Approved for Use With *Traveller*

Grand Census
Contacting and Detailing Cultures

CULTURAL PROFILE

1. Date of Preparation

2. World/Government Name

PROGRESSIVENESS

Attitude
- ☐ Radical
- ☐ Progressive
- ☐ Conservative
- ☐ Reactionary

Action
- ☐ Enterprising
- ☐ Advancing
- ☐ Indifferent
- ☐ Stagnant

AGGRESSIVENESS

Attitude
- ☐ Expansionistic
- ☐ Competetive
- ☐ Unaggressive
- ☐ Passive

Action
- ☐ Militant
- ☐ Neutral
- ☐ Peaceable
- ☐ Conciliatory

EXTENSIVENESS

Global
- ☐ Monolithic
- ☐ Harmonious
- ☐ Discordant
- ☐ Fragmented

Interstellar
- ☐ Xenophilic
- ☐ Friendly
- ☐ Aloof
- ☐ Xenophobic

EXPORTS

Natural Resources
- ☐ Agricultural
- ☐ Ores
- ☐ Radioactives
- ☐ Gems & Crystals
- ☐ Petrochemicals

Processed Resources
- ☐ Agricultural
- ☐ Alloys
- ☐ Agroproducts

Manufactured Resources
- ☐ Weapons
- ☐ Mechanical Parts
- ☐ Heavy Equipment
- ☐ Electronics
- ☐ Gravitics

TECHNOLOGY PROFILE

Columns: High | Low — Energy | Computers/Robotics | Communications | Medical | Environment — Land | Water | Air | Space — Personal Military | Heavy Military — Novelty

Common — Quality of Life — Transportation — Military

———— Achievement Tech Levels ————

Notes on Technology:

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3. Government Code and Description

GOVERNMENT DIVISION OF AUTHORITY

☐ Executive	☐ Executive	☐ Executive
☐ Legislative	☐ Legislative	☐ Legislative
☐ Judicial	☐ Judicial	☐ Judicial
☐ Ruler	☐ Ruler	☐ Ruler
☐ Elite Council	☐ Elite Council	☐ Elite Council
☐ Several Councils	☐ Several Councils	☐ Several Councils
☐ Demos	☐ Demos	☐ Demos

DETAILED LAW LEVELS (optional)

Columns: Overall — Weapons | Trade | Criminal Law | Civil Law | Pers. Freedom

☐ — ☐ ☐ ☐ ☐ ☐

UNIFORMITY OF LAW

- ☐ Undivided
- ☐ Territorial
- ☐ Personal

Notes on Religion:

RELIGIOUS PROFILE (optional)

Columns: God View | Spiritual Aim | Devotion Req. | Organization | Lit. Formality | Mission. Fervor — Nbr. Adherents

☐ ☐ ☐ ☐ ☐ ☐ — ☐

Notes on Culture:

Once a world's physical characteristics have been surveyed, the work has only begun. If the world supports life, are these life forms intelligent? What is their culture like? How do they deal with each other? How do they deal with offworlders?

The Imperial Interstellar Scout Service has answered some of these questions, but adventurers must ask them again when they explore for themselves. The tools and techniques used by the Scouts open a civilization up so it can be read like a book—but only by those who know the language of *Grand Census*.

Grand Census is the comprehensive guide to contacting and detailing cultures. *Grand Census* consists of two main sections:

• **Exploring a World** is specifically designed for **Traveller** players. It details the landing party procedures used by the Scouts, and discusses the difficulties the Scouts encounter when dealing with the myriad of languages across the Imperium. The section includes complete plans for several landing party vehicles and lots of new high-tech landing party equipment.

• **Detailing a Culture** is for the **Traveller** referee. It shows how to take the **Traveller** UPP stats for a world and expand them into a detailed description of the world's cultural outlook, local customs, government and legal structure, economics, and technological achievements. Included is information on how to create a cultural profile, and how to use the expanded cultural information to introduce a new level of exciting realism into a game session.

USEFUL RELATED MATERIALS

Any copy of the **Traveller** rules can be used with *Grand Census*.

This book goes beyond **Traveller** basic world generation by providing more detail about the world's inhabitants.

