevation ability. The commander's weapon (.50 caliber MG), is used for engaging light armored and soft-skinned vehicles. The TC's weapon is very deadly to personnel carriers of the Pact, as BMP's are made using magnesium alloys. The magnesium burns very well when hit by the tracer rounds of a .50 caliber machinegun.

The loader must expose himself at least chest-high (or "name tag defilade") to use his machine gun. The main MG used is the coax, because of its accuracy and protection of the firer (it is fired from inside). The commander's MG can hold only one box (100 rounds) of ammo at a time, but he carries a total of nine boxes (or 900 rounds) inside the tank. The weapon is effective when fired by the TC with the hatch open. It is sighted

for up to 2000 yards. The real liability of this weapon is firing from inside the turret. The TC uses a small periscope optical sight—which is often out of alignment. In reality, the TC aims his fire (while inside the tank) using the tracer rounds for sighting. Since only every 5th round is tracer, he gets only 20 real spottings before he must reload the weapon. This proves to be very frustrating; any M1 TC will verify that (I know from firsthand experience). The TC's weapon is fired from inside by pulling on a firing chain, and the weapon often rises while firing. If the TC can engage targets while above the hatch, he can be effective, but this is usually only possible while engaging enemies at longer ranges (rifles are rarely used at ranges of over 300 meters or 330 yards, and light/medium MGs are mainly used at ranges less than 1000 yards).

The M1 also carries one rifle with 210 rounds of 5.56 ammo, 8 hand grenades, and 24 smoke discharge grenades (for smoke launchers). The TC also carries a pistol (was .45 caliber, now 9mm). The rifle is a folding stock version of the M16 and is used for OPs/LPs (outposts or listening posts) at night, or as some protection if the crew must abandon the vehicle. The smoke dischargers on either side of the turret are used to mask movement when retreating from a firing position, or while under heavy fire. The smoke dischargers are located on the side of the turret (6 each side), and fire phosphorus grenades.

The M1 has great survivability and crew comfort. The Chobham compound spaced armor is highly effective. Chemical rounds (such as HEAT and Saggars) are completely ineffective against it. The kinetic rounds (such as APDU, APDS, AP and APFSDS) are greatly reduced (classified as to the real effectiveness). The ammo in the storage rack is separated from the crew by blast doors and can take a hit and not endanger the crew. The top of the tank has blow-out panels which allow a hit in the ammo rack to explode and not penetrate the blast door. The crew is separated into two compartments: the turret which contains the tank commander, gunner and loader; and the driver's compartment. If the turret is knocked out, the driver could drive to safety, and if the driver is knocked out, the crew can still fight. The tank has padded seats and is roomy inside (for a tank). It is designed with crew comfort in mind, which will definitely improve the crew's performance when compared to Pact vehicles (which have little regard for crew comfort).

The M1 can operate at less than optimum crew level. The TC can fire the main gun and coax MG from his position, but must select proper ammo selection by bending down to the gunner's position. The gunner may take the place of the loader if necessary. In the worst possible case, the TC could load and fire the weapons by himself with a lot of work. Each loss of crew *does* affect the firing and engagement time, and fatigue level of the crew. If the driver is lost, any crewman could replace him. The most expendable man is the loader, then the gunner, the driver, and lastly the TC. In real terms, the Army has the least time and training invested in the loader, then the driver, then the gunner. The TC receives the most training. The rank of a TC is at least a Sergeant, the gunner at least a Specialist, the driver usually a PFC, and the loader is usually a Private. The TC can be a Platoon Sgt, Platoon Leader (Lt), Executive Officer (1Lt), Company Commander (Captain) or higher, all the way up to Battalion Commander (Lieutenant Colonel). All Armor officers must train and maintain efficiency on their

tank (up to full Colonel).

I am convinced that the hardest job for a Second Lieutenant in the Army is being an Armor Platoon Leader. He must be proficient in his own tank operation, Platoon Operations, Forward Observer, and Tactics. You must be your own Forward Observer; there is no place to put an extra man, and it is foolish to expect an FO spotter to fight beside you in his jeep. You must call in all your own artillery fire and air strikes, command the Platoon, keep the Company Commander informed at all times, navigate for the platoon, and still command your own tank and direct fire for both your tank and your Platoon, when necessary. This means you are always looking for the enemy, keeping track of your position on your map, directing your tank and the Platoon's movement, and continually using the radio on two different frequencies. You must keep talking to the driver selecting your movement route, ordering the Platoon's movement by sections, inform your CO of the situation, and call in fire when needed! It is a heavy load for a new officer who averages only three to four hours rest each night.

I believe that the Abrams is the best tank in the world today. If you have to fight in a tank, then the M1 is your best choice. If you do suffer a catastrophic hit, at least you have had the best chance in the world and fought in comfort until then.

—Harold Martin (Cpt., USAR)

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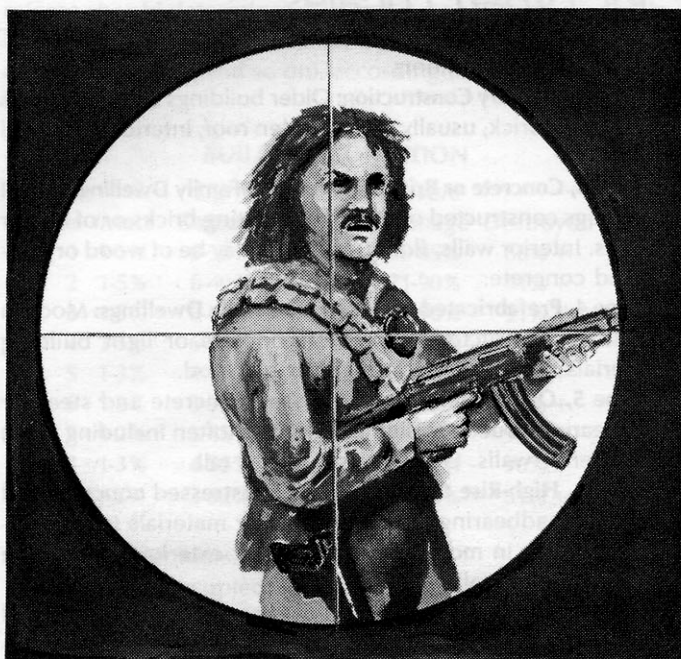
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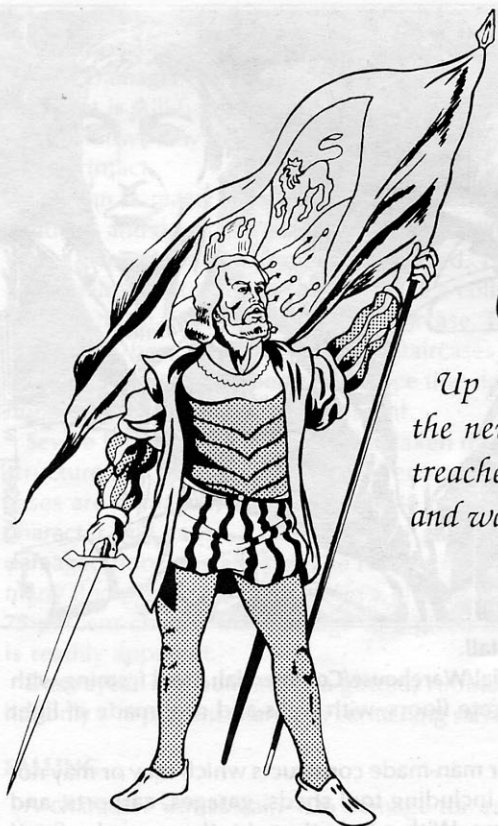
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Buildings: Optional Rules for Urban Locales

In practically every **Twilight: 2000** module there is opportunity for activities in and around urban areas. *Armies of the Night*, of course, is set in New York City, but even modules like *Airlords of the Ozarks* have fairly large cities in them, waiting for characters to enter.

This article will present some suggested rules for referees who wish to add more detail and color to their players' urban escapades. It will present a system for classifying buildings into several types and suggest how their condition and contents can be more readily summarized.

COMMUNITIES

Buildings may exist alone (out in the countryside), or in communities. Before the players can enter, the referee has considerable preparatory work to do.

First, either obtain or prepare a street map of the community. If it is a real place, a real map can be used. If the community is fictional, or if a genuine street map cannot be obtained, the referee will have to draw one or modify an existing map to suit. Whatever the case, this map should be divided into areas according to the predominant type of building. These are as follows:

Area A, Dense, Random Construction: Closely packed buildings and narrow streets (sometimes with curved, irregular street patterns). The older, "downtown" portions of some US communities are built on this pattern.

Area B, Closed, Orderly Block: Fairly closely built buildings, with closed front blocks more often than not. Streets are wider than Area A, and blocks often incorporate alleys, yards, gardens, and inner courts. In small towns these will be limited to a few main streets in the downtown area; in larger communities, these can stretch for many miles.

Area C, Dispersed Residential: Normally consists of rowhouses and/or single dwellings or well-spaced apartment buildings, on rectangular blocks or gently curving streets.

Area D, High Rise: Well-spaced, multistory buildings with wide areas between, often containing smaller residential or commercial buildings, parks, parking lots, recreational areas, and so on.

Area E, Industrial/Transportation: Low, flatroofed buildings and scattered smaller structures (these are malls, fast-food restaurants, retail stores, and similar buildings near major roads; warehouses, depots, and light industrial buildings near lesser roads and railroads). This area sometimes contains residential buildings as well (clusters of condos or townhouses).

Individual buildings are classified as follows (irrespective of size):

Type 1, Wood and Timber Frame Construction: Wooden supporting structure with lighter materials for roof, exterior and

interior walls, and floors.

Type 2, Masonry Construction: Older buildings with thick walls of stone or brick, usually with wooden roof, interior walls, and floors.

Type 3, Concrete or Brick, One- or Two-Family Dwellings: Small buildings constructed of solid or insulating bricks or of cinder blocks. Interior walls, floors, and roof may be of wood or reinforced concrete.

Type 4, Prefabricated One- or Two-Family Dwellings: Modern housing constructed of precast concrete or light building materials such as particleboard or plywood.

Type 5, Office Building: Prestressed concrete and steel for loadbearing structures, lighter materials (often including glass) for exterior walls. Less than six stories tall.

Type 6, High-Rise Office Building: Prestressed concrete and steel for loadbearing structures, lighter materials (usually including glass in modern structures) for exterior walls. More than six stories tall.

Type 7, Apartment Building: Prestressed concrete and steel for loadbearing structures, lighter materials (rarely incorporating large quantities of glass) for exterior walls. Less than six stories tall.

Type 8, High-Rise Apartment Building: Prestressed concrete and steel for loadbearing structures, lighter materials (rarely incorporating large quantities of glass) for exterior walls. More



than six stories tall.

Type 9, Industrial/Warehouse/Commercial: Steel framing with reinforced concrete floors, with walls and roof made of light materials.

There are other man-made constructs which may or may not provide shelter, including tool sheds, garages, carports, and a myriad of others. With a little thought, these can be fitted into one of the above categories without difficulty.

BUILDING CONDITION

The table below presents the percentage chance of a par-

ticular building having the stated damage condition. This is a one time determination and can be made in advance. The referee should determine which of the modifiers to the table apply in any given case (whether a given building is occupied, and for how long, and so on), according to the parameters of his campaign.

BUILDING CONDITION

Type	Intact	Light Damage	Medium Damage	Severe Damage	Destroyed
1	1-5%	6-30%	31-65%	66-85%	86% +
2	1-5%	6-40%	41-70%	71-90%	91% +
3	1-5%	6-40%	41-70%	71-90%	91% +
4	1-5%	6-35%	36-70%	71-90%	91% +
5	1-3%	4-45%	46-75%	76-90%	91% +
6	1-2%	3-50%	51-85%	86-95%	96% +
7	1-2%	3-45%	46-75%	76-90%	91% +
8	1-3%	4-50%	51-85%	86-95%	96% +
9	1-2%	3-32%	33-57%	58-80%	81% +

Percentage Modifiers:

Continually Occupied Since Disaster - 40
 Intermittently Occupied Since Disaster - 20
 Devastated Urban Location + 10
 Other Urban Location + 5
 Suburban Location -
 Rural Location - 10

EXPLANATION OF CONDITIONS

Intact: This is just what it says; the building is intact and probably (90 percent chance) occupied.

Light Damage: The building is in slightly deteriorated condition, but is still habitable. The basic structure is sound, but a few windows may be broken. Doors floors, and staircases are largely intact.

Medium Damage: As in *Light Damage*, but about half of the windows and doors are damaged. There is a 20 percent chance that a given floor or staircase is damaged. There is a 20 percent chance that a character will cause a collapse each game turn spent on a damaged floor or staircase. The referee must determine how many floors and staircases are in a given building. There is a 75 percent chance that damage to a given floor or staircase is readily apparent.

Severe Damage: The building has taken damage to its basic structure and is dangerous even to enter. All floors and staircases are damaged, and there is a 40 percent chance that a character will cause a collapse each game turn spent on a damaged floor or staircase. The referee must determine how many floors and staircases are in a given building. There is a 75 percent chance that damage to a given floor or staircase is readily apparent.

Destroyed: The building is a gutted, rubble-filled shell and has only a 10 percent chance of containing salvageable material.

FALLING

A character will sustain 1D6 damage for each story fallen, plus 5 points for each additional story above the ground (or first) story. Half of the damage is taken in a single location, determined by rolling 1D6. A result of 1 = head, 2 = chest/abdomen (split evenly between them), 3 = right leg, 4 = left leg,

5 = right arm, and 6 = left arm. The remainder of the damage is divided between the remaining locations. Round fractions to the nearest whole number.

Thus, a character who falls three stories will take 3D6 plus 10 points of damage. If the die roll is 11, this is a total of 21 points of damage: 10 taken in one location and 11 divided into the remaining six locations.

SCAVENGING

Scavenging is the process by which characters locate and take possession of materials of use to them. It would be handy for this article to have a simple list of the percentage chances of finding a particular item, but this is impossible because of the multitude of items available in modern society, and because of the many conditions under which they may be found. It would be futile to even attempt to list all the things that would *probably* be found in the average home, let alone all the things that *could* be found there. When places like department stores, shopping malls, garages, police stations, and armories are considered, the number of potential finds is astronomical. This article can only be of general assistance to the referee in determining what characters find. A collection of mail-order catalogs (general ones such as Sears or Wards, or more specialized ones such as BA Electronics or Whitney's Auto Parts) will prove useful guides to the myriad items available to modern society.

A rough list of categories of useful items is all that can reasonably be provided. Note that it is possible for one item to fit in several categories (an axe can be a tool and a weapon, for instance).

Food

Hand Tools

Weapons

Clothing

Transportation (Vehicles primarily intended to move goods or people long distances, and spare parts connected with them. Bikes, cars, jeeps, aircraft, subway trains, railroad cars, etc.)

Construction Materials (Concrete, bricks, rebar, lumber, etc.)

Machinery (Tools larger than hand tools, electrical generators, drill presses, milling machines, printing presses, radial arm saws, etc., as well as their spare parts. It does not include extremely large items such as nuclear power plants or blast furnaces)

Fuel

These broad categories contain many smaller subdivisions. The *Tool* category, for example, contains everything from the smallest drill bits, jeweler's screwdrivers, and swiss files to sledge hammers, shovels, and chainsaws. It does not include backhoes or bulldozers (which come under *Machinery*) or trucks or helicopters (which come under *Transportation*).

CONDITION AND UTILITY

Condition and utility are two simple concepts which determine the value of a given find to a given person. They are clues to assist the referee in deciding exactly what the characters have found.

Condition: This is a numerical quantification of the state or preservation of a find, ranging from 1 (poor condition) to 6 (excellent condition). The referee should set an individual item's condition after considering its location and background (or by

rolling 1D6).

Utility: This is a numerical quantification of the usefulness of a find, ranging from 1 (useless) to 6 (a treasure). In a desert, a thirsty character will find a case of club soda much more valuable than a sealed can of mixed nuts.

The referee should set an individual item's utility rating after considering its location and background, and a character's individual needs. Utility is seldom determinable by die roll, since each character will have different requirements at different times. Note that one item could have different utility ratings to two different characters, even if they find it simultaneously.

Condition and utility go hand in hand, but one does not necessarily equal the other. An item in good condition is not necessarily of high utility, and vice versa. Consider a corroded pipe wrench versus a shoebox full of mint condition baseball cards. The wrench, although in poor condition, is much more useful to a character in search of a weapon than the baseball cards. However, to a character looking for something to kindle a fire with, baseball cards are much more useful. There are certain times, however, when condition and utility are the same. A rusty, leaking can of rotten tomato paste is in poor condition, and is also useless (except for throwing at serenading alley cats at 3 AM). —Loren K. Wiseman

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Duneraiders by William H. Keith, Jr. Riches, danger, and mystery lie within the arid wastes of Tash-rakaar, a desert world peopled by the savage and enigmatic Duneraiders. The adventurers soon learn that desert nomads and desert heat aren't the only enemies they face. Makes use of rules and information presented in *The Desert Environment*. (GL-1989 64pp \$6.95)

Adventure

A Pilot's Guide to the Drexilthar Subsector by J. Andrew Keith. From the navigational computer files of the Imperium comes a detailed explanation of a subsector on Reaver's Deep, in the Imperial frontiers. Presents background information on the Deep and on the Drexilthar subsector (setting for the adventures *The Drenslaar Quest* and *Duneraiders*). Each world in the subsector is explored to sufficient depths to be the setting for one or more adventures. (GL-1980 48pp \$5.95)

Startown Liberty by John Marshal. Startown . . . the rough and tumble district on any world where travellers can find anything from entertainment to the worst sorts of crime and corruption. Condemned by the majority of honest citizens, exploited by the criminal subculture, and visited by starship crews looking for entertainment, information, jobs, and almost everything else, this is "a wretched hive of scum and villainy" . . . this is Startown. (GL-1975 48pp \$5.95)

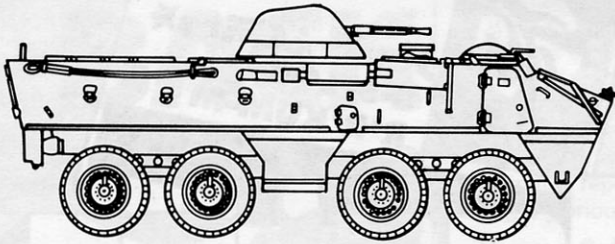
Lee's Guide to Interstellar Adventure: Volume 1 by Gregory P. Lee. The journals of the noted galactic wanderer Aramais P. Lee have now been converted into a referee's aid. *Lee's Guide* provides complete planetary specifications and detailed plot outlines for 10 worlds in which the situations taking place on the planet form the basis for a varied range of adventure opportunities, suitable for both small parties and large groups. (GL-1980 48pp \$5.95)

Wanted: Adventurers by John Marshal. From the want ads of a starport news service come 20 short adventure situations. Job opportunities abound for adventurers in this collection of scenarios which can lead a band of characters into anything from a luxury cruise to a mercenary expedition. (GL-1971 48pp \$5.95)

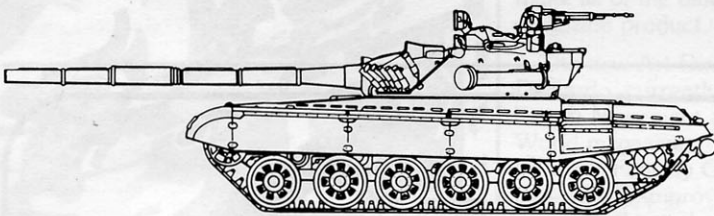
Available from Sleuth Publications, Ltd., 2814-19th Street, San Francisco CA 94110. Add \$2 per order for postage & handling.

Equipment List

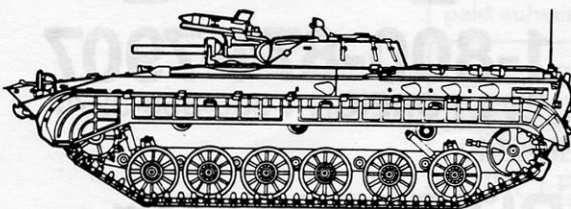
All of these vehicles have appeared before in various **Twilight: 2000** publications, but a large number of our readers have expressed a desire to see what they look like. We present the statistics for the referee's convenience.