Those desiring an optimum reference set for exquisitely detailed and realistic adventure settings should also acquire *Scouts* (GDW) and *Grand Survey* (Digest Group Publications).

Additional useful materials include pens, pencils, notebook paper, hex grid or square grid graph paper, and colored markers. A calculator or home computer is helpful.

DIE ROLLING CONVENTIONS

Grand Census uses the common die rolling conventions for **Traveller**. Briefly, these conventions include:

Throw: That die roll required to achieve a stated effect. If only a number is stated, it must be rolled exactly. A number followed by a plus (such as 7+) indicates that number or greater must be rolled. Similarly, a number followed by a minus (such as 3-) indicates that number or less must be rolled.

Number of Dice: Generally a dice throw involves a roll of two six-sided dice. Throws requiring more (or fewer) dice are clearly stated. For example, a throw calling for one die would be stated as 1D.

Die Modifiers: Die roll modifiers (abbreviated DM) are always preceded by either a plus or a minus. Thus the notation DM+3 indicates that three is added to the dice roll before it is used. Some throws will be written to include a constant modifier; for instance, 2D-7 indicates that the throw required is a roll of 2D with a DM of -7 immediately applied.

HOW TO USE THIS BOOK

Generally, the referee will use the section *Detailing a Culture* to generate the details of a world's culture (or subcultures) from the world UPP. During an adventuring session, the referee then has at his disposal a tremendous amount of useful detail about the world as the players adventure on it.

The referee can also use *Detailing a Culture* to detail a world as yet *unexplored*. The players can then use the section *Exploring a world* to discover the attributes the referee has already generated. The act of contacting an unknown culture can be an exciting basis for an adventure.

THE BASIC TRAVELLER PLANET

The Universal Planetary Profile (UPP) is used by **Traveller** as the standard for recording coded information about a world. It consists of starport, size, atmosphere, hydrosphere, population, government, law level, and tech level.

Additional data such as trade classifications and remarks can be added to clarify or elaborate on the UPP.

Any world can be described by the basic UPP. These brief stats serve as the starting point for *Grand Census*. Some details generated in *Grand Census* (such as exports) depend on world data from a World Profile generated using *Grand Survey*.

To generate the UPP for a system, use the basic **Traveller** rules or the system in *Scouts*. For many worlds, the UPP is not generated, but comes from a published source.

The Universal Task Profile—handling tasks in *TRAVELLER*

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UNIVERSAL TASK PROFILE FORMAT
Introductory Phrase _____ To diagnose the damage done to an air/raft:
Task Specification _____ ROUTINE, gravitics, edu, 15 min    (uncertain)

Difficulty (2D) ___
             |
             |
      add to roll
             |
         DMs ___
             |
    subtract from roll
             |
        Time (3D) ___

   Task Qualifier _____
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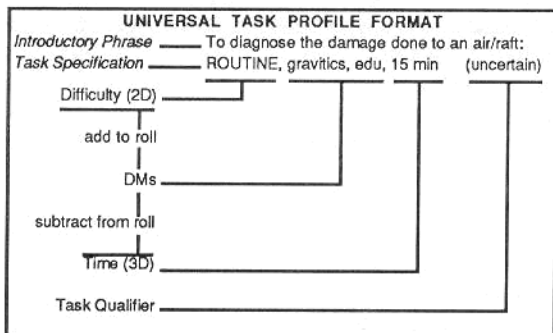
HOW CRUCIAL IS THE CRUCIAL SKILL?

If the character attempting the task has no skill (not even skill level-0) in the crucial skill, make the task *two levels* harder (perhaps even to impossible).

If, in the referee's judgement, the character has a related skill, increase the task difficulty only *one level*.

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

If the crucial skill listed in the UTP is deemed to be merely helpful rather than vital, declare the task to be *unskilled OK.*

TASK QUALIFIERS

Besides the standard unlabeled task, the other task types include:

Unskilled OK: Do not increase the task difficulty if the character does not have the crucial skill. However, most tasks should require the crucial skill; the unskilled OK task is an exception.