OT-64: An 8-wheeled amphibious armored personnel carrier jointly developed by the Czech and Polish armies, the OT-64 is used by the Czechs and Poles instead of the BTR-70. OT-64s were also used by the East German Army, but few are still serviceable due to a shortage of spare parts. It is identical in layout to the BTR-70. *Price:* 80,000 (S/C) *RF:* none *Armament:* KPV MG *Ammo:* as cargo *Tr Mov:* 180/70 *Com Mov:* 60/30 *Fuel Type:* D, A *Fuel cap:* 290 *Fuel cons:* 70 *Load:* 3 tons *Veh Wt:* 14 tons *Crew:* 3 + 15 *Mnt:* 6

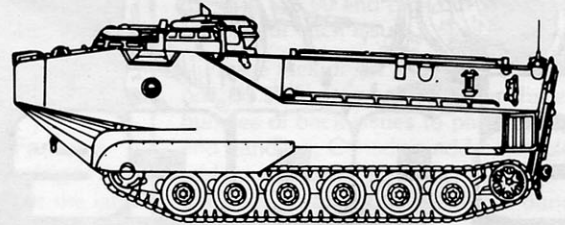


T-72: A tracked main battle tank. There is a driver's hatch on the middle front deck and a gunner's hatch and commander's hatch on the turret deck. The gun is automatically reloaded. A weapons mount is located by the commander's hatch. *Price:* \$400,000 (R/R) *RF:* +30 *Armament:* 125mm gun, PK MG, DShK MG (C) *Ammo:* 40 × 125mm *Tr Mov:* 120/70 *Com Mov:* 40/25 *Fuel cap:* 960 + 400 *Fuel cons:* 240 *Load:* 500 kg *Veh Wt:* 40 tons *Fuel Type:* D, A *Crew:* 3 *Mnt:* 18

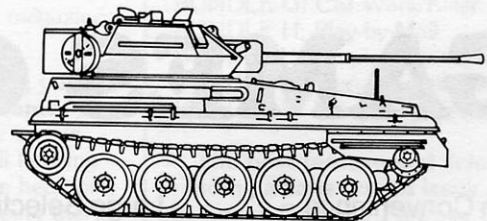


BMP-B: One of the standard Warsaw Pact tracked, amphibious armored personnel carriers. Main access to the vehicle interior is by a drop ramp in the vehicle rear. There is a driver's hatch on the left front deck, a commander's hatch behind it, a gunner's hatch on top of the turret, and two long oval-shaped hatches on the rear deck for the passengers. There

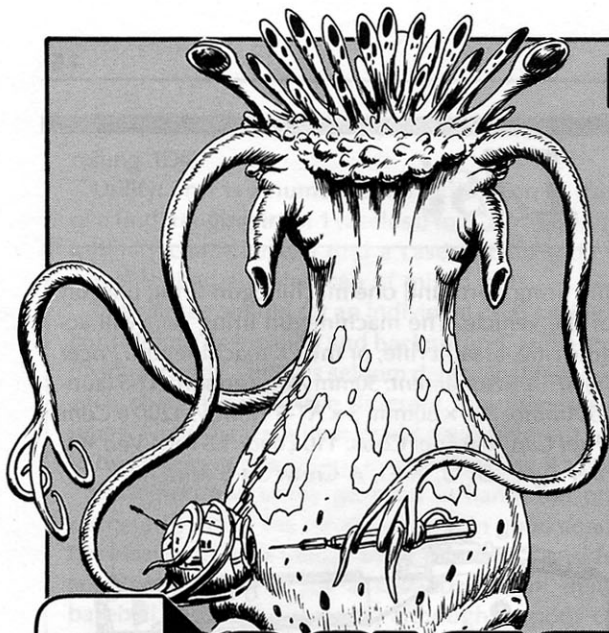
are three rifle firing ports and one machinegun firing port on each side of the vehicle. The machinegun firing port will accept any battle rifle, assault rifle, or the PK machinegun. *Price:* \$150,000 (R/S) *RF:* +5 *Armament:* 30mm Autocannon, AT-5 launcher, PK MG *Ammo:* 200 × 30mm, 3 × AT-5 *Tr Mov:* 120/70 *Com Mov:* 40/30 *Fuel Cap:* 440 *Fuel Cons:* 110 *Load:* 1.5 tons *Veh Wt:* 12.5 tons *Fuel Type:* D, G, AvG, A *Crew:* 3 + 8 *Mnt:* 12



AAVP9: The AAVP9 is an advanced version of the AAVP7A1 amphibious armored personnel carrier, entering service in the early 1990's. A 40mm AGL and M2HB MG combination is mounted in a small cupola on the right front hull deck, and there are two smaller hatches for the driver and vehicle commander on the left front hull deck. The rear deck contains two large doors for disembarking personnel, and the rear has a ramp/door which can be lowered as well. The vehicle is fully amphibious. The 40mm AGL is identical in performance and characteristics to the Mark 19. *Price:* \$80,000 (R/R) *RF:* +15 *Armament:* 40mm AGL, M2HB MG *Ammo:* 350 × 40mm *Tr Move:* 120/70 *Com Move:* 40/30 *Fuel Cap:* 360 *Fuel Cons:* 120 *Fuel Type:* D, A *Load:* 4 tons *Veh Wt:* 18 tons *Crew:* 2 + 22 *Mnt:* 6



Scorpion Mk 2/90: A British-built tracked recon vehicle. The Scorpion has a two-man turret with hatches for the commander and the gunner. There is a hatch on the front deck for the driver. There is a ring mount (NHT equivalent) on the commander's hatch. *Price:* \$90,000 *RF:* +30 *Armament:* 90mm gun MAG MG, MAG MG (C) *Ammo:* 30 × 90mm *Tr Move:* 170/250 *Com Move:* 60/50 *Fuel Cap:* 390 liters *Fuel Cons:* 156 liters *Load:* 300 kg *Fuel Type:* G, AvG, A *Veh Wt:* 8.7 tons *Mnt:* 12 *Crew:* 3.



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Space Gamer / Fantasy Gamer magazine is returning well in time for Christmas, and with so much to herald, we want to make sure you get the right gift! Space Gamer magazine has been published for eleven years, and has served Science-Fiction and Fantasy gaming fans faithfully through the years. It is a magazine with a long history, an outstanding reputation, and now it's having a glorious rebirth.

The new Space Gamer / Fantasy Gamer magazine will be appearing in stores and mailboxes throughout the land by December. Issue number 77 will mark a new era of creativity for one of the longest-published magazines in the hobby.

The new Editor is Anne Jaffe, formerly of Game News magazine. Anne is not only one of the industry's most qualified (and esteemed) editors, she is also energetic, organized, devoted, punctual, and has a great eye for the details that make all of the difference in a quality magazine product.

The new Art Director is Vince DeNardo, currently Art Director for both Fire & Movement and Computer Gaming World magazines. Vince is giving Space Gamer / Fantasy Gamer a new look, dynamically improved over previous issues, and an advance for all magazines of this genre.

Even the publisher is giving you more with the new Space Gamer / Fantasy Gamer. An increase in size from 48 to 64 pages (while still keeping the current cover price) is one heck of a fine gesture. They're not stopping there, however, because this notice also includes the following new subscriber deal:

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A Decade of Traveller

We have asked a number of people who have been connected with the game, in one way or another, to write a few words commemorating *Traveller's* tenth birthday this year. So, without further ado:

Consider two strong points which have led to the premier position of *Traveller* among SF-RPGs: First, *Traveller* has an extensive background. In the past ten years the Imperium Campaign has produced the most extensive (in excess of 3000 unique pages of information) published background of any fictional universe. The Imperium Campaign includes dozens of mapped star sectors; hundreds of mapped worlds, deck plans for space ships, characters, adventures, vehicles, weapons, aliens, robots, etc. In the past three years a host of fannish activities has arisen: fanzines, newsletters, PBM games, the *Traveller* Program Exchange (TPX), the *Traveller* Data Base Project (TDBP), *Traveller* BBSs, etc. This fannish activity is adding to the *Traveller* background at an unprecedented rate: anyone can participate. *Traveller* is bigger than other RPGs because of the extensive background of the Imperium Campaign. *Traveller* is better than other RPGs because any fan can contribute to the background.

—Ed Edwards

The recent growth in numbers of *Traveller* fanzines has been tremendous. From the early days of fanzines, starting about 1939, when Science-Fiction fandom was blossoming, fans in many fields have turned to publishing amateur magazines as a way of expressing their interest and support. Twenty-four years later, postal gaming got its start in May of 1963 with the publication of the first game oriented newsletter ("gamezine"), which is still published to this day. With the passage of yet another 24 years, the *Traveller* fanzine sub-field is well on the road to a bright future.

These "early days" are marked by a great deal of enthusiasm and cooperation. When I started publishing *The Travellers' Aide*, in December of 1985, the only extant *Traveller* fanzine was Magnus Abel's *Between Worlds*, which started about a month before TTA (there was a prior zine, Ed Edwards' *Working Passage*,

which folded before my time). Since then, interesting and lively newsletters (*Third Imperium*, *Continuum*, *Backspacer*, *Jumpspacer*), including my own *IS*, (the old *Imperium Staple*), have jumped on the bandwagon.

This can foretell a time of increasing fan involvement that could boost *Traveller* popularity immensely.

Now in my second decade of fanzine publishing, and in observing the ins and outs of such a field, I view this growth with optimism, mixed with caution. Fanzine hobbyists can easily get lost in the backwaters of feuds and politics. *Traveller* is headed for a glorious new age, as expressed by the increasing numbers of zines, but only if we remain aware of possible problems, and only if we are prepared to overcome those pitfalls by fostering responsible interaction.

This new hobby can flourish only by searching out and expanding to new horizons. After all, isn't that what *Traveller* is all about?

—W. E. J. Hinton, Jr.

When an entire universe is laid out before a person, there is no doubt that they are interested in what lies in store for them. There arises the desire to explore places never before traversed, to solve mysteries that have never been explained, and to gain knowledge and wealth beyond imagining.

Traveller is all of these things and ever so much more. Every individual is introduced into an entirely new universe, a place which can be molded by their thoughts and actions. It is a world which presents limitless challenges, where explorers seek their glory and good fortune or where they meet poverty and fate. It is a universe filled with beauty and wonders, spangled with a bright history meshed with a terrible past. It is a dark void lit by a hundred thousand suns, colonized and civilized by thousands of societies and cultures.

Traveller features a universe ruled wisely by mighty empires taunted by brutal enemies. It is a universe of miracles filled with unlimited possibilities. With this vast world of adventure, who could possibly refuse an invitation to "Come visit my universe?"

—Gregg Myles Giles

Happy 10th, *Traveller*!

Marc Miller and the folks at GDW have done a fantastic job of building a science-fiction role-playing game with a consistency of background second to none in the industry. And few (if any) science-fiction role-playing games can match the sheer "open-endedness" that *Traveller* offers.

Yet, even with ten years of groundbreaking *Traveller* products behind us, there's still a plethora of untapped potential in *Traveller*. That's one of the reasons Gary Thomas and I formed Digest Group Publications two years ago—we wanted to throw in our two cents worth and show people how much is yet to be done with *Traveller*. And thanks to Marc and GDW, we've been given that chance—in fact, Marc's been egging us on all the way!

One of the most exciting opportunities to come our way is the *MegaTraveller* project. Marc has given us the rare opportunity to have a major hand in helping GDW update, consolidate, and expand *Traveller* with the best that has been published for the game in the last ten years, and set it all against the exciting new background of the divided Imperium.

I for one can hardly wait to see what the next ten years of *Traveller* has in store.

—Joe D. Fugate, Sr.

When *Traveller* was first released, I was a boardgamer who had never heard of the role-playing phenomena. Interested in science fiction, but not knowing what to expect, I sent in my money, and, when the game arrived, opened it eagerly. The concept fascinated me, the game intrigued me...and soon the adventures and supplements and magazine articles started to appeal to me. I was hooked—an addict with a habit that cost more money than I was prepared to pay!

Because I came from a writing background, though, I soon saw a way to make my new "addiction" more bearable. I wrote a piece for the *Journal*. Loren Wiseman liked it. I wrote a few more. After my brother and I actually met the GDW staff at a convention, we talked about doing an adventure—and *Chamax Plague/Horde* followed. We branched out to work for the first big

licensee, FASA Corporation, and formed our own company, Marischal Adventures, with a line of "folio adventures" for **Traveller** all our own. What had started as a way to make back the cost of an expensive hobby quickly mushroomed into a livelihood.

Now, ten years later, I make my living from writing for adventure games—not just **Traveller**, but a host of others as well. My whole career, a decade's experience and development as a writer, comes from that first little black and red box with three small rulebooks inside. And after a decade of working with **Traveller** on projects ranging from adventures to magazine articles to starship deck plans to alien modules, I can only hope that **Traveller's** 20th anniversary will find me writing another article about how I got to be involved in a second decade with GDW's game of "Science-Fiction Adventure in the Far Future."

—J. Andrew Keith

REF: "Okay, inside the cave, you're out of the howling, dry wind of the Endless Desert of the planet Miller. In front of you, you see the inner door to the temple. It's old...very old. The acrylic paint is chipped and scratched in places. There are sticky fingerprints around the handle. Still, it shows signs of a highly advanced technology."

OSCAR: "What signs?"

REF: "They say 'DO NOT DISTURB' in flashing red LED lights."

ERNIE: "Wow! That's like Tech Level 18 or so! Do...do you think this could be a lost cache of...of the *Ancients*?"

BERT: "I'm examining the door."

REF: "There are strange words on it, up near the top."

OSCAR: "Never mind that. I'm using my laser on the door."

REF: "Okay. You've got *Laser Rifle-3*. Roll 2D. You got it! There's a flash of light and a bang, and the door swings open. All of you, roll against your *Dexterity*, with a DM of +5."

OSCAR: "Why?"

REF: "Because an avalanche of papers and artifacts comes exploding out of the tomb! Your saving throws failed. you're buried in the stuff!"

BERT: "What kind of artifacts?"

REF: "Oh, tons and tons of papers...drawings...books...old, old paintings! The tomb is some kind of storehouse."

ERNIE: "What are the books?"

REF: "There are lots of them. Dozens of back issues of *The Journal of the Traveller's Aid Society: Nomads of the World Ocean, Charnax Plague, Duneraiders, Ordeal by Eshaar, Uraqyadin of the Seven Pillars...*"

BERT: "(GASP!) Then this...this must be...Quick! I'm reading the words on the door!"

REF: "Roll against your *Intelligence*. You made it! It says *Approved For Use With...*"

ERNIE: "I got it! I got it! This must be a storehouse of...of *Them*!"

OSCAR: "Who's *Them*?"

REF: "Ages ago, a small band of mercenaries appeared out of nowhere. They were unknown...unheard of. But they began producing drawings and books and paintings and *Journal* articles by the tens...the hundreds...the billions and billions! Soon, whole planets were covered with their stuff. You couldn't open a *Journal* without seeing their names! Whole game libraries collapsed into mini-black holes as..."

OSCAR: "Oh...*Them*!"

ERNIE: "(GASP!) The Notorious Keith Brothers!"

WILLIAM H. KEITH, JR: "Happy 10th birthday, **Traveller**!"

Traveller peaked in 1981, in the number of items produced and also, I believe, in public gaming interest. Since 1981, the amount of **Traveller** material on game store shelves has been dwindling (from what I've personally seen and heard). This, the 10th year of **Traveller**, promises to be the best year since 1981. Even though the number of **Traveller** products produced in 1981 will not be surpassed, the material produced this year is of higher overall quality.

Public interest in **Traveller** will surge in the coming years due to the production of **MegaTraveller**. This, coupled with the dedication of licensed companies and the already loyal body of fans (and their fanzines), will clearly show **Traveller's** superiority over all other SFRPG systems.

The two Approved for Use with **Traveller** licensed companies currently producing **Traveller** material seem to be dedicated in their support of **Traveller**. Digest Group Publications, already in their third year of operation, have produced not only the *Traveller's Digest*, but many additional works, and the talent there has clearly proven itself. Seeker, which received an Approved for Use with **Traveller** license less than a year ago, has already begun to produce deck plans for **Traveller** (the first major producer of deck plans since FASA), and is considering some interesting projects for the future.

—Herb Petro

One of the most exciting aspects of **Traveller** is its versatility. Unlike other games, **Traveller** does not restrict you to one type of activity (such as crawling underground and killing monsters); you can participate in merchant activities, piracy, mercenary operations, exploration, diplomacy, and even espionage! **Traveller** is hundreds of games in one, and this is no better shown than in the number of products produced for it, each one new and different.

Traveller has also shown the highest quality all around of any RPG. It is one of the most realistic and playable systems around, and has the highest level of loyalty among fans of any game! In the five years I have been playing **Traveller** I have never found a better game; the many people I have introduced to it have never again been as satisfied with other games.

—Mike Jackson

I have the dubious distinction of having begun my employment at GDW precisely as **Traveller** was released—**Traveller's** tenth year is also my own. In that time I have had the opportunity to write or develop many **Traveller** products, beginning with *Fighting Ships* in 1981. Now, as co-editor of *Challenge*, I feel comfortable in knowing virtually every aspect of the game, and I've been all but "living" **Traveller** for nearly a decade.

Such intimacy has forced me to understand every nuance of the game, including why things were done, why others were not—things that have never been published but which assure realism and balance. I will be the first to admit that **Traveller's** tiny flaws are many. But its big ones are few—the game stacks up against all that have tried to duplicate its completeness.

Struck as I was opening that tiny black and red box ten years ago, I couldn't help but fall in love with the game. There I was,

presented with the endless possibilities of a truly limitless game. Our published universe, with its reams of detailed information, is but one possibility among countless millions of others. Few games can boast this kinship with the infinite.

—Timothy B. Brown

About eleven years ago, Marc proposed that GDW should do a science-fiction RPG. Our design work on the game had just begun in earnest when Marc asked if I would like to drive to Lombard with him to see *Star Wars* (which had just opened in the Chicago area, but was not likely to come to Bloomington for weeks). It was the only movie I had ever attended where a special effect (the *Millennium Falcon's* first jump) received a standing ovation. The theater audience...Marc and myself included...leapt to its feet and cheered. The movie had a profound effect upon the both of us. On the drive home, the atmosphere was electric as Marc and I talked of both the movie and the game, and how they both instilled the same excitement in us. If *Traveller* affected others the same way, we knew it would be a great success. It was. To this day, I cannot think of *Traveller* and *Star Wars* separately...thoughts of one invariably call up images of the other.

So (glasses raised), here's to *Traveller's* first decade, and to all the decades yet to come.

—Loren K. Wiseman

Traveller is formally ten years old this year, but it had a long history of development before its publication in 1977. The first glimmers of the game were present in 1975 and 1976 when the GDW design staff played an interstellar wargame that we called *Imperium* (but not the *Imperium* that GDW eventually published). Deeply influenced by our work on historical games, this original *Imperium* provided a variety of spacecraft units all carefully rated with space attack, space defense, planetary attack factors, and costs. Its map, centered on Earth, was an early attempt to portray near-Solar space with accuracy. Its rules tried to handle not only combat and movement, but economics and the relationships between aliens as well. Its map showed space within 20 light-years of Earth and assigned specific star systems to intelligent races. Industrial rules governed the production of starships, and slower-than-light drives made it a sort of "wagon train to the stars" situation. There were two important aspects of this game that are still visible today.

First was the concept of alien races: the prototype *Imperium* universe was populated with Aslan, Hivers, Vargr, Humans, and Dorsai. As in *Traveller*, which followed, the Vargr were patterned on canines, the Aslan on lionlike carnivores, and the Hivers on bees. Humans were just as we know them today, and Dorsai were mercenaries. It was from this base that our general concepts of alien races in *Traveller* were formed.

The second influence prototype *Imperium* had was in the realm of role playing. While the game was a board wargame with a hex map, counters, and extensive strategic rules, a separate set of rules was introduced for individual characters. While each player was assumed to be a highly placed leader of his side, he was also given a character as the son or daughter of that leader. That son (usually) could choose a career (Army, Navy, Marines, Scouts, Merchants, or Civil Service) and progress through it, eventually reaching the upper levels of his particular service. At each level of rank, the son provided modifications to the action. A Navy Lieutenant provided a DM

in space combat; a Merchant officer provided DMs for trade with other races. The only problem was that the son needed to actually be present in order to have his effect, and slower-than-light drives made it difficult to have the son in exactly the right place without a lot of planning. The careers of these sons were the original inspiration for the basic *Traveller* character types.

Of course, no one at the Workshop knew that our publication of a science-fiction role-playing game would mark a whole new area for us. Indeed, for the first year, we sat back and let people buy *Traveller*, play it, and enjoy it. In our own naive way, we thought that the basic rules set was enough. It was a review in a fanzine run by Tony Watson that changed my mind. The reviewer, talking about *Traveller*, complained that there was not enough background and detail for the *Traveller* rules: each player had to make up his own. And Tony (as the editor) inserted a comment that he would never play a system that imposed a background on him. At that point I realized that, as much as each player wishes he could create his own science-fiction background, few have the luxury of unlimited time to do it. It was my responsibility, as a game designer, and our responsibility, as a game publisher, to provide support for the role-playing system.

So at Gencon in 1978, the GDW staff sat down and planned out what products we should produce for *Traveller*. As we talked, it became clear that we not only had to provide useful products, but also expand the store of information about the Imperium. We set to it with a vengeance, and now, 10 years later, you can judge for yourself how well we have done.

Traveller Publications

1977—*Basic Traveller, Imperium*.

1978—*1001 Characters, Mayday, Mercenary*.

1979—*Animal Encounters, Citizens of the Imperium, High Guard, Snapshot, The Kinunir, The Spinward Marches, Journal of the Traveller's Aid Society #1*.

1980—*Across the Bright Face/Mission on Mithril, Research Station Gamma, Shadows/Annic Nova, Twilight's Peak, Dark Nebula*.

1981—*76 Patrons, Aliens Handout, Azhanti High Lightning, Best of the Journal 1, Expedition to Zhodane, Fifth Frontier War, Fighting Ships, Introduction to Traveller, Invasion: Earth, Leviathan, Library Data (A-M), Striker, The Argon Gambit/Death Station, Traders and Gunboats, Basic Traveller (2nd edition), Deluxe Traveller, Trillion Credit Squadron*.

1982—*Best of the Journal 2, Broadsword, Chamax Plague/Horde, Divine Intervention/Night of Conquest, Library Data (N-Z), Marooned/Marooned Alone, Prison Planet, The Solomani Rim, The Traveller Book*.

1983—*Best of the Journal 3, Forms & Charts, Murder on Arcurus Station, Nomads of the World Ocean, Scouts, Tarsus, Starter Traveller*.

1984—*Aslan, Atlas of the Imperium, Beltstrike!, Best of the Journal 4, K'kee, Safari Ship, Secret of the Ancients, The Traveller Adventure, Vargr*.

1985—*Droyne, Merchant Prince, Signal GK, The Spinward Marches Campaign, Zhodani*.

1986—*Alien Realms, Hivers, Robots, Solomani*.

1987—*MegaTraveller*

1988—?

My own production records give a brief overview of **Traveller** production. Not counting *Journal of the Travellers' Aid Society* and a few small items, we have still produced 65 **Traveller** items in the past ten years: that averages slightly better than one new item every two months. We have produced nearly a quarter-million (248,585) **Traveller** rules sets and nearly one and a half million (1,487,377) total **Traveller** pieces. None of that includes licensed products from such companies as *Martian Metals*, *Grenadier*, *Judges' Guild*, *GameLords*, *Paranoia Press*, and the *Digest Group*.

Traveller is available throughout the world, and not just in English. It's been available in Japanese for more than two years and enjoys great success over there. There are currently editions of **Traveller** in German and French. We recently concluded an agreement to publish **Traveller** in Italian, and we are working on a similar agreement for Spanish.

Early in its history, **Traveller** moved to the top ranks of role-playing games. Just last month, the gaming column of *Analog* spoke of **Traveller** as the premier SF game. The writer thought that perhaps time has passed **Traveller** by, even as he favorably reviewed the new **Traveller: 2300**. But our plan is not to replace **Traveller** with **Traveller: 2300**. They are two distinct games that serve distinct needs. So it is especially fitting that we unveil our plans for **Traveller** for the next ten years on this tenth anniversary of the publication of **Traveller**.

We are publishing a new edition of the **Traveller** rules set this year. We call the set **MegaTraveller** (and that name appears on the box), but the game is the classic **Traveller** we all know and love. The set consists of three 96-page books in the large 8½" by 11" format. Each book will be available separately, and the three will be packaged together in a box with additional materials (like the *Spinward Marches* map).

The *Player's Handbook*, aimed primarily at players, provides character generation (eighteen character types using the original four-year system; plus the *Mercenary*, *High Guard*, *Scouts*, and *Merchant Prince* systems) and advanced **Traveller** combat (based on *Striker* and *Azhanti High Lightning*, but task-based). Some additional player information, primarily on the task system, will also be included.

The *Referee's Handbook*, aimed at referees, provides starship design and combat based on *High Guard*, vehicle design (simplified from *Striker*), worlds (taken from basic **Traveller** and from *Scouts*), and commerce (from *Merchant Prince*). A complete coverage of the task system, pioneered by the *Digest Group*, will also be included. Tasks, and the editing of the **Traveller** rules to make use of tasks, makes the entire game run more smoothly and efficiently, without ever slowing down play.

The *Traveller Encyclopedia*, aimed at both players and referees, includes lists of equipment, library data, essays on the state of the Imperium, maps, world data, and player aids. The entire purpose of this volume is to make the background and details of the universe readily accessible to everyone.

With the cream of the past ten years now compiled into three easy-to-use volumes, we have an opportunity to produce a variety of new **Traveller** materials in areas we have only lightly touched before. We're talking about a *Cloak & Dagger* sourcebook, and *Aerospace and Orbital Command* coverage. *Digest Group* is planning a *101 Vehicles* supplement. I want to do an updated, expanded, and enhanced **Imperial Fighting Ships** (with appendices on non-Imperial forces). There will be more adventures as well.

But there has to be more than just a rules revision. We want **Traveller** to continue as the standard against which other role-playing games are judged. We've put ten years into developing the details of this universe of the future, and we can't, we won't, let it fade away. At the same time, nothing lasts for ever; everything changes. And in the interests of a more intriguing future, the Imperium itself has to change.

The Imperium is crumbling. Swirling around and through the Imperium are coming the times that disrupt ordinary lives, but make role-playing adventures exciting and memorable. A set of ordinary, foreseeable circumstances is bringing the Imperium down. The Emperor Strephon will die by an assassin's hand, and in the aftermath of the deed, the empire is going to fall apart as each bloc struggles to take the reigns of power.

I think the next ten years is going to be even more exciting than the last. Stick with us and see. —Marc W. Miller



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TRAVELLER NEWS SERVICE

CAPITAL/CORE (0508-A586A98-F)

Date: 132-1116

¶ Emperor Strephon Aella Alkhalikoi was assassinated at 1517 hours local time, 132-1116, in the Grand Reception Hall of the Imperial Palace above Capital/Core. In the ensuing firefight, the Empress Iolanthe and the Grand Princess Iphegenia were also killed, along with the Aslan Yerlyaruiwo ambassador, twelve Imperial Guards, and a number of bystanders.

¶ In the following minutes, Archduke Dulinor of Ilelish appeared before the cameras of the Reception Hall, claimed the crown of Emperor by right of assassination, and scattered holocrystals documenting his claim to the surviving crowd. He ascended the steps of the dais and sat on the Iridium Throne briefly before leaving in the company of his bodyguard.

¶ System Control Central reported tracking the Archduke's cruiser leaving the Capital system minutes later. Fleet elements are reported in pursuit.

¶ Capital has been placed under martial law. Off-planet transportation has been suspended temporarily. Naval headquarters has issued a statement that the situation is stable and under control. Rioting is reported in the city.

CAPITAL/CORE (0508-A586A98-F)

Date: 133-1116

¶ The Imperial Palace above Capital has been sealed off by Naval Security troops. Dulinor is rumored to remain concealed in the palace with a company of bodyguards. It remains unclear whether Dulinor fled the Capital system yesterday aboard his cruiser, or if he remains in the Palace. Occasional plasma flashes have been reported along the Grand Concourse.

¶ Imperial officers at the scene refused comment.

CAPITAL/CORE (0508-A586A98-F)

Date: 134-1116

¶ Captain Sir Gerals Spirlandin, commanding the Honor Company of the 2nd Imperial Marine Regiment, denied reports that Duke Varian, Strephon's nephew and heir apparent to the Iridium Throne, was killed in skirmishes within the Imperial Palace yesterday.

¶ Spirilan, 32, of Ibaru/Zarushagar, said "The situation is under control, but identities of people in the palace remain unconfirmed."

¶ News Service personnel have not yet been allowed inside the Palace.

CAPITAL/CORE (0508-A586A98-F)

Date: 135-1116

¶ Preparations for Emperor Strephon's funeral tomorrow continued today without incident. Empress Iolanthe will be buried at the same time. Grand Princess Iphegenia will be buried Thirday.

¶ The Admiralty confirmed today that the Imperial Palace has been cleared of disloyal elements. The apartments accorded Dulinor in the Palace have been retaken, with no sign of the Archduke.

¶ The body of Prince Varian, until today heir apparent to the Iridium Throne, was recovered from the Imperial Palace this afternoon and now lies in state alongside the Emperor in the central Hall of Nobles beneath the Moot Spire. Varian's funeral is scheduled for Thirday.

¶ Crowds of mourners continue to file through the Hall of Nobles. Responding to the press of crowds, last minute arrangements have been made to keep the hall open through the night.

¶ The Office of the Mint has suspended production of the Cr1 coin pending the coronation of the next Emperor. A generic sunburst design has been adopted as a temporary replacement.

CAPITAL/CORE (0508-A586A98-F)

Date: 136-1116

¶ Emperor Strephon and Empress Iolanthe were buried today with full state honors. The procession from the Hall of Nobles to the Alkhalikhoi section of the Imperial Park in the shadow of the Palace moved slowly and without incident.

¶ Prince Lucan, Varian's younger brother, and now heir apparent to the throne, appeared briefly at graveside, leaving under heavy security immediately after the ceremony.

CAPITAL/CORE (0508-A586A98-F)

Date: 137-1116

¶ Following simple burial ceremonies for Grand Princess Iphegenia and Prince Varian, the Office of the Emperor today announced that Prince Lucan had formally ascended the Iridium Throne in private ceremonies in the Imperial Palace.

¶ Shortly thereafter, Duke Simalr of Ushra, speaking for the Moot, charged that private ascension ceremonies are invalid, adding that any assumption of the powers of the Imperium requires the consent of the Moot.

¶ Emperor Lucan, communicating through his seneschal, exercised the Imperial power to dissolve the Moot for one year. Duke Simalr of Ushra, speaking for the Moot, denied the legitimacy of Lucan's action in a strongly worded reply which was released simultaneously to the news services.

¶ A meeting of the Moot later in the day failed to achieve a quorum. Duke Simalr is reported under house arrest.

VLAND/VLAND (0307-A967A9A-F)

Date: 202-1116

¶ Emperor Strephon was assassinated by Archduke Dulinor of Ilelish 132-1116. The Central Authority issued a simple statement early today regretting the Emperor's death, but calling on all citizens to remain calm and remember his passing with dignity.

The Universal Task Profile

Editor's Note: Devoted *Traveller* players have been using the Universal Task Profile (UTP) system for more than two years, and their constant play-testing of the system has honed it to a fine edge. The original system, designed by Joe Fugate and Gary Thomas for their *Traveller Digest* magazine, had only a few of the many options now in the present system. Over the past 24 months, *Traveller Digest* adventures (eight so far) have picked the system apart, and put it back together, better and better each time.

We have had a tremendous response to the basic concept. Our German publisher saw the system and wanted it for their translation. Our Italian publisher wants the new system for his *Traveller* translation. We are convinced that this system is a major improvement for *Traveller*, and it is being integrated into the new *MegaTraveller* scheduled for later this year. Here is an advanced look at a key part of the next edition of *Traveller*.

The UTP provides *Traveller* players and referees with a comprehensive system for defining and resolving tasks. The UTP is valuable in an adventure session for impromptu, on-the-fly task definitions. It serves to add immediate depth to an on-the-spot situation. The UTP is also valuable because it requires that a player make definite use of his character's skills and characteristics. Using the UTP, referees can create a catalog of tasks for

future reference.

FORMAT

The components of the UTP are:

Introductory Phrase: A brief phrase (beginning with *To*) explaining the specific task that this UTP covers.

Task Specification: A series of items which define the kind of task and what it takes to attempt this task. The items are:

Difficulty: Indicates the relative difficulty of the task (see chart). From this, the basic roll (on 2D6) needed to succeed can be determined.

DIFFICULTY

Task	2D6 Roll
Simple	3+
Routine	7+
Difficult	11+
Formidable	15+

DMs: Indicates which skill(s) and which characteristic(s) are judged most crucial to task success. Generally, DMs are limited to these two items. Other factors influence the task difficulty, rather than becoming additional DMs. The DMs are added to the 2D6 roll for the task attempt, and are determined as follows:

For crucial skills, use the character's skill level as the DM. At the referee's option, a related skill can be used at a hand-capped level. If the character attempting the task has no skill (not even skill level-0) in the crucial skill, make the task at least

one level harder and perhaps even *impossible*. Optionally, the combination of the character's intelligence and education may substitute for lack of skill (this represents all of the character's intellect, knowledge, and experience brought to bear).

For crucial characteristics, use the character's characteristic divided by five as the DM (drop fractions, the DM range is 0 to 3); the absolute maximum DM is ± 8 . Regardless of DMs, a natural roll of 2 is a *fumble* and results in automatic failure.

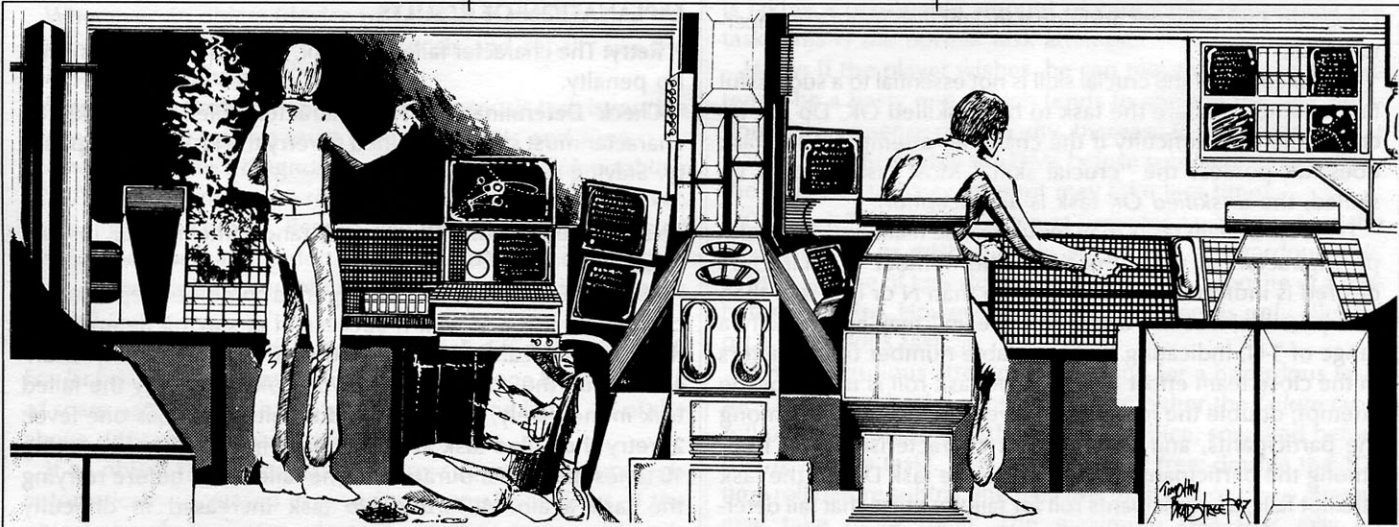
Time: Indicates the base time period for the task attempt. The task attempt (successful or not) is assumed to take an average of ten UTP time periods. (Some tasks may have the time period omitted, in which case the task is assumed to be *instant* and the time duration roll is ignored.)

To determine the actual duration of the task attempt, use the following method:

UTP Time period \times (3D - DMs) (the absolute minimum is 3 time periods).

Task Qualifier: Indicates some special condition that applies to the task. (An understanding of task failure, task retries, and task mishaps is needed to fully understand how to use a task qualifier: see the section *Failure and Task Retry* and the section *Mishaps* for details). The task qualifiers are:

Standard: If no task qualifier is present, the task is a *standard* task. The standard task is a task which: 1) has an outcome that is certain; 2) has only a mild



element of risk; 3) Requires the crucial skill to avoid an increase in difficulty; 4) can be performed by one character alone.

Hazardous: A hazardous task runs a much higher risk of mishap if the attempt is unsuccessful.

If the character fails in an attempt of a hazardous task, roll 3D6 (instead of 2D6) on the *failure table*.

Safe: A safe task is the opposite of a hazardous task. Roll 2D6 on the mishap table as with a standard task, but if a mishap occurs, the mishap type is always *superficial*.

Uncertain: If the result of a task attempt is largely opinion or, because of the nature of the task, if immediate feedback on how successful the task has been is not possible, then declare the task to be uncertain. With an uncertain task, those associated with the task have some idea of how successful the task attempt was, but they are not certain.

When a character is attempting an uncertain task, both the player and the referee roll for the task attempt. The referee's roll is hidden from the player, and serves to modify the result of the player's roll.

<i>If the player's roll:</i>	<i>If the referee's roll:</i>	<i>The player gets:</i>
Failed	Failed	No Truth
Failed	Succeeded	Some Truth
Succeeded	Failed	Some Truth
Succeeded	Succeeded	Total Truth

EXPLANATION OF RESULTS

No Truth: The player is totally misled as to the success of the task attempt. Completely erroneous information is given.

Some Truth: The player is given some idea of the success of the task attempt. Some valid information is given. Notice that it is possible for the character to fail at the task attempt and still get some helpful information, although he can not know for sure this is the case.

Total Truth: The player is not misled in any way as to the success of the task attempt. Totally valid information is given. Notice that the player may still not believe all the information he is given, even though it is the complete truth.

Sensor readings, interchanges between characters (including any task which might require a reaction roll), psionics, computer programming, repairs, and research are all good candidates for uncertain tasks. The section *Further Uses of the Uncertain Task* provides additional insight into using the uncertain task.

Unskilled OK: If the crucial skill is not essential to a successful task attempt, declare the task to be unskilled OK. Do not increase the task difficulty if the character attempting the task does not possess the "crucial skill." Most tasks should be skilled, the *unskilled OK* task is an exception.

Team N: Certain tasks may require close teamwork by multiple characters at the same time. The number of characters desired is indicated by N. One more than N or one less than N is possible, but not optimum. "Team" may also specify a range of 1-N, indicating that a variable number of characters in the close team effort is okay. One task roll is made for the attempt; double the lowest skill level possessed from among the participants, and use the best characteristic level from among the participants to determine the task DM. If the task attempt fails, all participants roll for failure; those that fail determination cannot participate in a future team attempt unless

they wait the required ten time increments. No matter how many mishaps are rolled, roll only once on the mishap table.

Notice that the best teams are those in which the skill levels of the participants are roughly equal. The close teamwork defined here is not to be confused with a loose team effort. Loose team effort is covered in the *Cooperation* section.

Referee Paragraph: As flexible as the UTP is, it cannot cover all combinations of circumstances or conditions. Whenever such special conditions exist, the UTP is immediately followed by a paragraph labeled *Referee*. Some examples:

Referee: This task is non-repeatable; only one attempt is allowed.

Referee: Any mishap causes a security alert to sound.

Referee: If any non-Scout character attempts this task, it becomes *difficult*.

General Format Guidelines: Experience has shown that the UTP should be easy to find in a body of adventure text. To facilitate this, it is recommended that the UTP be listed in its own paragraph preferably bounded by one blank line above the UTP and one blank line below the UTP, as shown:

To locate the source of the strange hum: routine, recon, int, 1 min (unskilled OK, hazardous).

Referee: Any major or destroyed mishaps automatically become minor mishaps.

Failure and Task Retry: If the needed difficulty roll is not obtained, the task attempt is unsuccessful and has failed; roll on the following table:

FAILURE TABLE

Die	Failure Type
2	Reroll
3+	Retry
7+	Check Determination
11+	Mishap (2D6)
15+	Mishap (3D6)

For ordinary (non-hazardous) tasks, roll 2D6; for hazardous tasks, roll 3D6.

EXPLANATION OF RESULTS

Retry: The character failed the task, but can retry it again with no penalty.

Check Determination: The character failed the task; the character must stay determined to retry the task without penalty. Staying determined is a task:

To stay determined: Difficult, endurance, intelligence, Instant.

Referee: Endurance and intelligence combined represents a character's force of will. If successful at staying determined, the character can retry the failed task with no penalty. If unsuccessful, the character has two choices: 1) retry the failed task immediately, but the task difficulty increases one level; 2) retry the failed task at no increase in difficulty by waiting 10 times the actual duration of the failed task before retrying the task again. A *formidable* task increased in difficulty becomes *impossible*, that is, failure is permanent. No more

retries are possible until circumstances change enough to allow a new UTP to be defined for the task. Jack-of-All-Trades skill provides one free retry per level of skill (representing the character's resourcefulness).

Mishap (2D6): The character failed the task; roll 2D6 on the *mishap table*.

MISHAPS

If a mishap occurs from a roll on the *failure table*, roll the indicated number of dice (either 2D6 or 3D6) on the table below.

MISHAPS

Die	Mishap Type
2	Reroll
3+	Superficial (1D6)
7+	Minor (2D6)
11+	Major (3D6)
15+	Destroyed (4D6)

After correcting the effects of the accident, the task reverts to *check determination*, should a retry be desired.

Mishap (3D6): Same as *Mishap (2D6)*, except roll 3D6 on the *mishap table*.

EXPLANATION OF RESULTS

Superficial (1D6): Impose superficial damage on some device/vehicle involved in the task and/or 1D6 wounds to the character.

Minor (2D6): As above, except impose minor damage and/or 2D6 wounds.

Major (3D6): As above, except impose major damage and/or 3D6 wounds.

Destroyed (4D6): As above, except impose destroyed damage and/or 4D6 wounds.

A specific mishap is always preferred to these general results; where possible, spell out specific mishaps in the referee paragraph. If mishap results seem inappropriate, the referee should retroactively declare the task to have been a safe task, and implement a *superficial* mishap.

GENERAL DAMAGE AND REPAIR

Whenever an object (device or vehicle) is damaged, in the absence of detailed rules for diagnosis and repair, use the following procedure:

Diagnose the Problem: The standard diagnosis task is *routine (uncertain)*; the referee must determine DMs and *time*.

Once the player's diagnosis task roll is successful, establish a UTP for performing the repairs based on the damage level, as per figure 6, below. Repairs can be made without a successful diagnosis at an additional cost multiplier of 1D6 (just replace the entire assembly if it can't be determined what's wrong).

For *repairs in the field*, increase the task difficulty one level. For *lack of tools*, increase the task difficulty one level. For *lack of spare parts*, increase the task difficulty one level. All of the above difficulty increases are cumulative.

If an object has *minor* damage, any subsequent damage is automatically increased in severity by one level. Thus, if the object already has *minor* damage, another *minor* mishap is

GENERAL DAMAGE AND REPAIR

Damage Level	Operate?	Repair Task	Repair Cost*
Superficial	Yes	Simple	1D6%
Minor	No	Routine	1D6 × 1D6%
Major	No	Difficult	2D6 × 5%
Destroyed	No	Formidable	2D6 × 2D6 × 5%

*Percentages are of the price when new.

Repair Task and *Repair Cost* are for repairs done at a shop.

changed to *major* instead; a *major* mishap is changed to *destroyed*. *Superficial* damage is not cumulative; it's just more scratches.