Hazardous: The task runs a much higher risk of mishap if the attempt fails. When rolling on the failure table, roll 3D instead of 2D.

Fateful: If the attempt fails, immediately roll on the mishap table (no retries are allowed). "To avoid a mishap" situations work well as fateful tasks.

Safe: The opposite of a hazardous task. Roll 2D on the failure table: if a mishap does occur, it is always SUPERFICIAL.

Uncertain: Immediate feedback on the success of the task attempt is not possible. When the player rolls for the task, the referee also rolls a hidden roll for the same task. The referee's hidden roll modifies the player's roll, as follows:

IF BOTH FAIL, the result is no truth. The player is totally misled as to the success of the task attempt. Completely false information is given.

IF ONE SUCCEEDS AND ONE FAILS, the result is some truth. Some valid information is given. Note that the player can fail and still get some valuable information—although he can not know for sure this is the case.

IF BOTH SUCCEED the result is total truth. Totally valid information is given. Notice the player may not believe all the information he is given, even though it is totally true.

SPECIAL CASES—THE REFEREE PARAGRAPH

As flexible as the UTP is, it can not cover all combinations of circumstances or conditions. Whenever special case situations exist, a special paragraph labeled REFEREE follows the UTP. For example:

REFEREE: This task is NON-REPEATABLE, only one attempt allowed.

REFEREE: Any mishap causes a security alarm to sound.

REFEREE: If any non-Scout character attempts this task, it becomes DIFFICULT.

SPECIAL TASK ATTEMPTS

The player can specify that his character is performing a special task attempt. Besides the regular task attempt, a player may select:

Hasty: Tends to shorten the task duration at the expense of difficulty. Increase the task difficulty one level and double the DMs before subtracting them from the time roll (a hasty attempt may take less time).

Cautious: The opposite of a hasty attempt, a cautious attempt provides a way to reduce the risk of failure when attempting a task, at the expense of time, and perhaps an increase in difficulty.

Before a player may try a cautious attempt, he must first make a determination roll: if successful, he may continue with the cautious attempt. If he fails to stay determined, the task increases in difficulty by one level, and he can not try a cautious attempt on this task.

If the determination roll was successful, the player may perform a cautious attempt. To perform the cautious attempt, decrease the task difficulty one level, and double the 3D time roll before subtracting the DMs from it (a cautious attempt may take more time).

ATTEMPTING A TASK DEFINED BY A UTP

DIFFICULTY: Indicates the relative difficulty of the task (see table 1). From the difficulty level, determine the 2D roll needed to succeed.

EXAMPLE: The format example to the left specifies a ROUTINE task. Consulting table 1, we see that a roll of 7+ (including DMs) is needed to succeed.

DMs: ADD DMs to the difficulty roll (DMs improve the likelihood of success) SUBTRACT DMs from the time roll (DMs shorten the duration of the attempt).

Difficulty	Roll Needed (2D)
SIMPLE	3+
ROUTINE	7+
DIFFICULT	11+
FORMIDABLE	15+
IMPOSSIBLE	19+

Table 1

DMs typically listed are the CRUCIAL SKILLS and CRUCIAL CHARACTERISTICS. These DMs represent the skills and characteristics judged most crucial to task success. Other factors will influence the task DIFFICULTY LEVEL rather than be used as additional DMs.
  • *Crucial Skills:* use the character's skill level as the DM.
  • *Crucial Characteristics:* use the character's characteristic/5 as the DM (drop fractions; the DM range is 0 to 3).

EXAMPLE: A character with gravitics-3 (skill DM of 3) and an education of 9 (characteristic DM of 1) would have a total DM of 4.

TIME: Indicates *one-tenth* of the average time required for the task attempt (successful or not). Roll 3D to determine the time duration; an average throw of 3D is 10.

Some tasks may have time omitted, in which case the task duration is assumed to be INSTANT and the time duration roll is ignored. Other tasks may state ABSOLUTE with the time; in this case, the task always takes the stated amount of time and no time roll is made.

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

UTP time period x (3D – DMs) (the absolute minimum is 3 time periods)

EXAMPLE: A 3D roll of 15, minus a DM of 4 (as per the DM example) gives a modified roll of 11. For a UTP time period of 15 minutes, the task attempt is 165 minutes (2 hours, 45 minutes). The absolute minimum would be 3 time periods, or 45 minutes.