If an object had *major* damage that was last repaired in the field (not yet taken into the shop), any task using that object is automatically *hazardous* (high risk of another breakdown). This lasts until the original *major* damage is totally repaired in the shop.

Complex Objects: Certain objects (e.g. vehicles, robots) are very complex with many sub-systems. If the referee wishes, he can specify that an object is a complex object, and vary the damage procedure slightly, as follows:

One system is defined as the *primary system* (the main reason the object works or is useful: on a civilian vehicle this is the locomotion system, on a military vehicle it's the weapons, on a robot it's the brain).

The other systems are *secondary systems*. One or more secondary systems exist. It is up to the referee to specify what these systems are.

Roll for damage as normal: if the result is *superficial* or *minor*, reroll for the damage level to a secondary system; if the result is *major* or *destroyed*, reroll for the damage level to the primary system. Specific damage rules tailored to a complex object are always preferred to these general rules; where possible, spell out specific sub-systems with the complex object design or spell out specific damage suggestions in the referee paragraph.

SPECIAL TASK ATTEMPTS

The player can specify that his character is performing a special task attempt. Each type of task attempt has its own advantages and disadvantages:

Standard: The standard task attempt (in the absence of any other specification by the player) assumes that the character is taking a reasonable amount of care while performing the task. This is the normal task attempt.

Hasty: If the player wishes, he can request that the task attempt be a hasty one, which tends to shorten the task duration at the expense of difficulty. Increase the task difficulty at least one level; double the DMs before subtracting them from the *time* roll (a hasty attempt may take less time).

Cautious: The cautious attempt provides a way to reduce the risk of failure or mishap when attempting a hazardous task, at the expense of task duration; it is just the opposite of a hasty task attempt. However, a cautious attempt is only allowed on a hazardous task.

When a cautious attempt is specified for a hazardous task, the DMs may also be subtracted from either the *failure table* roll or the *mishaps* roll (the player's choice, specified before rolling for the task). This benefit is not free; double the 3D6 time roll before subtracting the DMs from it (a cautious attempt may take more time). The maximum DM that may be

subtracted from either table is -4. Thus if the character has the maximum DM of -8, a DM of -4 may be applied to both the *failure table* roll and the *mishap table* roll.

SUBTASKS

Many tasks can be divided into a sequence of subtasks. A good example of this is the UTP general repair task, which is subdivided into diagnosis and repair tasks. Additional depth and enjoyment may be added to a situation by dividing it into a string of subtasks, rather than using just one big "macro" task.

However, not every macro task should be subdivided. In fact, there are times when a particular task should be one task roll, and then there are other times when the same task should be a string of subtasks. Keep in mind the relevance of the task to the overall adventure. Insignificant tasks should be kept to a single macro task, if they are even to be considered as a task at all.

Also keep in mind that as more subtasks are created, the chance that a mishap will occur increases proportionately. To minimize this effect, try to limit the subdivision to two or three subtasks in most cases.

The risk of a mishap brought on by task subdivision can also be reduced by: 1) defining some of the subtasks to be at a lower difficulty level than the difficulty level of the overall "macro" task; 2) declaring certain subtasks to be safe tasks.

COOPERATION

A task can also be divided into required and supportive subtasks, allowing characters to cooperate toward a common goal. The required subtasks must be accomplished for the "macro" task to be accomplished, while the supportive subtasks simply enhance the efforts of those attempting the required subtasks.

Establish which required task is enhanced by which supportive tasks. If over 50 percent of the supportive tasks related to a single required task succeed, one determination roll is waived on the required task if it fails.

FURTHER USES OF THE UNCERTAIN TASK

A particularly useful technique with the uncertain task is to substitute referee judgment for the purely random secret roll. As an example, consider character interaction. Using tasks with character interaction skills can interfere with genuine role-playing. Is there an easy way to implement tasks in character interaction without eliminating the opportunity for the player to really role-play the situation if he wants? Yes, there is. First, treat all intercharacter tasks as uncertain, and then: 1) define a UTP for the situation, and have the player make the task roll; 2) either role-play the situation or let the player present his argument (whichever method you normally use); 3) rate the quality of the player's presentation and arguments as either success or failure, instead of using the referee's secret roll.

If the result of the uncertain task is *total truth*, roll 1D6+6 on the *reaction table*. If the result of the uncertain task is *some truth*, roll 2D6 on the *reaction table* as normal. If the result of the uncertain task is *no truth*, roll 1D6 on the *reaction table*. Remember, if the player fails the task roll, he must roll for failure. If a mishap occurs, always implement a negative DM (the exact DM is up to the referee) on the *reaction table* roll.

Notice what can happen with this approach. A good presentation or argument from the player can do a lot to save an unlucky task roll, or even to save a mishap. This method also works well because it lessens the pure randomness typically seen in *reaction table* rolls.

SUMMARY

The UTP has been designed to be easy to remember: notice that the three basic tables used all have the same 3/7/11/15 breakdown, with each number 4 more than the last. With a little practice, you should find the system easy to remember and be able to use it strictly from memory.

One Final Note: Be creative in your application of seemingly inappropriate results. Random dice have no idea of the difference between a challenging adventure and an utterly frustrating one. Use the UTP system as your tool—don't let it use you.

—Joe D. Fugate Sr.

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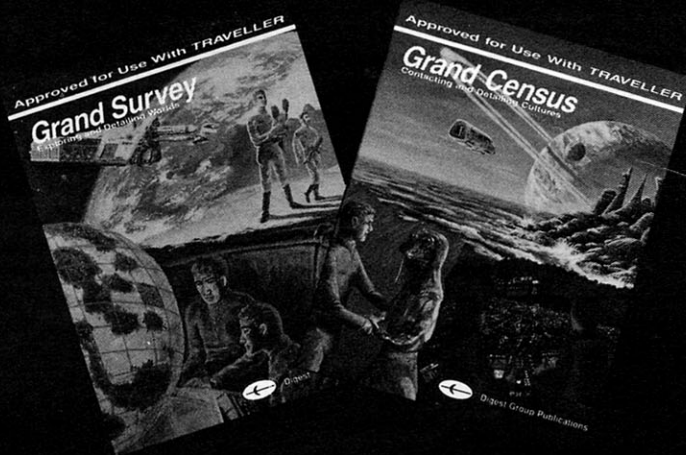
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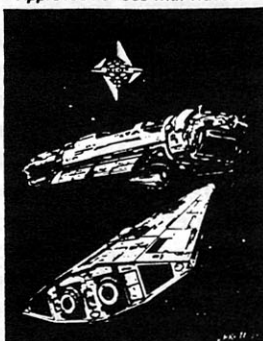
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Scientists

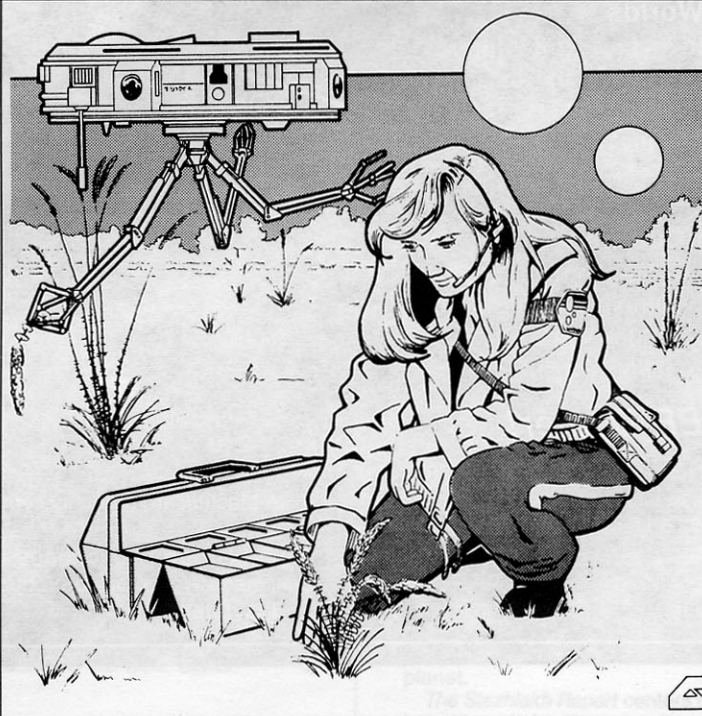
Across the far-flung expanses of the Third Imperium, as in any society of sophonts, there are those who push back the frontiers of knowledge. These people come from all social classes, but have one thing in common: a deep passion for learning and understanding.

Some examine the "hard" sciences like chemistry and mathematics. They work with the physical universe and strive to unlock the secrets of its most absolute truths. Included in this field are the astronomers, whose study of the cosmos brought humanity the jump drive and opened the galaxy to exploration, as well as the physicists who study matter and energy at its most basic levels.

Others study the "life sciences" and work to attain a more perfect understanding of the evolution and operation of all forms of life. These professionals range from the noble physicians, who have sworn an ancient oath to ease all suffering wherever they might find it, to the sophontologists whose study of the development of sentient life spawned the solomani Hypothesis and unraveled the secrets of the Vargr uplift to the ranks of intelligent life.

A third group of scientists, who contemplate the interaction of sophonts and their cultures, work in the fields of "social science." In this category we find the historians and archaeologists who sift through the remains of past cultures to gain a fuller understanding of current events and probable future trends as well as the psychologists who deal with the mind and its complex thought processes.

Lastly, we find the inventors and such who work with technology every day in the "applied sciences." Working in a far less abstract realm than the psychologists or mathematicians, they favor hands-on experimentation and work to improve existing machinery. In general, they take the theories brought forth by some of the other types of scientists and turn them into inventions which



make everyone's life a little bit better. This field includes the computer experts and roboticists who have refined the sciences of automation to remove man's need to work in dangerous or repetitive tasks.

IMPERIAL SCIENTIFIC INSTITUTIONS

There are countless organizations within the borders of the Imperium that have devoted themselves to science and the pursuit of knowledge. Some work quietly in well-equipped labs while others sponsor bold exploration missions into dangerous regions of space. In many cases, they are supported by the local or Imperial authorities, but there are also numerous private agencies and even a few underground groups (like the notorious Psionic Institutes). The following is a list of some of the associations which exist in the time Third Imperium.

Argushiigi Admegulasha Bilanidin (AAB): Located on Vland, the AAB is perhaps the most respected scientific and research body in known space. The vast stockpile of information to be found here is far beyond that available anywhere else in the Imperium, and thus the AAB has become a sort of "clearing house" for new inventions and patents. Although the AAB sponsors very few outside research programs, it maintains a vast

network of laboratories on Vland. Due to the often conservative leadership of the AAB, characters who find employment here are likely to be investigating already existing phenomena, rather than breaking new scientific ground.

Probable Technologies: Based in the Solomani Sphere on San Rogue (a jovian moon in the Capella system), this outgoing corporation is constantly on the leading edge of technology. ProbTech has sponsored numerous exploratory missions beyond the rimward frontiers of the Solomani Sphere, not all of which have returned. The founders of this company were Zeus and Thorian Manningston, both former Solo-

mani scouts with a great passion for exploration. Agents of ProbTech will usually find themselves assigned to dangerous and flashy missions which are geared as much for the favorable press as for the research value.

Enshukki Ohrahndin: Recently formed on Regina in the Spinward Marches, Enshukki Ohrahndin ("The Association of Technologists") is a consortium of scientific research groups (all nonprofit agencies) which have united to eliminate redundant spending of their limited resources. Although less than a decade old, this organization quickly captured the eye of the press and public alike when an expedition of its members found and explored the wreck of the almost legendary luxury liner *Lady Armada* on the outskirts of the Rethe system. Although they fund research in many areas, they are very conservative with their economic resources and are slow to recognize exceptionally unusual efforts. Due to the diverse natures of the organizations that make up the Enshukki Ohrahndin, a group of characters working for this agency might be called upon to do almost anything.

Rukhin Rarruffark Kharn: Translated as "Explorers of Undreamt-of Knowledge," this Vargr operated firm exists just outside of the borders of the Third

Imperium in the Gvurrdon sector. Although it claims to be a scientific research facility which is supported by public and private donations, the true nature of Kharn is well known. In actuality, its agents are experts at corporate espionage who make their living by stealing recent technological breakthroughs in nearby Imperial space, running the border, and selling to the highest bidder in Vargr space. Kharn employees are commonly known as "tech-pirates" and are constantly hounded by Imperial authorities when rimward of the border. In order to operate more freely in Imperial space, Kharn often hires human agents to do their work for them. Players who are hired by Kharn are going to be acting more like smugglers than scientists in most cases.

ConTech: ConTech was established in 713 by the noted philanthropist Wilhelm Roberto Conwell to delve into the mysteries of the life sciences and is supported to this day by his investments and a seemingly bottomless credit line. Originally based in the Maadin system, ConTech has expanded over the years and now has offices on several worlds in the Dark Nebula sector. Recently, ConTech has begun to exchange knowledge with an Aslan firm of a similar nature. Characters who work for ConTech are liable to be field researchers, examining the behavior of animal and plant life on various worlds or seeking out new discoveries in the fields of life sciences.

SuSAG: A powerful business interest, SuSAG is an example of the various megacorporations which exist within the Third Imperium. SuSAG has a wide array of operations, with chemical, pharmaceutical, and genetic engineering being of utmost importance. The company has a bad reputation in many portions of the realm because it maintains Psi drug factories outside of the Imperial borders and due to a history of accidents at some of its biochemical warfare facilities. Due to the firm's original emphasis on Psi drugs, the advent of the Psionic

suppressions in 800 almost shattered it. By quickly pressing on with a policy of diversification that it had begun years earlier, however, SuSAG was able to survive. Currently, SuSAG is a leading manufacturer of anagathics and medical equipment in the Imperium. Due to the great diversity of the corporation's interests, employees of SuSAG may be anything from members of its paramilitary security force to biochemists testing various chemical weapons.

ENLISTMENT

In order to get a solid base for a scientific career, most characters should begin by attending some sort of college (see below). Although it is possible to achieve success as a scientist without such an education, it is much more difficult. The enlistment throw indicates the total needed on 2D to obtain a position in the fields of science. Failure means that the character is unable to pursue such a career and may attempt some other course of action. If the character makes the throw, he or she may serve a term of four years (unless otherwise specified) in the field.

RE-ENLISTMENT

At the end of each four-year term, the character is free to attempt re-enlistment and work for another term as a scientist. The re-enlistment throw indicates the required roll on 2D to continue

Enlistment: 9+

DM +1 if Int 9+

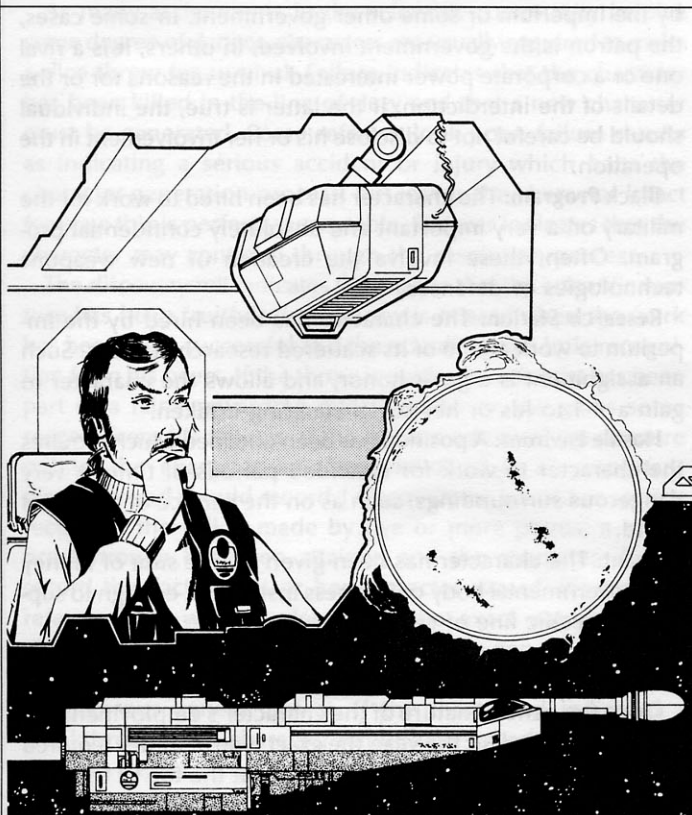
DM +2 if Edu 11+

Re-enlistment: 4+

COLLEGE

Any character may attempt to enter a college of some sort prior to finding a position within the scientific community. Two types of institutes are open to would-be scientists: colleges and technical schools. In general, the college graduate has a more well-rounded education than those who have completed technical school, but the latter generally has looser admission requirements.

Once a character decides to enter either college or tech school, they must apply for admission. The admission throw determines success. If the character fails to attain admission to their chosen school, they may attempt to enter the other. If they fail a second time, the character is unable to attain higher education and may enter into the scientific profession at its lowest levels. The success throw is then made to determine if the character remains in school for a full four years. If the throw is not made, the character ages one year (to 19) and may enter the field for a short (3-year) term. Success indicates that the character has completed his or her course of study and has graduated. The education section of the tables on the next page is used to determine the increase in the character's education attribute acquired during this time. The minimum improvement is always 1. Graduates may then attempt the throw for honors, indicating outstanding achievement by the student. Attaining the honors throw allows the character to apply for admission to Graduate School, and add to their education. Whether or not the character attains honors, he or she has graduated and may enter the scientific community at once if desired.



	College	Technical School
Admission	9+	7+
DM +1 if	Edu 9+	Edu 8+
Success	7+	7+
DM +1 if	Int 8+	Int 7+
Education	1D-2	1D-3
DM +1 if	Int 9+	Int 9+
Honors	10+	9+
DM +1 if	Edu 10+	Edu 9+

GRADUATE SCHOOL

Any character who graduates with honors from either college or tech school may apply for admission to a graduate school. These facilities provide advanced training for dedicated students and include institutions like medical colleges. The procedure is similar to that used for earlier schooling. successful completion of graduate school indicates that the character has aged four more years and is entitled to a number of skills as detailed below. Failure ages the character one year (to 23) and allows him or her to enter the scientific field for a short (3-year) term. Those who complete graduate school are presumed to have earned a doctoral degree and are entitled to be called "doctor."

Depending on the type of graduate school attended, the character will attain various skills. Due to the great diversity of such institutions, a comprehensive listing of them is impossible. In order to simulate the studies available, the character may select any one science or technical skill as his or her major and another as a minor. For example, someone interested in following a career in astrophysics would take astronomy as a major and physics or, perhaps, computer as a minor. Upon successful graduation, the character receives a level of 3 in their major and a level of 1 in their minor. Honors graduates receive a +1 level to their major and minor fields of study. Whether or not the character has attained honors, he or she is now 26 years of age and may freely enter the profession for which they have studied.

Admission 9+
DM +2 if Edu 10+
Success 8+
DM +2 if Int 9+
Skills Level 3 in major, level 1 in minor
Honors 11+
DM +1 if Edu 11+
Skills +1 level in major, +1 level in minor

GENERAL POSITIONS

Each year spent as a scientist involves the attainment of a position of employment. To determine roughly what type of program the character has been involved in, roll 2D on the general position table below. The various assignments are detailed below:

Unemployed: The character has been unable to find a suitable position for the year and survives on cash reserves and odd jobs.

University: The character has become employed as an instructor at a college, a technical school, or a graduate school or has been hired to work on a school-funded research program in his field.

Government: The character has been hired by a government (perhaps local or planetary, perhaps the Imperium itself) to work on a project which is of some interest to them. In some instances these are primarily military in nature, but that is not always the case.

Private: A position has been attained with a private organization which is wholly devoted to a specific type of research. In most cases, the group is nonprofit, and survives on grants from companies and governments.

Corporate: A commercial interest has hired the character. More often than not, the position will be in the research and development department, although other, more unusual, positions do exist.

Special: The character has been hired to work on a very unusual program which may be quite dangerous, but which offers a good chance for reward if success is attained. Roll at once on the Special Assignment table to determine the exact nature of the position. Once the specific assignment has been determined, the character is free to turn it down and roll for a new general position.

Psionics Institute: A very rare opportunity has been found to work for or with one of the remaining underground psionics institutes. Although such work is highly dangerous, it can be very rewarding. Due to the extreme prejudice towards the institutes and psionics in general, many characters turn down such jobs. If the assignment is taken, it is assumed to be confidential, and the scientist will usually avoid letting the fact out. Public release of such information will cost the character 1D6 points from his or her social standing. Accepting a position with a psionics institute entitles the character to free psionic testing and training as per Book Three.

Interdiction Probe: The character has been hired to work inside an area which has been officially closed to outside travel by the Imperium or some other government. In some cases, the patron is the government involved; in others, it is a rival one or a corporate power interested in the reasons for or the details of the interdiction. If the latter is true, the individual should be careful not to disclose his or her involvement in the operation.

Black Program: The character has been hired to work for the military on a very important and absolutely confidential program. Often, these involve the creation of new weapons technologies or defenses.

Research Station: The character has been hired by the Imperium to work at one of its scattered research stations. Such an assignment is a great honor, and allows the character to gain a +1 to his or her social standing if taken.

Hostile Environs: A position has been obtained which requires the character to work for extended periods of time in very dangerous surroundings, such as on the surface of an airless world.

Grant: The character has been given a large sum of money by a governmental body or business institution, enough to support a specific line of research for a year.

SPECIFIC DUTIES

Once the general nature of the character's employment has been determined for the year, the exact type of duties required of the character are found on the table at the top of the next page.