WHAT TO DO WHEN THE TASK ATTEMPT FAILS

If the needed difficulty roll is not obtained, the task attempt is unsuccessful and has failed; roll on the failure table (table 2).

ORDINARY TASK: Roll 2D on the failure table.
HAZARDOUS TASK: Roll 3D on the failure table.

FAILURE table results:

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

check determination: the character failed the task, and must stay determined to retry the task without penalty. Staying determined is a special task with a UTP of:

Die	Failure Type
2	reroll
3+	retry
7+	check determnination
11+	mishap (2D)
15+	mishap (3D)

Table 2

DIFFICULT, end, int (endurance and intelligence combined represent a character's force of will)
REFEREE: If successful at staying determined, the character can retry the task with no penalty.
If not successful at staying determined, the character has two choices:
  1. Retry the task immediately, but increase the difficulty one level
  2. Retry the task at no increase in difficulty by waiting 10 times the actual duration of the failed task BEFORE retrying the task again.

NOTES: A FORMIDABLE task increased in difficulty becomes impossible, i.e. 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 (represents the character's resourcefulness).

mishap(2D): the character failed the task; roll 2D on the mishap table (table 3). After correcting the effects of the accident, the task reverts to check determination, should a retry be desired.
mishap(3D): same as mishap 2D, except roll 3D on the mishap table.

MISHAPS

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

MISHAP table results:
SUPERFICIAL (1D): impose superficial damage on some device/vehicle involved in the task, and/or 1D wounds to the character.
MINOR (2D): as above, except impose minor damage and/or 2D wounds.
MAJOR (3D): as above, except impose major damage and/or 3D wounds.
DESTROYED (4D): as above, except impose destroyed damage and/or 4D wounds.

Die	MishapType
2	reroll
3+	SUPERFICIAL (1D)
7+	MINOR (2D)
11+	MAJOR (3D)
15+	DESTROYED (4D)

Table 3

DAMAGE AND REPAIR

Whenever a device/vehicle is damaged, in the absence of detailed rules for diagnosis and repair:
  1. Diagnose the problem. The standard diagnosis task is ROUTINE (uncertain); the referee must determine DMs and TIME.
  2. Once the diagnosis task is successful, establish a UTP for performing the repairs based on the damage level, as per the table below:

NOTES: Repairs can be made without a successful diagnosis at an additional cost multiplier of 1D (just replace the entire assembly if you can't figure out what's wrong).

DAMAGE AND REPAIR			
Damage Level	Operate?	Repair Task (shop)	Repair Cost (shop)
SUPERFICIAL	Yes	SIMPLE	1D% of new price
MINOR	No	ROUTINE	1Dx1D% of new price
MAJOR	No	DIFFICULT	2Dx5% of new price
DESTROYED	No	FORMIDABLE	2Dx2Dx5% of new price

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 difficulty increases are cumulative.

SUPERFICIAL damage affects appearance, but not function or operation.
Unrepaired damage levels above SUPERFICIAL are added together. Two MINOR damage mishaps become MAJOR damage. MINOR and MAJOR damage combined become DESTROYED.

If a device/vehicle has MAJOR damage that was 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.

With these rules, a player may not want to muster a new character out of the Scouts—nor does he need to. "Exploring a World" tells what Scouts do in the Exploration Office, when gathering and updating data about the cultures, flora, and fauna that exist across the Imperium and surrounding areas.

Once the duties of the Exploration Office are understood, players can delve into the procedures used by the Scouts when exploring a world's surface in detail. Comprehensive landing party rules are given, with notes about equipment used during different steps.

Identifying and contacting sentient life forms is discussed. Once contact has been made, it is imperative that an efficient and effective means of communication be developed as soon as possible. A brief history of language in the Imperium opens the doors to a new skill and detailed equipment for dealing with languages, both new and old.

A variety of equipment has special uses on exploration missions, providing highly technological means of transportation, communication, protection, and data gathering. Each of these devices is detailed and illustrated.