Die	General Position	Die	Special
2	Unemployed	1	Psionics Institute
3	Unemployed	2	Interdiction Probe
4	University	3	Black Program
5	Government	4	Research Station
6	Private	5	Hostile Environs
7	Corporate	6	Grant
8	Private	9	Government
		10	University
		11-12	Special

Die	Specific Duties
1-2	Laboratory
3-4	Administration
5-6	Field

Laboratory: This indicates that the scientist has been working in controlled conditions and in fairly comfortable surroundings. This type of assignment offers a fairly good chance for progress and advancement.

Administration: The character has been hired to work in the support section of the program (such as fund raising or public relations). Chances for advancement in this area are not very good.

Field: The character is working outside of a laboratory and in fairly rough conditions. There are good chances for advancement and discoveries in this type of duty.

RESOLUTION

Once the character has determined what he or she is going to be doing for the year, the resolution tables below are consulted to discover the exact results. Each table indicates a throw for survival, discovery, and skills.

As many assignments in the scientific community involve some degree of danger, characters are usually required to make a dice throw for survival. Failure indicates that the character has been killed in the line of duty and that a new character must be generated. Some referees look upon failure results as indicating a serious accident or injury which halts the character generation process, but leaves the character intact for play; this is perfectly acceptable. Success indicates that the character may continue through the resolution process.

The discovery roll indicates the chance that the scientific venture has been fruitful. If the throw is missed, then the work has been fairly successful and the scientist gains little recognition from his peers. If the throw is made, the scientist has been part of a fairly rewarding effort and he or she gains some respect from his fellows. If the roll is made by three or more points, the character has been involved in an important discovery and should record 1 discovery on his or her service record. If the roll is made by five or more points, a major breakthrough has been attained and the character should record this fact on his or her character record. Players and referees may wish to determine the exact nature of the discovery or breakthrough. For example, a geneticist who attains a discovery might be credited with finding the cause of a dangerous genetic defect. If the throw had indicated a breakthrough, the character might have found a way to prevent the defect from occurring.

No matter what the results of the discovery throw, the

character has a chance to acquire new skills (or improve old ones) in most cases. The throw for skills indicates the roll needed for success. If it is missed, the character's resolution for the year is completed and he or she may proceed to the next year or to re-enlistment (if they have completed a 4-year term).

RESOLUTION TABLES

University

	Laboratory	Administration	Field
Survival	3+	Auto	4+
Discovery	7+	None	8+
Skills	9+	8+	7+

Government

	Laboratory	Administration	Field
Survival	3+	Auto	4+
Discovery	7+	None	8+
Skills	9+	8+	7+

Private

	Laboratory	Administration	Field
Survival	4+	Auto	4+
Discovery	8+	None	8+
Skills	7+	8+	7+

Corporate

	Laboratory	Administration	Field
Survival	4+	Auto	4+
Discovery	8+	None	9+
Skills	7+	8+	8+

Psionics Institute

	Laboratory	Administration	Field
Survival	5+	3+	5+
Discovery	8+	None	8+
Skills	6+	7+	6+

Interdiction

	Laboratory	Administration	Field
Survival	4+	Auto	5+
Discovery	7+	None	7+
Skills	8+	8+	7+

Black Program

	Laboratory	Administration	Field
Survival	4+	Auto	4+
Discovery	7+	None	7+
Skills	7+	8+	7+

Research Station

	Laboratory	Administration	Field
Survival	5+	3+	5+
Discovery	6+	None	6+
Skills	7+	8+	7+

Hostile Environs

	Laboratory	Administration	Field
Survival	5+	3+	5+
Discovery	7+	None	7+
Skills	7+	8+	7+

Others

	<i>Grant</i>	<i>Unemployed</i>
Survival	3+	Auto
Discovery	8+	None
Skills	9+	None

Die Modifiers: +1 to on survival rolls if Int 10+; -2 to discovery rolls if not college educated

SKILL ELIGIBILITY

If a character makes the roll for skills indicated during a given term of employment, he or she is entitled to roll once on one of the tables listed below and receive a level in the skill indicated. Depending upon the type of service the character was involved in, he or she may have a choice of several tables upon which to roll. In such cases, the character must select which one will be used prior to rolling the die for skill determination. In all cases, a character may elect to apply a +1 DM to the roll prior to throwing the die. A description of each table and the requirements for rolling on it are as follows:

Scientist: This table is open to any character at any time and simulates the personal development possible in the course of the year.

Laboratory, Administration, and Field: These tables are open to characters who have served in specific assignments. For example, a character who has just completed a term of service in the field would be able to make use of the field table, but not those for laboratory or administration assignments.

Hard, Life, Social, and Applied Sciences: These tables represent the various overall fields in the scientific community. A character is free to roll on any table which lists a skill that he or she already has. Originally, this usually comes from the scientist's graduate school training. For example, a character who majors in chemistry with a minor in genetics (a biochemist) would be able to roll on both the hard and life sciences tables. If the character later gained skill in computers from an administration assignment, he or she could now roll on the applied sciences table.

Psonics Institute, Hostile Environs, Interdiction Probe, and Black Program: Any character who has worked for the last year in one of these is allowed to roll on the appropriate table.

<i>Die</i>	<i>Scientist</i>	<i>Laboratory</i>	<i>Administration</i>	<i>Field</i>
1	+1 Str	+1 Int	Computer	+1 Str
2	+1 Dex	+1 Edu	Admin	+1 Dex
3	+1 End	Computer	Forgery	+1 End
4	+1 Int	Admin	Bribery	Gun Cbt
5	+1 Edu	Robot OPs	Liaison	Survival
6	Carousing	Sensor OPs	Recruiting	Vehicle
7	Instruction	Vehicle	Broker	Survey

<i>Die</i>	<i>Hard</i>	<i>Life</i>	<i>Social</i>	<i>Applied</i>
1	Astronomy	Sophontology	Archaeology	Commun.
2	Chemistry	Genetics	Linguistics	Computer
3	Geology	Botany	History	Electronics
4	Cryonics	Ecology	Psychology	Engineer'g
5	Mathematics	Psonics	Sociology	Gravitics
6	Physics	Medical	Theology	Mechanical
7	Meteorology	Zoology	Psychohistory	Robotics

<i>Die</i>	<i>Psi Institute</i>	<i>Hostile Environ</i>	<i>Interdict</i>	<i>Black Prog</i>
1	Psonics	+1 Str	+1 End	N. A'tect
2	Recruiting	+1 End	Recon	Tactics
3	Streetwise	Ship's Boat	Survey	Computer
4	Bribery	Vehicle	Survival	Admin
5	Forgery	Survival	Streetwise	Wpns Tech
6	Brawling	Vacc Suit	Vehicle	Scr'n Tech
7	Liaison	Zero-G	Gun Combat	+1 Soc

SKILL DESCRIPTIONS

Administration: Per Book One.

Archaeology: Similar to the history skill, archaeology applies to the physical objects of past cultures rather than to their historical records. Characters with experience in this field of science will be able to identify the origin of various artifacts and estimate their value or scientific importance accurately.

Astronomy: Astronomer skill is a compilation of both observational astronomy and astrophysics. It includes an understanding of stellar and planetary evolution as well as a familiarity with the effects of gravitation fields, solar winds, and similar phenomena. In brief, the character is provided with an overview of the structure of the universe. This skill can be used in many ways, including the location of a ship's position after a misjump or the calculation of precise orbital trajectories for probes and such.

Botany: Similar to zoology, this skill deals with the study of plant life and the systems which make it up. It includes an understanding of agriculture and hydroponics. Characters with botany skill are able to find and treat the cause of various plant diseases or estimate the commercial uses for various types of fauna.

Bribery: Per Book One.

Broker: Per Book Six.

Carousing: Per Book Five.

Chemistry: Chemistry is the study of molecular compositions and the properties of various chemical compounds. Characters with this skill are able to determine the effects of chemical mixtures and the probable by-products of such as well as deducing the composition of already existing substances. In game terms, the chemistry skill applies to nonliving compounds. The chemical makeup of living things is considered to be a portion of the genetics skill. Chemists are able to create useful mixtures (like acids, inks, or even explosives) if given the proper equipment.

Communications: Per Book Five.

Computer: Per Book One.

Cryonics: This science deals with the behavior of matter at very low (near absolute zero) temperatures. It crosses over into the life sciences as it covers the operation of cold sleep units and their effects on living matter. Characters with cryonics skill (any level) are entitled to the +1 bonus when reviving persons in low passage berths.

Ecology: Ecology is an understanding of planetary ecosystems and their structures. It allows the character to determine the importance of various features of a planetary ecology and their relationships to other environmental conditions. An understanding of evolutionary processes is also included and there is some cross-over with the sciences of both zoology and botany. Characters with ecology skill are able to quickly deduce the type of life forms that might be found in a given area or

explain unusual climatic conditions.

Electronics: Per Book One.

Engineering: Per Book One.

Forgery: Per Book One.

Genetics: The field of genetics involves the study of life at its most basic levels. Genetic engineering has brought many wonders to the Imperium, including disease resistant crops and many types of microbes used in terraforming or for medical treatments. Characters with this skill are able to diagnose genetic defects in living things, modify existing life forms, or even synthesize new types of life (including cloning techniques).

Gun Combat: Per Book One.

Gravitics: Per Book Five.

History: The character has an understanding of past events and can often draw upon his knowledge of them to gain new insights on current problems. The character is able to research historical events much more quickly than those who are unskilled and will often spot important occurrences which others might have missed.

Instruction: Per Book Four.

Liaison: Per Book Five.

Linguistics: The character is familiar with the structure of various forms of communication and can often be called upon to "break" unknown languages. Although this can be quite time consuming, the wait is often rewarded with a far more friendly contact than might otherwise be possible. Characters with this skill are also able to detect forms of communication which might not be noticed by others (like subtle color changes or odor releases).

Mathematics: Mathematics is a wide-reaching field and includes such sciences as statistics, geometry, and calculus. In actual game terms, the referee can allow a character unlimited access to a pocket calculator or computer when attempting to solve mathematical problems. A skill roll can be used to solve computations which are beyond the player's actual understanding or in the interests of time and playability.

Mechanical: Per Book One.

Medical: Per Book One.

Meteorology: This science focuses on the understanding of weather systems and atmospheric effects on terrestrial planets. It includes an understanding of atmospheric composition and behavior, as well as allowing the prediction of weather patterns. At higher tech levels, it encompasses weather control techniques and devices. Characters with this skill are able to predict the coming weather using available data and can be invaluable when travelling in the wilderness.

Naval Architect: Per Book Six.

Physics: In game terms, this skill includes many fields of modern science such as nuclear physics and electromagnetics. With the discovery of a unified field theory (usually at tech level 9, as it is needed for the understanding of jump drives and gravitics), the field of physics covers all aspects of the behavior of matter and energy at its most basic levels. Characters with skill in physics can often identify and provide safeguards against hazardous forms of radiation or determine what amount of force is needed to achieve a given effect on an object.

Planetology: This skill imparts an understanding of the physical compositions of planetary structures. It includes such

features as plate tectonics and minerology. There is some degree of cross-over with the prospecting skill as the character is aware of the conditions that lead to valuable mineral formations and deposits.

Psionics: This is an understanding of the functioning of psionic powers, but not the ability to employ them. Characters with a skill level of 2+ are able to test for psionics, and characters with a 3+ level are able to train others in the use of their talents (as per Book 3). This skill allows the character to understand the functioning of psionic shielding equipment as well.

Psychohistory: As detailed in Supplement 11 (Library Data N-Z) the field of Psychohistory is little understood. It involves the study of historical prediction and large scale social manipulation. The theory behind psychohistory assumes that the actions of a very large population (like the trillions that make up the Imperium) are very predictable when viewed as a whole. In this context, the actions of the individual are lost and can be easily ignored. Characters with this skill are able to predict the actions of large groups with a some degree of accuracy over prolonged periods of time.

Psychology: This skill allows the character to understand the actual motives and thoughts of those encountered more fully than others might. It includes a knowledge of psychotherapy and behavioral analysis as well as a familiarity with group dynamics. Characters with this skill will often pick up subtle clues from behavior that indicate lies or hidden motives.

Recon: Per Book Four.

Recruiting: Per Book Four.

Robot Ops: Per Book Eight.

Robotics: Per Book Eight.

Sensor Ops: The character is skilled in the use of various sensory equipment and can attain accurate readings in less than optimum conditions. This applies to all forms of avionics.

Ship's Boat: Per Book One.

Screen Tech: The character has become skilled in the theory behind modern defensive fields like nuclear dampers and meson screens. This is a cascade skill, and the player must select one of the following: Nuclear Dampers, Meson Screens, or Black Globes. This allows the character to repair damaged systems, design new equipment based on the type of screen studied, or analyze existing devices of that nature.

Sociology: This skill imparts upon the character an understanding of the various socio-political systems found across the Imperium and allows them to draw upon available information to reach conclusions about governmental and cultural operations that might evade unskilled persons. Characters with this talent are able to more quickly come to terms with local customs and to spot social or political trends.

Sophontology: This science has three main branches: cultural, physical, and developmental sophontology. Cultural sophontology is classed as sociology in this system and physical sophontology is covered under genetics. This category is taken to mean the third branch of the science (developmental sophontology) which concerns itself with the evolution of intelligent life and the functioning of such races. It allows the character to take a broad overview of a sentient life form and assess the various factors which have contributed to their intellectual development.

Streetwise: Per Book One.

Survey: Per Book Six.

Survival: Per Book Four.

Tactics: This indicates that the character has received some form of training in the application of some type of military force. The player should select at once from the following: Tactics (as per Book One), Ship Tactics (as per Book Five), or Fleet Tactics (as per Book Five).

Theology: Training in theology gives the character a familiarity with the myriad of religions which span the Imperium. It allows an understanding of the values and beliefs that form the base of a religion and permits the character to deduce the nature of higher bureaucratic structures as well. In some respects, it is similar to sociology, but deals only with value systems. Those who are skilled in theology can often avoid violating a cultural taboo that might be missed by others.

Vacc Suit: Per Book One.

Vehicle: Per Book One.

Weapons Tech: The character is familiar with the functioning of a specific type of offensive system and can repair or design such units. This is a cascade skill and the player should select at once from the following: Lasers, High Energy Weapons, Particle Accelerators, Missiles, or Meson Guns.

Zero-G Combat: Per Book Four.

Zoology: Zoology skill provides detailed and extensive knowledge of animal life. Zoologists study the behavior and physical structures of nonsentient life forms in many ways. Zoologists with medical training can provide medical care for injured or sick animals and locate specific types of animals in the wilderness.

XENOLOGICAL SKILLS

In most cases the skills above are based on the character's own racial and cultural background. Players are free to select xenological counterparts to any skill that they receive in the course of service resolution. For example, a Solomani Character who receives Medical skill might opt to take it in Aslan medicine. In cases like this, the field is treated like a cascade skill and numerous specific fields may be selected. A character who does not have a xenological skill may apply more mundane versions as if they were two levels lower in expertise. For instance, a human scientist with Theology—4 is attempting to gain insights about a Vargr religious group which worships the bones of their ancestors. His attempt to do this would be made as if he had Vargr Theology-2. It is possible for a single character to have several versions of the same skill (Human Psychology, Vegan Psychology, and K'Kree Psychology). Another example of xenological skills might be found in the character who wishes to be an oceanographer. He or she could major in ecology and state that the skill was going to be taken as a xenological skill, oceanology. Referees and players should feel free to experiment with various xenological skills.

MUSTERING OUT

When the character completes the generation process above (due to a failed re-enlistment roll or player's choice), the mustering out benefits become available. There are two tables which may be consulted. Table one incorporates educational, material, and travel benefits while the second table is used for severance pay. The character is allowed one roll for every term of service (excluding college and graduate school) which may

be taken on either table. Characters are allowed one extra roll for every two discoveries or breakthroughs made. The table must be selected prior to the throw of the die, and no more than three rolls may be taken on table two. Additionally, all scientists are eligible for retirement pay as described in Book One.

Die	Material Benefits	Severance
1	Low Passage	Cr1000
2	Middle Passage	Cr5000
3	High Passage	Cr10,000
4	+1 Edu	Cr20,000
5	+1 Social	Cr30,000
6	Travellers'	Cr40,000
7	Lab Ship	Cr50,000

DMs: +1 on table one if the character has made a breakthrough in his or her career, +1 on table two if the character retired (i.e.: Did not fail to make a reenlistment throw, but halted the generation process by choice)

BENEFIT DESCRIPTIONS

Passages: Low, middle, and high passage starship tickets may be received during mustering out, these are detailed in Book One.

+1 Edu and +1 Social: These indicate increases in the character's attributes and are applied at once.

Travellers': The character has gained membership in the Travellers' Aid Society. This is fully described in Book One.

Lab Ship: The character has received a Type L Laboratory Ship (as detailed in Book One). This ship is assumed to belong to some scientific institution and can not be sold or disposed of.

—William Connors



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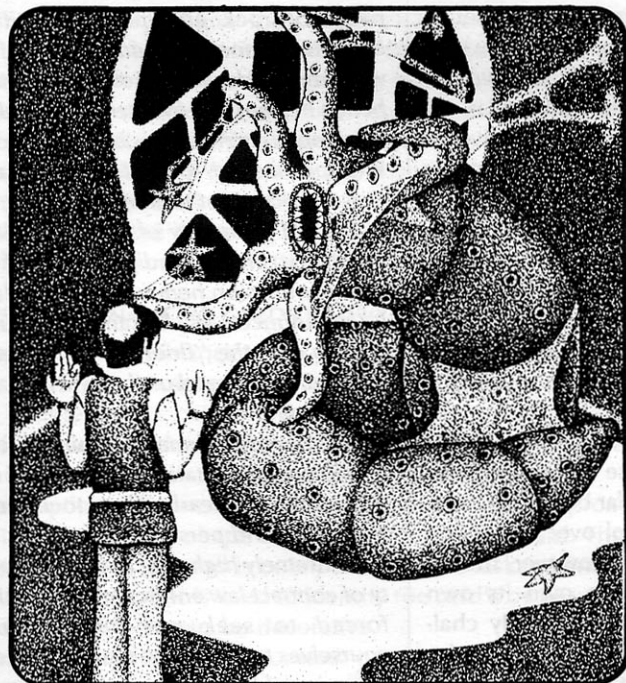
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Even before the night had fallen, they came back; hordes of mutated creatures, demons and ghosts, armed with rifles and grenades by their master, the insane sorcerer Black Wolf. Teinquerion watched his friend ready another arrow and take aim at the closest mutant; for nearly two days now, they had fought back attack after attack on this lonely crag of rock, and the elf still did not show any signs of fatigue. Teinquerion, human by birth and fighter by trade, thought back on all the fiends he had vanquished in his life. He remembered the giants that had raided his homeland, smashing entire houses with their bare hands, the wars between the Free States, the soldiers who fought with steel and the merchants who fought with gold, the witch-king he had defeated in single combat, and so many others. He had fought all his life, against swords and against spells . . . and now against machines. An elf screamed to his left, flung off the crag by machine gun fire, dead before he hit the ground; hideous creatures threw themselves on him, swinging blood encrusted axes and maces. Teinquerion blocked the first one's blow, and riposted with his longsword, slashing deep in the mutated flesh; the creature howled, falling on his comrades who were still scaling up the crag. As the elves fought on and the mutants fell back, Teinquerion began to hope that he might live to see another day, in the grim world of **FIRELAND** . . .

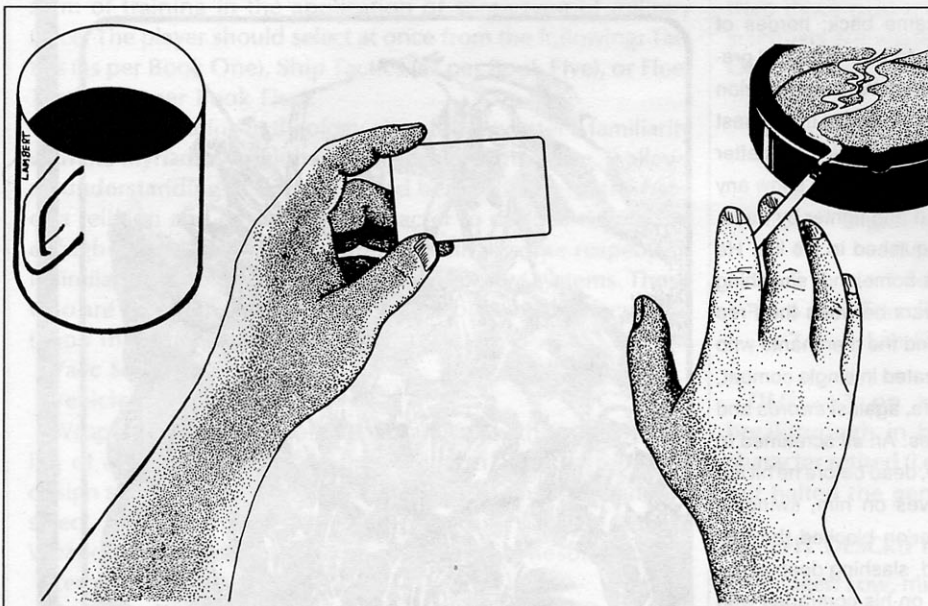


The gigantic worm shaped creature drunkenly slithered forward, dripping toxic slime as it reared its tentacled head towards Father Vicente. A deep throbbing sound came from it, followed by the translator's metallic voice: "Explain to me again exactly what it is you mean by immaculate conception, priest-human." Father Vicente stepped back, trying to avoid the noxious ammonia vapours the thing was releasing; he had been given poor assignments by the New Vatican cardinals, but never quite so bad. Nevertheless, alliance with these creatures would give the Holy Empire enough power to defeat the imperial cities of earth, and free thousands of star systems. He somehow had to convince this alien monster that Pope Catherine represents God in the universe, and siding with her would mean glory not only in this world but in heaven; Father Vicente struggled to find the right words. "It's something like that, the Holy Spirit is . . ." Father Vicente never finished his sentence, as the salvo of nuclear missiles hit his ship vaporizing him and the Outworlder ambassador. Thousands of miles away, aboard a strike cruiser of the imperial city of Tucsan, an officer grinned as the sensors reported a direct hit. There would be no negotiations this time; New Vatican would have to fight alone against the might of **IMPERIAL EARTH** . . .

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In the Cards



"Welcome to Xi Ursae Majoris, Center of operations for Trilon Corporation. From all of us here at Interface/Ground Operations, we hope you enjoy your visit!"

Each seat on the spaceplane lander featured a prominent viewscreen which was displaying a similar message to every passenger, in the appropriate language, of course. The trip out from Beta Canum was rather speedy, actually—two days to Henry's Star, one more to 61 Ursae Majoris, and one more day for the final leg. Whatever this Alexander fellow needed us for, he needed it rather quickly—a company sponsored trip with no significant layovers doesn't happen without a reason. Turbulence began shaking the plane about, and the windows were sealed off against the re-entry.

Gathering luggage at the surface port, after a quick customs check, we were met at the terminal by a young executive fellow wearing a flashy business suit and brandishing a briefcase and cane. "Gentlemen, my name is Alexander. I'm so glad you could make the trip so quickly. Forgive my lack of courtesy, but we must make haste—if you will leave your bags with my assistant here, we should go immediately to a more discreet location to discuss the problem at hand."

XI URSAE MAJORIS

The multiple star system of Xi Ursae Majoris boasts many interesting planets, but only one has come to be known as

"garden" status. As such, this planet takes the name of the system at large and dominates all the system's human activity. Without going into excessive detail, Xi Ursae Majoris is a pre-garden world in the process of building its own advanced ecology. Most of the world is still virgin territory, and while the native atmosphere is breathable, it contains many unsavory elements which should not be taken internally on a long-term basis. Several enormous atmosphere processing stations are in place on the planet, attempting to remedy this situation—significant results are not expected for several decades.

Trilon Corporation was the first human concern to occupy the garden world of the system and make a colony work there. They have thus far been able to exercise ultimate control over the planet since its colonization. However, the actual ability of Trilon to own its own planet has never been seriously challenged by any established nation. Under the direction of Trilon, Xi Ursae Majoris has become an industrialized bastion of mankind's civilization on the very frontier of the so-called French Arm, with Trilon encouraging not only its own activities, but those of many other industrial concerns as well.

One such concern is DataResources, Inc., a Canadian microelectronics firm which has had an established facility on Xi Ursae Majoris for over a decade. Mr. Alexander works for DataResources, and

his superiors have authorized him to locate and hire several troubleshooters to look into a grave situation which threatens the very existence of their small business.

A MEETING IN THE PARK

Alexander's personal limo brought us to a green area in the surface port facility. Outside the dome of the port quite a storm was brewing. The brilliant blue sky was giving way to enormous brown and black clouds and we were already being treated to quite a show of lightning in the distance. Below the plateau of the surface port lay the city Arnor, reputed to be the favorite port of call for every ship's hand in the Arm. I wondered if that reputation would hold true later in the night.

We got out of the car and entered the park. We walked among the transplanted Terran and extra-Terran flora on winding paths of rock and plastic, until we became almost lost in this artificial wilderness. Alexander gestured toward a bench in front of a fountain on which sat a solitary figure with his back toward us. We approached to find an elaborately dressed man, not unlike Alexander, but older and definitely of African lineage.

"This is Mr. Ogundipe, head of our Security division here on Xi Ursae Majoris," announced Mr. Alexander, gesturing as if to give the "floor" to his superior. Mr. Ogundipe eyed us thoughtfully, and then began.

"We have had a major security breach within our organization which could cost the company dearly. Due to my own budgetary and personnel shortages and the extremely high cost and low reliability of contract law enforcement here, I am forced to seek out men such as yourselves to rectify the matter." He continued as if he had been practicing this speech for some time. "Without going into great detail, I am prepared to pay handsomely for the apprehension of a man who has left this system with property belonging to DataResources. Certain information made available to you in order to catch him will be strictly confidential, and your activities will be monitored even after the job is completed. On this basis, do you accept?"

Ogundipe stood patiently, waiting for

a reply. He could have stopped after the "pay handsomely" part. I spoke for us all. "We accept."

Ogundipe and Alexander will now proceed to explain their situation, using materials they have brought with them concerning the man in question.

They will explain that DataResources is a major manufacturer of financial cards for several banks on the French Arm, and on Earth. The locations of such facilities are generally kept confidential, as modern financial cards are the very backbone of the personal financial organizations of virtually all of mankind—tampering with their production could be catastrophic. The characters will be asked to keep this information to themselves.

The man in question is one Benjamin Yamahira, a microelectrical technician who was, until recently, a loyal employee beyond reproach. His activities ran the gamut of card manufacture, from hardware to software. One week ago, Yamahira turned up missing, as did five new financial cards "addressed" to Imperial Bank and Trust of Adrian, Beta Canum. Since Yamahira had access to the information and materials necessary to set any balance he chose on these cards, this loss could mean the financial ruin of both the bank and DataResources. The bank is liable for any charges made on these cards under the charter signed with all businesses which honor their cards. The bank will undoubtedly sue for compensation from DataResources, which will probably be forced out of business as a result.

Mr. Ogundipe will give the characters a file on Yamahira, which includes a description and brief background check on the man (which is quite unremarkable). It also contains all the information DataResources has been able to obtain about his current whereabouts. They know he boarded a ship bound for Henry's Star six days ago using the assumed name Hikaru Samuru, but that's all they know.

Oh, there is one last thing. Mr. Alexander will have to accompany the characters on their search.

PERSONAL FINANCIAL CARDS IN 2300

Most individual finance in the year 2300 is conducted using personal financial cards, each owned by an individual according to agreements between the individual and the holding bank. While individual agreements may vary, what follows are the uses, capabilities and limitations of financial cards.

Description: A financial card is a small, plastic card, approximately the size and shape of a 20th century credit card. The outer surface of the card is unimportant to the tasks of financial transactions, but is used to identify the card's owner, the holding bank, and can be decorative.

Inside the card is a microprocessor capable of handling quite a number of financial transactions. The processor itself is capable of withstanding most abuses, including folding and smashing. However, it will become inoperative should the card be burnt or torn into pieces, at which time a replacement card should be obtained.

Account Balance: The card holds all the information about the holder's current financial balance, which it draws upon much like a savings account. The balance is updated whenever the owner makes a purchase or other transaction. It is also possible that the microprocessor will continuously update the balance with such things as salaries, pensions, interest on



balance, or allowances, any of which can be programmed into the card by the holding bank only.

Purchases: Any purchase can be made using a financial card. The universe of 2300 is virtually cashless. Cash transactions are more common on the frontier than in the core. The card must be present with the owner during the transaction.

First, the card is capable of identifying the thumbprint of its owner and will not function without reading the correct thumbprint. Next, the storekeeper takes the card and inserts it into his register/computer which signals the card to deduct the correct amount from the balance and makes a copy internally which will be sent to the holding bank for their records. A card with insufficient funds will be recognized by the register/computer and the sale will be voided. Finally, the card is returned to its owner and the purchase is complete.

Deposits: Deposits of cash may be made into the balance of a card. Any register/computer can perform this function, and most establishments which have register/computers will do this. Similarly, the balance can be turned into cash.

Loans: Bank loans can be administered by the financial card as well. The loan must be applied for at the holding bank, where the balance is credited with the amount of the loan and the card is programmed to deduct payments due on that loan.

The card will alert the owner continuously a week before a payment is due. On the date of payment, the card will deduct the amount from the balance. If there are insufficient funds, the card will go on working without taking out the payment. However, frequent failures to make payments will cause the card to "lock up"; it will not function until reset by the holding bank, usually after restitution is made.

It is virtually impossible to counterfeit financial cards. First off, they are a particularly sophisticated item, including a powerful fingerprint scanner and microprocessor capable of withstanding a respectable amount of punishment. Second, there are plenty of software safeguards, including multiple access codes and identification numbers which must be recognized and used during transactions.

MR. ALEXANDER

Aside from being completely unprepared for the lifestyle of a troubleshooter, Lyle Alexander appears to be a pleasant enough fellow. He seems to know his business well, which is mostly administration. However, his utter lack of skills in the area of stealth or surveillance will make him stand out like a sore thumb.

Alexander is well-meaning but clumsy. Small accidents follow him wherever he goes. However, he insists that it is his right to accompany the player characters on what might be very subtle duties (tracking Yamahira, spying on him, etc.). On one of these occasions he will most certainly foul up. One way or another, he will give himself and the player characters away to Yamahira, alerting the latter to their presence.

Referee: Handling this particular incident could be difficult. Be careful to administer it when appropriate according to the actions taken by the player characters when seeking Yamahira. The player characters are calling the shots, but Alexander's enthusiasm will tip Yamahira off despite their best efforts.

After this incident, Alexander will yield to the wisdom of the more experienced player characters and agree to stay in his cabin during delicate operations.

NPC Motivation Results: *Diamonds 6:* Alexander is a company man, interested chiefly in climbing the company ladder and gaining a position where he can make a substantial profit. He sees this particular mission as a potential feather for his cap, as it were, possibly getting him the recognition he needs to advance in the security division. *Hearts 3:* He is an amiable person, interested in pleasant relations with his associates. He is very much in love with his wife and family, which helps to fuel his desire for financial success.

TRACKING YAMAHIRA

Under the name Hikaru Samuru, Yamahira has fled Xi Ursae Majoris on the merchant ship *Carnival* bound for Henry's Star. He would have reached Henry's Star three days ago and has almost certainly moved on from there.

At Henry's Star it will be only slightly difficult to determine Yamahira's whereabouts. Asking around at the starport terminals with the photograph of Yamahira will probably yield results.

To determine the whereabouts of Yamahira. Routine. Street-wise. One Day. (Unskilled).

Success will tell the players that Yamahira signed onto a trip aboard the Tall Ship *Queen of the Nile* which left two days ago bound for Beta Canum and beyond. He is now travelling under the name Hikaru Saito.

Trips aboard Tall Ships are pleasure excursions and speed is not an issue. Though it could make the trip from Henry's Star to Beta Canum in only a couple of days, the *Queen of the Nile* will be taking a leisurely pace, and is not expected to make port for nearly two weeks. It is common practice for other ships to visit Tall Ships making such cruises. For instance, the merchant/courier vessel *Lorraine* is bound for the *Queen of the Nile*, leaving from Henry's Star in one day. Passage for each person will be Lv300, plus passage on the *Queen of the Nile* for the rest of the journey to Beta Canum of Lv31,000, or

Lv31,300 per person to be charged to the expense account of DataResources (which Mr. Alexander will approve with much enthusiasm).

THE TALL SHIP QUEEN OF THE NILE

I'd heard of the Tall Ships, about their reputation, I mean. I never thought I'd be able to afford to be on one. Sure, this is a job, but as jobs go it's a pretty good one.

Our ship the Lorraine came out of stutter warp in deep space. It's sort of unnerving to see your termination image knowing there's not a real planet for trillions of miles in any direction. The Queen of the Nile was already waiting for us at the rendezvous point.

Several passengers were on board the Lorraine who were also meeting the Queen. We just blended into the crowd, more or less. Alexander booked us our rooms while we checked things out.

The reception area we were in was decked out pretty well, date trees and jeweled pillars. The porters were made up to be Nubian warriors, ornamented with gold and silver jewels and bronze swords. We could see other passengers, some made up to fit the character of the ship, others in their 24th century attire. Down the corridors we could hear drums and music accompanying the laughter and frivolity of a large and (from the sound of it) lively party.

Alexander came back, saying we had a suite of six adjoining staterooms. Since they are pretty booked, we had to take luxury staterooms, instead of the standard tourist rooms. Good thing this is on someone else's tab.

This could be fun.

The *Queen of the Nile* is typical of the twenty plus Desarge 8680 ships in that it is completely unique unto itself. Known collectively as the Tall Ships, this fleet of luxury liners has gained a reputation of being the most exciting cruise ships in all of human space. Specific information on these ships can be found in the ship listings of **Traveller: 2300**.

This particular ship, the *Queen of the Nile*, is decorated in the flavor of an ancient Egyptian river barge in areas frequented by the passengers. The stewards and crew in these areas are more often than not dressed in traditional garb as soldiers, slaves, or whatever pseudo-Egyptian equivalent comes closest to their actual jobs.

The word best describing this ship is "gaudy." All the staterooms, the casino deck, the nightclubs and the passageways are ornately decorated with gold and jewelry (all fabrications, of course) for the benefit of the passengers. The ship's mood is one of continuous festivity, to the extent that the passengers are encouraged to draw appropriate costume from the ship's stores and take part in all of the feasts and parties thrown by the ship's social directors.

Sure, it's touristy, but it makes money and keeps these ships in operation.

The Crew: As mentioned earlier, those crew directly involved with the passengers are commonly costumed to match the ship. Other personnel, such as the engineers, pilots, and other specialists, are not so outfitted and are only occasionally found in the main areas of the ship. Their duties keep them isolated in the inner workings of the ship itself.

Also in costume, and thus disguise, on board the *Queen of*

the Nile are its security personnel. Security teams are on constant duty in all areas of the ship. There is usually no trouble on such pleasure cruises which justify a large security force. However, with many important people on each voyage, the potential for criminal activity runs high.

THE MISSION

Obviously, once on board the *Queen of the Nile*, the characters will have to do three things. First, they will have to locate Yamahira. Next, they will have to abduct him or at least get the financial cards away from him. Finally, the characters must get Yamahira off the ship and return him to Xi Ursae Majoris. For purposes of this adventure, the scenario ends when Yamahira is off the *Queen of the Nile*.

Locating Yamahira: This may not be as simple as it sounds. There are nearly 400 passengers on board, half of them in costume and all of them enjoying themselves throughout the ship. The one thing the characters do know is that Yamahira entered the ship using the assumed name Hikaru Saito. By asking the desk clerk, they can locate his assigned cabin, which is in the Southern Nile habitat (called "Upper Egypt" for the sake of history buffs).

Yamahira's Cabin: Yamahira never went to his cabin. He will not go there. If the characters stake it out, they will have no luck finding him. If they break in they will find none of his things. Yamahira could easily spend the entire voyage simply carousing from cabin to cabin, which is, in fact, exactly what he is doing.

Yamahira's Luggage: The characters will know that large pieces of luggage will be placed in the luggage hold. Attendants there allow access by passengers to their belongings during the trip. Some of Yamahira's luggage will also be in the luggage hold.

To remember that Yamahira's luggage might be in the luggage hold. Routine. Intelligence. Instant (Unskilled).

Obviously, the clerks will not allow anyone but Yamahira to examine his luggage. So, the characters can take one of two options regarding the luggage hold. They can break into it to examine the luggage, or they can stake it out in hopes of spotting Yamahira.

To spot Yamahira at the luggage hold. Difficult. Recon. 1 Day.

Should the players actually examine his luggage, they will find neither the cards nor any particular clue as to where Yamahira is or what he is doing.

Simply searching the ship for Yamahira might also prove effective.

To spot Yamahira by searching the ship. Difficult. Recon. 1 Day.

Important Note: Once Yamahira is spotted, Alexander will make his blunder and give the party away. From this point on, Yamahira will know that he has been spotted. He will lose himself in the crowd and lay low.

Apprehending Yamahira: Once the player characters locate Yamahira, they will have to isolate and capture him. There are two major problems with this plan. First, since he has been

tipped off, he will be more difficult to locate. Second, the ship's security men do not take kindly to this kind of activity—they will interfere on Yamahira's behalf if they are in the vicinity of a struggle.

The Search is On, Again: Finding Yamahira this time will be somewhat more difficult. The tasks for spotting him are the same as those mentioned above, but are formidable instead of just difficult.

The Struggle: Anyone who spots Yamahira may try to capture him. Use the regular 2300 rules to administer a chase, or whatever.

Security: Whenever there is a struggle, there may be security guards present. Since they are usually in costume, they are virtually impossible to spot in advance.

To avoid security during a struggle. Difficult. Stealth. Instant.

Failure of this task will result in 1 security guard joining the struggle, on Yamahira's side. He is armed with a Brandt Audio-nique AS-3 stun pistol.

Catastrophic failure will bring three such security personnel into the melee.

Any player characters who are rendered unconscious will be collected by security and held in a standard stateroom, under the guard of two security people. Of course, the rest of the party will have to break them out in order to continue the adventure or to escape the ship. However, once a character is marked, security will be on their guard looking for suspects.

To avoid security. Routine. Stealth or Disguise. Instant.

Getting Yamahira off the *Queen of the Nile*: Once apprehended, there will be several ways to get Yamahira off the ship. Since this is a passenger liner, and since security has no reason to suspect someone is being smuggled off the ship, there should be no trouble, provided the characters have some reasonable plan. In this case, getting Yamahira off the ship under the nose of security will be a task.

To get Yamahira off the ship. Simple. Intelligence. 5 minutes.

Failure of the task means that Yamahira can tip off security and a firefight will ensue. Naturally, if the players are already being sought by security for previous shenanigans on-ship, they will have to resolve the task to avoid security when leaving the ship.

AFTERMATH

Whether the mission is successful or not, the player characters will have ingratiated themselves to DataResources. This will be quite a feather in their caps should they come into a tight situation, especially in this part of the frontier. Both Alexander and Ogundipe will remember the player characters and help them out when possible, either with work or information, within reason.

However, on the flip side, the havoc on the *Queen* could cause them trouble in the future if they ever travel on her again. Also, since it is not infrequent to switch from Tall Ship to Tall Ship for crew positions, the player characters should exercise caution when travelling on all Tall Ships.—*Timothy B. Brown*

Trade in 2300

While it might be possible to write good **Traveller: 2300** scenarios that take place entirely on Earth, the real diversity of the game is achieved only by taking advantage of its name and travelling. There is no better excuse for travelling than regular interstellar trade; this article presents a short scenario using trading characters, along with rules for buying and selling goods from world to world.

Players should not read this scenario, although they can read the section beginning *Trading Rules in Traveller: 2300*.

IN THE CHIPS

This scenario is meant for four to ten characters, some of whom have experience in a mercantile or related career. The characters are the owners and operators of an Anjou Class Cargo Vessel, the *Bosc*. The characters are likely to be of French or German ancestry, but could be of any nationality. Their main base of operations is Nous Voila, the third planet orbiting Beta Comae Berenices. The characters are travelling between Nous Voila and the Hochbaden system, making as much money as they can and building up trade networks.

It wouldn't hurt either if the characters have some combat or underworld skills, too, but why spoil the fun by warning them ahead of time...

BETA COMAE BERENICES

Nous Voila is the third planet circling Beta Comae Berenices, the home of a French colony founded 80 years ago in 2220. Its 12 million inhabitants lead comfortable lives on this garden world, engaged mostly in agricultural pursuits.

Nous Voila's economy is based on these pursuits, with agricultural goods making up more than 80 percent of the colony's exports. The colony exchanges these goods for manufactured products, as Nous Voila has very little local manufacturing capability. Nous Voila uses an orbital catapult or slingshot as its primary system for boosting goods into orbit. Scramjets are used as supplemental transportation for passenger service and shipment of particularly fragile goods.

The world itself is less dense than

Earth, but has a diameter of 15,000 km, so its gravity is almost identical to that of Earth. Nous Voila has only about half the water percentage of Earth. The world supports its own military and naval bases.

DM + 36 2393

Circling DM + 36 2393 in its first orbit is Dunkelheim, a world colonized by the Germans in 2224. Dunkelheim is a dry, barren world, about half the size of Earth in diameter, with a gravity of about 60 percent of Earth's. Dunkelheim's greater density is an indication of its mineral wealth; Dunkelheim exports many ores, and most of its economy revolves around mining. It imports agricultural and manufactured goods. Dunkelheim uses orbital catapults to boost ores to orbit.

HOCHBADEN

Kolonie Zwei is a small colony occupying the first orbit of Hochbaden. About half of the four million colonists live in several orbital complexes circling Kolonie Zwei.

With the technical assistance of Das Astronomischen Rechen-Institut, Kolonie Zwei is known for its high-tech manufacturing facilities, many of which are orbital. The colony exports computers, electronic components, space satellites, and energy-weapon systems. Since these goods are manufactured in space, there is no cost in getting them to orbit. Each year, Kolonie Zwei imports a large quantity of ore and a moderate amount of agricultural goods annually.

THE NETWORK

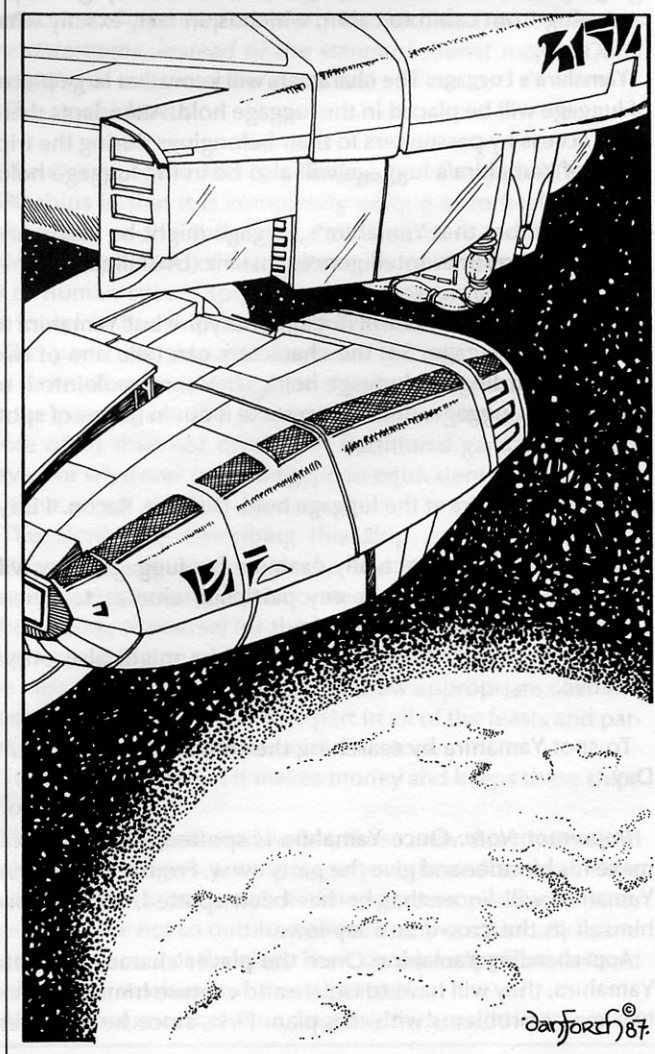
The most obvious way to make a profit

in trade between these three systems is to carry agricultural goods from Nous Voila to the other two worlds, ore from Dunkelheim to Kolonie Zwei, and manufactured goods from Kolonie Zwei to the other two worlds.

Allow the characters to spend time at this, building up trade networks as they go along. Roll up several NPC traders for each world ahead of time, so that these can be used in trade encounters.

A BARGAIN ON KOLONIE ZWEI

On one buying expedition, the characters are very lucky to find some rather ordinary electronic goods available on Kolonie Zwei. The goods themselves are not exceptional, but because they are the end run on a factory production line and are being phased out, they can be purchased for half their normal cost. These are goods that



the characters have previously been successful in reselling on Nous Voila.

Once the characters reach Nous Voila, it takes almost no time at all to sell these electronic parts. One of their earlier contacts happens to spot the characters as soon as they reach the surface of the world, and asks them if they have any new cargoes. When he hears about the electronic parts, he is immediately interested. He knows of another buyer to whom he could resell these components, and so he offers a premium price of 30 percent over regular on the spot, and wastes no time in moving the cargo to his own warehouse.

MISSING SHIPMENT

Shortly after the transaction is concluded, a seedy-looking man approaches the characters, interested in buying electronic parts or equipment. When the characters tell him that they regularly deal in such goods, but they have none to sell now, the man becomes visibly disturbed. He seems to know about their latest cargo from Kolonie Zwei, and is greatly upset that it has been sold to someone else.

In fact, the seedy-looking man was meant to receive these electronic goods, which were by no means ordinary. Thieves on Kolonie Zwei had managed to steal two space satellites meant for the Eta Bootis colony and were using the hapless characters to smuggle these satellites to Nous Voila, where other members of the gang would receive them and arrange for their further transportation to other buyers.

The characters have upset these plans by selling the components to someone else. If the characters are not highly cooperative with the seedy-looking man, they will be visited shortly thereafter by three thugs who will want to know in no uncertain terms just where the cargo was taken. If necessary, the thugs will rough up the player characters to make their point, but it is better at this point if no fatalities occur on either side.

MISSING MONEY

The characters should be further concerned when they are notified by their bank on Nous Voila that the last deposit they made cannot be processed because of the untimely death of the purchaser of the goods. His check cannot go through until an investigation has been completed. When the characters inquire, they find out that their buyer was murdered in his warehouse, and the police have no clues as to the identity of the culprits.

If the characters visit the warehouse, they will find that two large crates of electronic components are missing, but everything else is there. The authorities will not allow the characters to recover any of their goods at this time, so the characters should have incentive to clear this up themselves.

TRACKING THE CROOKS

The characters will be able to locate the seedy-looking man with some difficulty by making delicate inquiries at the right places. This is a good opportunity to use Streetwise skill in a task roll.

Once the characters have located the gang, holed up in some other warehouse, use the combat rules to resolve the confrontation. You should roll up the gang ahead of time, with the strengths of your player characters in mind. The battle should

not be a giveaway, of course, but the characters will enjoy the reward more if they are still alive to collect it.

There is, in fact, a substantial reward offered for the satellites, totaling Lv100,000, if they are safely recovered. The characters will have to travel to Kolonie Zwei to collect the reward from the manufacturers there.

TRADING RULES FOR TRAVELLER: 2300

Since the first working starship was developed in 2136 by the European Space Agency, interstellar exploration has led naturally to interstellar trade. Wherever mankind went, they needed to carry goods with them, and when they found things of value on those new worlds, they exchanged them for the goods they needed from home. As large-scale colonization took place in the Second Age of Exploration, more and more worlds were settled, and historians call the century from 2201 to 2300 the Second Age of Commerce.

Characters in **Traveller: 2300** can start their careers as independent traders, sometimes using their own ships, sometimes purchasing space on other vessels. Other characters, including scouts, colonists, administrators, ship crew members, and smugglers and pirates all have the opportunity to learn mercantile skills on the job.

THE NATURE OF THE BEAST

If a character wants to make money as a merchant, he needs only to follow one rule: "Buy low, sell high." A character who keeps this maxim foremost in his mind, and who truly lives by it, is bound to increase his capital. But life isn't that simple. It takes a careful eye to determine the true value of available goods; it takes a network of contacts to have sources and customers; and it takes shrewd communication skills to haggle for the best prices. All of these skills can be earned as mercantile skills, and tasks can be developed which use each. Some tasks are included in these guidelines; many others can be invented by the referee on the spur of the moment during game sessions, depending on the situation in which the characters find themselves.

FINDING A PRODUCT

A profitable trade route must go both ways, unless costs can otherwise be held to a bare minimum. Expenses accrue whether the cargo hold is empty or full, so it is to the ship owner's advantage to find customers at the destination of each leg of his regular route.

Sometimes this is simple. The merchant may carry agricultural goods from a farming colony on a garden world to a barren mining world, where the foodstuffs are exchanged for ores. These minerals are then carried on to an older colony with manufacturing facilities, where the ores are traded for finished goods. These are then loaded into the ship, which returns to the garden world and swaps them for more agricultural goods, thus completing the cycle.

Unfortunately for the players, dice are not omnibenevolent deities which set up the **Traveller: 2300** universe in this way. It can be discouraging to discover how many mining worlds are adjacent to each other, and how agricultural colonies tend to clump along one area of an arm.

But profits can still be made even in these situations if the players are willing to work harder. Even on Terra, many

countries both export and import agricultural goods. A country that exports manufactured products also imports them. Ores go out, ores come in. What's the secret here?

UNLIKE FOR LIKE

No one will trade apples for apples, or oranges for oranges. But many apple growers would enjoy orange juice for breakfast with their eggs and bacon, and many owners of sunny orange groves can't resist a hot slice of apple pie with cheddar cheese on top.

The same situation holds for ores and manufactured goods. A country or world may be rich in iron, but lacking in molybdenum. It will gladly trade one for the other in order to make it possible to forge stronger steel with its own ores. The Azanian export of tantalum, platinum, and gold for other minerals is an excellent example of this.

WORLD CLASSIFICATION

How can the referee know which worlds are rich in some materials, and, simultaneously, what materials that world would like to import from others? Detailed rules for classifying world supply and demand are beyond the size and scope of this article. For now, this is a subjective decision made by the referee for each particular case. Some guidelines can be given, however.

When a colony is generated, you can determine its general nature from its world type, age, population, and settlement character. Colonies which are better established, with larger populations, tend to have a higher degree of trade. The quality of interface systems is also a good indicator of the amount of trade: the better the interface, the more the importing and exporting that takes place on the world.

Surface facilities should also be noted. Worlds with heavy mining tend to export more ore than they import. Worlds covered with farming hexes are usually exporters of foodstuffs. Worlds with heavy industry are likely to produce their own manufactured goods. In all of these cases, the special situation of trade of unlike goods should be remembered. (The old saw about the exception proving the rule holds true in this case.)

BUYING AND SELLING

The referee should decide for each particular cargo and world the difficulty level of the task for buying and selling goods, ranging from simple to impossible. The following task serves as a guideline:

To buy or sell a particular good on a particular world. Routine. Trader and/or Eloquence. 1 hour.

Referee: This task determines the availability of goods for sale on a particular world, or the purchasers for such goods. Price

determination is covered in a separate task below. This task varies from world to world and assumes that the character is a regular trader in the goods in question on those worlds. The task further assumes that a network of trade contacts has been built up over time. If a character is visiting a world for the first time, make the task's level of difficulty one higher. Other modifiers to the difficulty level might be the colony's natural supply and demand for the goods being purveyed. Here are a few specific examples that might be used in the accompanying scenario:

To buy agricultural goods on Nous Voila. Simple. Trader and/or Eloquence. 1 hour.

To sell agricultural goods on Nous Voila. Difficult. Trader and/or Eloquence. 1 hour.

To sell agricultural goods on Dunkelheim. Simple. Trader and/or Eloquence. 1 hour.

To sell agricultural goods on Kolonie Zwei. Routine. Trader and/or Eloquence. 1 hour.

PRICING OF GOODS

The characters always fulfill the roles of distributors in inter-



stellar trade in **Traveller: 2300**. They do not manufacture products, nor do they sell to the final buyer. Rather, they buy from manufacturers (or occasionally other distributors) and then sell to retailers, who sell the goods at their list prices.

Characters pay 50 percent of the list price when they buy goods; they receive 80 percent of the list price when they sell goods. For example, take a product with a retail list price of Lv5000 per ton. (Naturally, most products are not sold by tons to the final consumer; this price represents the value of a quantity of these goods that require a ton of cargo space.) A character who wanted to buy 100 tons of these goods would pay Lv2500 per ton (50 percent), for a total of Lv250,000 in expenditures.

When the character sold these goods, he would receive Lv4000 per ton (80 percent), for a total income of Lv400,000 for the cargo. Notice that a distribution network is necessary for

both the purchase and the sale of the goods, and that these prices apply only to wholesale quantities. A character, even an interstellar trader, cannot purchase one of an item for a 50 percent bargain price.

Actually, things aren't quite this simple. There are a number of other modifiers which come into play depending on the world where the trade takes place. Worlds that do not have local manufacturing facilities, such as frontier worlds, must import certain goods and are therefore willing to pay a premium for them. On high import worlds, multiply the list price for applicable goods by two or three, depending on how far away the world is from a major manufacturing center.

Other worlds do produce their own goods. Some of these products are consumed on the world itself, but it is often better for the citizenry if the rest of the goods are traded for goods from other worlds which are not abundant locally. In order to encourage this export trade, local goods are priced at from .9 down to .5 times their price on a "typical" world.

The referee must decide, based on the characteristics of a particular colony, which pricing schemes are in effect for which goods. Record this information on the Colony/Outpost Data form; it should not vary radically over time, although seasonal fluctuations may be in order depending upon the product.

Complete examples can be found in the accompanying tables. The examples show the buying and selling prices for goods costing Lv100 per ton on the different types of colonies in the game. Referees should compute the expenditures and incomes for trade in other goods according to their own ordinary value.

EXPENDITURES AND INCOME CHART

When buying:

Ord. Value	Colony Type	Local Mod.	Price /ton	Dis.	Exp./ton
Lv100	heavy exporter	.5	Lv50	.50	Lv25
Lv100	light exporter	.9	Lv90	.50	Lv45
Lv100	average	1	Lv100	.50	Lv50
Lv100	light importer	2	Lv200	.50	Lv100
Lv100	heavy importer	3	Lv300	.50	Lv150

When selling:

Ord. Value	Colony Type	Local Mod.	Price /ton	Dis.	Rcpts/ton
Lv100	heavy importer	3	Lv300	.80	Lv240
Lv100	light importer	2	Lv200	.80	Lv160
Lv100	average	2	Lv100	.80	Lv80
Lv100	light exporter	.9	Lv90	.80	Lv72
Lv100	heavy exporter	.5	Lv50	.80	Lv40

A NOTE ABOUT PERCENTAGES

Many people are uncomfortable in working with percentages, generally because they have never been taught how simple percentages really are. Besides, no one can remember how to use percentages if one doesn't use them on a regular basis; this is a law of the universe, so don't feel bad if you've forgotten how since you last learned. Unfortunately, a certain amount of percentage calculations are necessary to conduct interstellar trade. To make things as simple as possible, you might want to use a pocket calculator for these calculations.

Now for a complete course in percentages. Ready? Here goes:

Percentages are fractions of 100. That's all there is to it. Here are some examples to show how this works.

If a product can be bought for 80 percent of its cost, this means that we can buy it for 80/100 of its cost, since the percentage is a fraction of 100. This is the same as multiplying by 0.8.

What about discounts? The easiest way to handle these is to subtract the amount from 100 to give the multiplier. If something can be bought at a 20 percent discount, we subtract 20 from 100 to give an actual price figure of 80 percent, and then we compute the price as above.

If something costs more than it should, we add to 100 to get the multiplier. For example, to compute the cost of something that can be bought only by paying a 20 percent premium, we add 20 to 100 to get a price of 120 percent of normal. Remember that this 120 percent means 120/100. Work it out on the calculator to find that the cost is 1.2 times normal.

PRICE TASK ROLLS

Characters who find goods available on a world, or who have a network of possible customers for goods, must determine the actual value of such goods; once that is done, they still have an opportunity to haggle over price. Appraisal and bargain skills are used for these tasks.

To estimate the value of goods (Uncertain). Routine. Appraisal and/or Intelligence. 1 minute.

Referee: A character who gets a result of *total truth* for this task will know the value of goods within 10 percent; roll 1D6 and 1D10 to determine this. If the D6 result is even, the character's estimate is too low; if the D6 result is odd, the character's estimate is too high. The value on the D10 tells how far the character is off.

A character who gets a result of *some truth* will know the value of goods within 20 percent; roll a 1D6 and 2D10 to determine the estimate.

A character who gets a result of *no truth* will know the value of goods within 40 percent; roll a 1D6 and 4D10 to determine the estimate.

For example, a character with an Intelligence of 7 and an Appraisal skill level of 1 has a DM of +2 on this attempt, trying to estimate the value of a load of apples from Nous Voila. Under perfectly normal circumstances, apples would be worth, say, Lv300 per ton retail. Nous Voila is an agricultural world with heavy exports, so using the chart above, we can determine that the regular sale price for these apples would be Lv75 per ton wholesale (because of the heavy exporter modifier of .5 and the standard wholesale discount of 50 percent). The player rolls a 4 for the task, plus his DM of +2, failing the roll. The referee secretly rolls a 1, also failing the roll, so the result is *no truth*.

Under these circumstances, the referee rolls 4 on a D6, so the character's estimate is too low. Rolling 4D10 gives a total of 11, so the character believes the apples to be worth 11 percent less than they actually are. Now for the percentage calculation: subtract 11 from 100 to give 89 percent; since this is a fraction of 100, we compute 89/100 (or .89) as the multiplier. The referee tells the character that he believes the apples to be worth about Lv67 per ton, since Lv75 times .89 gives Lv67. Whether the character will be able to buy the apples for that

amount, or whether he must pay more depends on the next task.

To haggle for the best price with a buyer or seller (Uncertain). Routine. Bargain and/or Eloquence. 5 minutes.

Referee: The Bargain skill levels of both the character and his adversary must be taken into account as DMs for this task, counteracting each other. Only the character's Bargain level is used for the player's roll. For the referee's secret roll, subtract the adversary's Bargain skill level from the player's to give the resulting DM. For example, a player with Bargain-4 and an Eloquence of 7 would have a DM of +5 (4 for the skill and 1 for the characteristic). If the adversary had Bargain-1, then the referee would apply a DM of 4 (4 minus 1, giving 3 for the skill and 1 for the characteristic). The player should not be told the skill level of his adversary.

When buying, a character who gets a result of *total truth* for this task will get a discount of up to 40 percent; roll 4D10 to determine the amount.

When buying, a character who gets a result of *some truth* will get a discount of up to 20 percent; roll 2D10 to determine the amount.

When buying, a character who gets a result of *no truth* will get no discount.

When selling, a character who gets a result of *total truth* for this task will get a premium of up to 40 percent; roll 4D10 to determine the amount.

When selling, a character who gets a result of *some truth* will get a premium of up to 20 percent; roll 2D10 to determine the amount.

When selling, a character who gets a result of *no truth* will get no premium.

For example, a character with an Eloquence of 7 and a Bargain skill level of 4 has a DM of +5 on this attempt, trying to get the best price on the load of apples from Nous Voila discussed above. We have already determined that the apples are worth Lv75, as explained above. The character is trying to buy the apples from an NPC with Bargain-1. The player unfortunately rolls a 1, failing the task even with his DM of 5. The referee roll uses a DM of +4, because the adversary's skill level of 1

must be subtracted. The referee rolls 5, which succeeds with the DM, for a result of *some truth*. Under these circumstances, the referee rolls 2D10 to get a total of 10, so the character will get a discount of 10 percent from the Lv75 value.

Now for the percentage calculation: subtract 10 from 100 to give 90 percent; since this is a fraction of 100, we compute $90/100$ (or 0.90) as the multiplier. The referee tells the character that he can get the apples for Lv68 per ton, since Lv75 times .90 gives Lv68. Since the character earlier determined (somewhat mistakenly) that the apples were worth only Lv67 per ton, the character may decide not to buy the apples for this price, or may decide that this price is close enough to the real value to make the purchase worthwhile.

MORE EXAMPLES

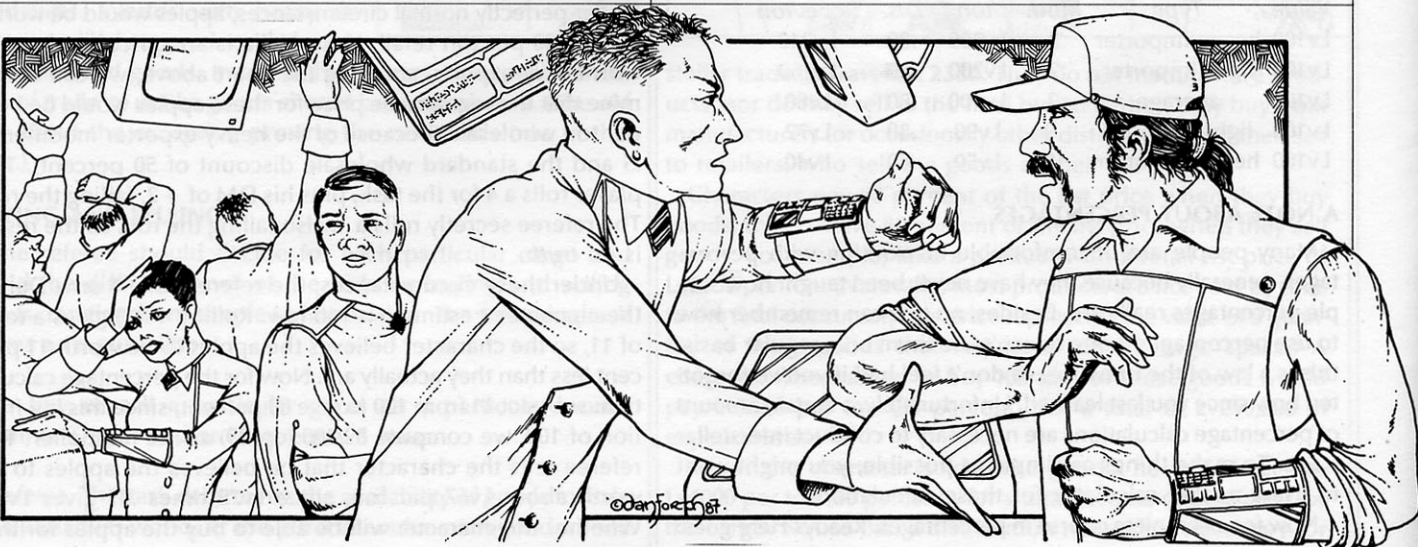
Let's continue with the apples. The characters manage to load them on their ship and transport them to a world that is a heavy importer of agricultural goods, and we will further assume that the character has succeeded in locating his trade contacts, so that he can sell the apples with little difficulty. How much is he likely to get for them?

Since the world is a heavy importer, we have a modifier of 3; together with the standard wholesale discount of 80 percent (since the goods are being sold), we have a multiplier of 2.4 on the retail list price. Since the retail list price was Lv300 per ton, this results in a price of Lv720 per ton. But haggling is still necessary.

The character, with his DM of +5, is up against an adversary with Bargain-3 this time, so a hard sell will be necessary to get the most for the apples. The player rolls 3, which with his DM of +5 succeeds. The referee secretly rolls 9, which also succeeds, even without the DM of +2. This result of *total truth* allows a premium on the price of up to 40 percent. The referee rolls 4D10 to get a total premium of 20 percent. Now for the percentage calculation: add 20 to 100, giving 120 percent. This is a fraction of 100, remember, so we calculate $120/100$ or 1.2 as the multiplier. The lucky character can sell the load of apples for Lv864 per ton. Since he paid only Lv68, this gives a nice profit of Lv796 per ton.

HERE AND THERE

Looking at the *expenditures and income chart* for goods, it



appears that good profits can be made with a minimum of work. Unfortunately, the only way to conduct interstellar trade is by transporting goods from one colony to another. This cost quickly raises the expenditures for a trader.

Except for products manufactured in orbital facilities, all goods must be transported from a world's surface into orbit. They are then loaded onto a ship equipped with a stutterwarp drive. The ship spends its time travelling between the stars, and once in the destination system, the goods are unloaded from the ship and moved to the surface of the new world. Each stage has its own costs, again, often depending upon the particular characteristics of the colony in question.

UP

Four different systems are typically used to carry goods from a world's surface to orbit. Not all of these are available on every world, and some require the presence of an atmosphere.

Beanstalks can be found only on Earth and on Beta Canum Venaticorum-4. Characters must book space on the beanstalks a full two weeks before transport is necessary, and unused space is not refundable. Payment must be made when the space is booked. Using a beanstalk costs Lv500 to transport one ton of cargo into orbit.

A rocket or shuttle can be used to convey goods into orbit at a cost of Lv3000 per ton on a low gravity world.

Space planes, more specifically known as rocket planes or scramjets, carry goods from low gravity worlds at a price of Lv2000 per ton. These vehicles need an atmosphere to operate. Scramjets are the most usual mode of transportation for carrying humans from the surface to orbit. Regular flights, with departures several times a day, are available on nearly any human colony world.

The catapult or slingshot can be used to carry inanimate cargo, at a cost of Lv500 per ton on a low gravity world. These devices can operate in any type of atmospheric conditions, but cannot be safely used with humans or animals.

ACROSS

Starships outfitted with stutterwarp drives are used to carry goods from star system to star system (and also occasionally from world to world within a system). The major cost of this, other than the cost of the ship itself, is in crew salaries. Compute these costs using the figures on page 23 of the *Referee's Manual*. If the ship does not have self-fueling capabilities, fuel from a terminal station costs Lv100 per ton.

DOWN

Once the goods reach the new system, they must be transported safely down to the world's surface.

If a beanstalk is available, it can carry goods down for Lv50 per ton. Advance booking for this space is not as necessary as it is when transporting goods up.

Certain goods can be sent down with a parachute or deadfall at a low cost of Lv50 per ton on a low gravity world. Parachutes cannot operate if the atmosphere is too thin, and deadfalls should not be used except under minimal gravity conditions.

Space planes (rocket planes and scramjets) can carry goods down for Lv200 per ton.

In certain conditions, lifting bodies can be used. These re-

quire the use of special cargo containers, which can then be fitted with aerodynamically designed shapes that provide lift to the container. These lifting bodies are flown by human pilots to the ground. This also costs Lv200 per ton, and requires at least a normal atmospheric pressure.

Finally, a rocket or shuttle can be used at a cost of Lv300 per ton. Shuttles need atmosphere to operate, but rockets can land safely even in a vacuum.

TO ORBIT		
Method	Cost/ton*	Special
Beanstalk	Lv500	Limited access, advanced booking
Rocket, shuttle	Lv3000	
Space plane	Lv2000	
Rocket plane	Lv2000	
Scramjet	Lv2000	
Catapult	Lv500	no passengers or fragile cargoes

*Multiply by 1.5 on average gravity worlds; multiply by 2 on high gravity worlds.

TO THE SURFACE		
Method	Cost/ton*	Special
Beanstalk	Lv50	no booking
Parachute, deadfall	Lv50	needs atmosphere or low grav, no passengers
Space plane	Lv200	
Rocket plane	Lv200	
Scramjet	Lv200	
Lifting body	Lv200	needs normal atmosphere or denser
Rocket	Lv300	
Shuttle	Lv300	needs atmosphere

*Multiply by 1.5 on average gravity worlds; multiply by 2 on high gravity worlds.

FILTHY LUCRE

Once a character has made a killing in the market, the referee has an additional problem in keeping proper game balance. If a character is too wealthy, he will tend not to adventure, but rather will settle down and enjoy his amassed fortune. How to keep the right perspective on the game? The following scenario will *not* work.

Referee (after rolling dice, and looking disappointedly surprised): "Oh, no! While you were back on Earth, walking down the streets of Quito, a loose brick fell from the top of a building and stove your head in. Guess you'll have to roll up a new character, Chuck..."

—Gary L. Thomas

Convention Organizers

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Picking a Homeworld

You are rolling up an army character, and you receive Vehicle, a cascade skill. You must decide what specific skill to choose from the vehicle skill list. Your character is from a pre-stellar (tech level six to eight) vacuum world, so watercraft and aircraft are ruled out immediately, as are grav vehicles. You must thus choose from wheeled or tracked vehicles—a much simpler choice since you know what your character's homeworld is like.

Traveller character generation often refers to a character's homeworld, so knowing your homeworld is helpful, and sometimes even necessary (such as in *High Guard*, where you must know in order to determine if you can join the sector, subsector, or planetary navy). The referee can just arbitrarily rule something, such as "you're all from a waterworld with a class C starport," but an established method helps check abuses and is more fun.

There are a couple of "systems" you can use to determine your homeworld; just pick a world at random from a subsector or sector map, or roll one up using the world generation system. Both methods have their place, but they have some disadvantages as well.

Picking a homeworld from a map works okay as long as you have all the world stats for the map. If you want to stay with the official published universe, this is less than ideal when you are adventuring where you do not have any detailed starmap data (such as an adventure from *Alien Realms*). Besides, picking a world at random may not reflect where a star traveller is likely to be from.

Rolling up a world from scratch takes longer than just picking a world from a map. And it is quite likely the world you roll up won't match any stats in the official sector you're using. In addition, the typical world produced by the world generation system is not the same as the typical world where stellar travellers come from, so the resulting "typical homeworld" is skewed.

Let's examine that last statement a bit closer. The world generation system tends to produce worlds with a class C or B starport and a population code of 3 to 8. But in reality, an adventuring character is more likely to be from a world with a class A starport and popula-

tion code of 9 or more.

HOMEWORLD DESCRIPTION TABLE

The homeworld description table (at the end of this article) produces a general homeworld description, rather than specific UPP values. If the player does want to locate his homeworld, his task is much easier since he simply has to find a world whose UPP fits the general description.

The table also solves the skewing problem by intentionally slanting the results to reflect where travelling characters are likely to be from.

Using the table to describe a character's homeworld is also faster than using the full-blown world generation system. The table has been carefully designed to faithfully reproduce the dependencies of world generation (atmosphere depends on size, hydrosphere depends on atmosphere, etc.).

The table is for characters living in or near the Imperium. Similar tables for the Aslan Hierate, Hivers Federation, and the other major areas of explored space can be constructed, if desired.

Herewith, an explanation of the table's results:

SECTOR

Client State: Character's homeworld is just outside the borders of the Imperium in one of the following sectors: Far Frontiers, Foreven, Spinward Marches, Deneb, Corridor, Vland, Lishun, Antares, Empty Quarter, Vanguard Reaches, The Beyond Trojan Reach, Reft Sector, Ley Sector, Delphi, Glimerdrift Reaches, Reavers Deep, Hinterworlds, or Spica.

Imp Frontier: Character's homeworld is on the Imperial border in one of the following sectors: Spinward Marches, Deneb, Corridor, Vland, Lishun, Antares, Empty Quarter, Trojan Reach, Reft Sector, Ley Sector, Delphi, Glimerdrift Reaches, Reavers Deep, Hinterworlds, or Spica.

Imp Core: Character's homeworld is in the central Imperium in one of the following sectors: Gushemege, Dagudashag, Core, Fornast, Illelish, Zarushager, Massilia, Daibei, Diaspora, Old Expanses, Magyar, Solomani Rim, Alpha Crucis.

Starport: Character's homeworld star-

port. A, B, C, D, E, X, as shown.

Size: Character's homeworld size. Asteroid: 0; Small: 1-4; Medium: 5-7; Large: 8-A.

Atmosphere: Character's homeworld atmosphere. Vacuum: 0-3; Thin: 4, 5; Standard: 6, 7; Dense: 8, 9; Exotic: A-F.

Hydrographics: Character's homeworld hydrosphere. Desert World: 0; Dry World: 1, 2; Wet World: 3-9; Water World: A.

Population: Character's homeworld population. Lo Pop: 0-3; Mod Pop: 4-8; Hi Pop: 9, A.

Law Level: Character's homeworld Law Level. No Law: 0; Lo Law: 1-3; Mod Law: 4-7; Hi Law: 8, 9; Ext Law: A+.

Tech Level: Character's homeworld Tech Level. Pre-Ind: 0-3; Indust: 4, 5; Pre-Stellar: 6-8; Stellar: 9, 10; Avg Imperial: 11-13; Hi Imperial: 14, 15, (or occasionally) 16.

USING THE HOMEWORLD

In the context of character generation, just what is a character's "homeworld?" Sometimes "homeworld" means just what it says: it's the world the character was born and raised on. But more importantly, for the purposes of character generation, the homeworld is the "baseworld" for the character's service career. Notice this may or may not be the character's world of birth—his traditional "homeworld."

With the details of a character's homeworld available, we can make some useful observations about the **Traveller** careers:

Navy: Character must originate on a world with a tech level of pre-stellar or greater.

Marines: Character must originate on a world with a tech level of pre-stellar or greater.

Army: Character must originate on a world with a tech level of pre-stellar or greater.

Scouts: Character must originate on a world with a tech level of stellar or greater.

Merchants: Character must originate on a world with a tech level of stellar or greater.

Barbarians: Character must originate on a world with a tech level of pre-ind or less.

Belters: Character can originate on any world as long as the system has at least one planetoid belt.

Bureaucrats: Character must originate on a world with a population of mod pop or greater.

Diplomats: Character must originate on the main world of any system.

Doctors: Character must originate on a world with a tech level of indust or greater.

Flyers: Character must originate on a world with a tech level of indust or greater, a population of mod pop or greater, and an atmosphere of thin or greater.

Hunters: Character can originate on any world.

Nobles: Character can originate on any world.

Other: Character can originate on any world.

Pirates: Character must originate on a world with a tech level of pre-stellar or greater.

Rogues: Character can originate on any world.

Sailors: Character must originate on a world with a hydrographics of wet or greater.

Scientists: Character must originate on a world with a tech level of indust or greater.

Some skills are limited to characters of certain world types:

Wheeled Vehicle: Tech level indust or greater, hydrographics of wet or less.

Tracked Vehicle: Tech level indust to stellar, hydrographics

wet or less.

Grav Vehicle: Tech level stellar or greater.

Prop-driven Fixed Wing Aircraft: Tech level indust to stellar, atmosphere standard or more.

Jet-propelled Fixed Wing Aircraft: Tech level pre-stellar to stellar, atmosphere thin or more.

Helicopters: Tech level pre-stellar to stellar, atmosphere standard or more.

Hovercraft: Tech level pre-stellar to stellar, atmosphere standard or more.

Small Watercraft: Tech level pre-stellar or less, hydrographics wet or more.

Large Watercraft: Tech level stellar or less, hydrographics wet or more.

Submersibles: Tech level stellar or less, hydrographics wet or more.

Lighter-than-air Craft: Tech level pre-indust to stellar, atmosphere standard or more.

Ship's Boat: Tech level pre-stellar or greater.

Homeworld law level and tech level apply when selecting any weapon skill (Rogue, Pirate, and Other may use one law level lower than their homeworld, however).

Roll 2D on each column of the table below to determine the general description of the character's homeworld:

—Joe D. Fugate, Sr.

HOMEWORLD CHARACTERISTICS

Die Sector	Starport	Size	Atmosphere	Hydro	Pop	Law Level	Tech Level
2 Client State	A	Asteroid	Vacuum	Desert World	Lo Pop	No Law	Pre-Ind
3 Imp Frontier	A	Small	Vacuum	Desert World	Lo Pop	Lo Law	Indust
4 Imp Frontier	A	Small	Thin	Dry World	Mod Pop	Lo Law	Indust
5 Imp Frontier	A	Small	Thin	Dry World	Mod Pop	Mod Law	Pre-Stellar
6 Imp Frontier	A	Small	Standard	Wet World	Mod Pop	Mod Law	Pre-Stellar
7 Imp Core	B	Medium	Standard	Wet World	Mod Pop	Mod Law	Stellar
8 Imp Core	B	Medium	Standard	Wet World	Hi Pop	Mod Law	Stellar
9 Imp Core	B	Medium	Dense	Wet World	Hi Pop	Mod Law	Avg Imperial
10 Imp Core	C	Large	Dense	Wet World	Hi Pop	High Law	Avg Imperial
11 Imp Core	C	Large	Exotic	Wet World	Hi Pop	High Law	Hi Imperial
12 Imp Core	D-X	Large	Exotic	Water World	Hi Pop	Ext Law	Hi Imperial

On D-X, roll 1D6, 1-3=D, 4-5=E, 6=X.

DMs: Lo Pop: -1. Client State: -2. Hi Pop: +1. Imp Frontier: -1. Imp Core: +1. Starport A: +3. Starport B: +2. Starport C: +1. Starport X: -2. Asteroid: +1. Water World: +1. Lo Pop: +1. Hi Pop: +2.

PUT YOUR WANT AD HERE. Any *Traveller* or *Twilight: 2000* related ads accepted, subject only to space available and good taste. Buy or sell out-of-print booklets. Advertise fanzines. Find people to play against. Challenge Classifieds, Challenge Magazine, PO Box 1646, Bloomington, IL 61702

TIDEWATER TRAVELLER CLUB: An association of players and referees of *Traveller* and *Traveller: 2300* located in the Tidewater area of Virginia. For information, write Mark Gelinas at Code 5211 NAVGMSCOL Dam Neck, Virginia Beach, VA 23461-5593.

JUMPSPACE: An illustrated fanzine for *Traveller*, first issue now available. Send \$4 payable to James B. King, 50 Basin Dr, Mesa, WA 99343.

WANTED: Will *Traveller* players in the Yuba City, Chico and Sacramento areas please contact Mike Linsenmayer at 1590 Christifer Ln, Yuba City, CA 95991, for possible gaming.

STARSHIP EXCHANGE: I want *High Guard* stats for as many different types of ships as possible—preferably over 1000 tons—will trade for mine! Also want *Striker* vehicle designs. Philip Athans, 7783 Kensington Lane, Hanover Park, IL 60103

WANTED: Journals 1, 4, 14. Willing to bargain. Joseph Kimball 1723 Oak Lane, Provo, UT 84604.

WANTED: *Hotel Complex* by FASA and *Evening Star* by Robert Warfield. Will pay well for mint copies. Al Adams, PO Box 1328, Kealakekua, HI 96750

GENESIS: *Genesis* is an IBM-PC and Compatible program designed to assist the *Traveller* referee in designing complete sectors of planets in a matter of minutes. View, edit, and print results in various formats. Copy of program and 39-page documentation available as public domain program for \$5. Send \$5 to Synergy Software of Nebraska, 904 Lariat Circle, Papillion, NE 68046.

AUSTIN AREA: Gamers in and around Austin should check out Hexworld, Austin's game room, with a library of over 1000 games, including *Twilight: 2000*, *Traveller*, and others. Regular campaigns for several RPG systems, as well as boardgames and tabletop miniatures. Write Hexworld, 8910 Research #C-2, Austin, TX 78758.

BEASTMASTER: Generate *Traveller* character(s) with a new twist. In plastic cover, introductory price of \$3.00 plus S/H. Write for details.

Also looking for *Traveller*, *Twilight: 2000*, *Traveller: 2300* players in N. Seattle/King County area. Jerry Campbell, 8717 N.E. 138th, Kirkland, WA 98034.

NEW MAGAZINE: Will interested role-playing clubs and individuals in West Germany please contact Ralf Lammert, Lange Strasse 14, 4784 Ruthen-Meiste, West Germany. He is beginning a role-playing magazine called *Die Meister Runde*.

IMPERIUM STAPLE: Ten issues produced by Herb Petro, now under new editorship. \$6 for six monthly issues, or \$11 for twelve monthly issues (one year); \$1.25 for sample issue. W. Elmer Hinton, 20 Almont St., Nashua, NH 03060.

CONTINUUM: A new *Traveller* Newsletter by Herb Petro to support miscellaneous writings and *Traveller* Data Base project news. Send SASE for sample issue, \$2 for 4 issue subscription. Herb Petro, PO Box 1515, Belmont, NC 28012.

WANTED: Photocopies of the *Vanguard Reaches* and the *Beyond Sector* (published by Paranoia Press), and *50 Starbases*

Classifieds

by Judges Guild. James P. Ward, 7907 Wynbrook Rd, Baltimore, MD 21224.

THIRD IMPERIUM: A quarterly Canadian *Traveller* fanzine by M. Jackson, A. Berg, and D. New. Each issue contains new

equipment and equipment blueprints, starship deck-plans, a complete adventure, and more! \$2.50 Canadian for a sample issue, \$9.00 Canadian for a 4-issue subscription. Mike Jackson, No. 512, 4676 Yew St., Vancouver, BC, Canada, V6L 2J6.

GAMEMASTERS GUILD OF WAUKEGAN: The Guild invites you to become a member of a gaming guide. This will be a directory of games, and people in the Chicago area who play them. There will also be a list available for new people or out-of-town people who wish to find opponents. If you play a game or have a game club, please contact us at (312) 336-0790.

WANTED: Photocopy of *High Passage #1*, unpainted Martian Metals figures and vehicles, and *The Desert Environment* by Gamelords. Jed Docherty, 21 Moran Ave, Princeton, NJ 08542.

WANTED: Will players and/or referees of *Traveller* in Lancashire, Yorkshire, or members of the RAF please contact J/T Birchenough I.P, T91 Flt, RAF Staxton Wold, Scarborough, N. Yorkshire, UK, YO12 4TJ.

WANTED: Journals 1-4, 6, 8, 11-17. Will pay \$5.00 each, but am willing to bargain on early issues. Dale Allen, 9380 SW Palamino, Beaverton, OR 97005.

THE FANTASY FORUM: An amateur fanzine for *The Fantasy Trip*. Features programmed adventures, rules variants, short fiction, and more! Six-month subscription: \$7.50; sample copy: \$1.50. Write Lester W. Smith, 34 A Northmeadow Village, Normal, IL 61761.

WANTED: Complete set of 2nd Edition *Striker* rules, in fair or better condition. Dave Strecker, 40 Broad St., Wethersfield, CT 06109.

WANTED: TCS players in NYC metro area. Ronald Finkelstein, 120 Asch Loop, Bronx, NY 10475.

CHALLENGE Next Issue

For Traveller:

More information on the **MegaTraveller** project and news of the current crisis.

For Traveller: 2300:

Bayern: A short trip...to the Pleiades!

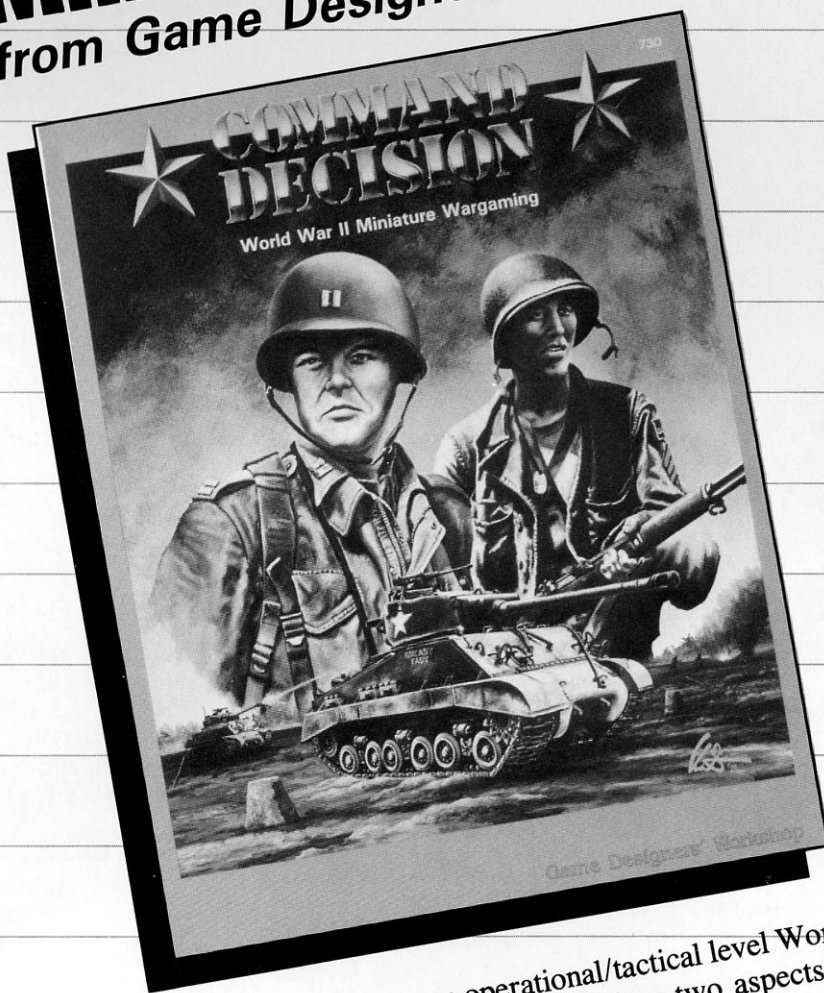
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