THE IISS EXPLORATION OFFICE

The Exploration Office of the Imperial Interstellar Scout Service is responsible for exploration of areas previously discovered but not explored, or incompletely charted. It is divided into the *Exploration Branch* and the *Contact and Liaison Branch*.

The *Exploration Branch* undertakes actual exploration of space and planets, compiling data on local flora and fauna, on planetological features, and on hazards to navigation or dangers to individuals.

The *Contact and Liaison Branch* was originally charged with locating, making first contact (and maintaining friendly relations) with non-human intelligent races. As the Imperium expanded, the C&L Branch was given the additional duty of acquainting the various races of the Imperium with each other's cultures, and with smoothing over the inevitable conflicts that arise between cultures. Another function of the C&L Branch is the controlled dissemination of technological information to backward worlds within the Imperium, with a goal of bringing them up to Imperial standards slowly enough to minimize cultural shock effects.

Even though most sentient races in and around the Imperium were contacted long ago, on rare occasions a previously undiscovered intelligent life form is found, and the C&L branch must make first contact. The chapter "First Contact" discusses these situations in further detail.

Contrasting Survey and Exploration: Although all the parts of the Imperial Interstellar Scout Service cooperate with one another, not all Scouts are the same. The specialization of function is evident both in the formal training and in the skills learned while on a mission.

Both Survey and Exploration personnel learn how to conduct themselves while wearing vacc suits. Space skills, including engineering, gunnery, navigator, pilot, ship's boat, and ship tactics, can be learned by those in either office. Since Scouts in either office can find themselves in hostile environments, survival skills are important to both. Jack-of-all-trades skill is also common to both offices: well-rounded individuals are vital to the

Scout Service's missions.

Survey skill, the mapping and charting of star systems, is exclusive to members of the Survey Office. This office puts more of an emphasis on pilot, engineering, and vacc suit skills, as its members spend more of their working hours travelling in space.

The Exploration Office, on the other hand, teaches its members several skills useful to their missions. Air/raft and general vehicle skills are important to those travelling about on the surface of a world. Recon skill allows the discreet observation of animals and alien cultures. And if worst comes to worst, exploring Scouts may get more than one chance to learn gun combat.

Both offices have special schools. Members of either office can be sent to Specialist School, where medical, mechanical, computer, administration, and gunnery skills are taught, as well as special strength training. Both offices also offer Field Training, where vehicle, air/raft, recon, survival, navigation, and survey skills can be learned.

The Exploration Office also offers Intelligence School and Contact School to its staff. Intelligence School teaches forgery, streetwise, brawling, bribery, gun combat, and survival skills. Contact School provides formal training in survey, liaison, streetwise, survival, pilot, and gun combat skills.

In general, the work of the Survey Office is done mostly from space, although some planetary mapping and sample gathering may be conducted from a planet's surface.

Exploration missions are carried out in the field, face to face with the local world, where the Scouts attempt to learn about the varied phenomena, life forms, and cultures spread about the Imperium's 11,000 worlds.

Coordination Between Offices: It is typical for members of both offices to be aboard a Scout survey vessel, such as one from the *Donosev* class detailed in *Grand Survey*.

The surveyors spend most of their time in the holo pit during a survey operation, travelling to the surface of the planet only for special purposes, when shipboard sensors can not provide the degree of detail desired.

Explorers do most of their work on the planet's surface. They collect specimen samples of life forms and watch for signs of undiscovered sentience. They are responsible for keeping the ethnographic reports on the Imperium's worlds up to date by observing and re-observing the local culture.

Explorers also have their share of work away from the field. Specimens must be catalogued and further analyzed. Full-scale computer analyses can cross-correlate cultural characteristics using extensive Scout databases.

The ship has entered the star system. It's time for the personnel of the Exploration Branch to head for the world's surface, to meet whatever awaits...

FIRST CONTACT

On the whole, the habitable zone worlds of the Imperium were contacted long ago, are fairly well explored, and have at least an adequate spacefaring technology. Because of this, the Scouts of the Third Imperium rarely perform first contact activities today. But exceptions do exist. When these exceptions occur, the Exploration office must perform its most challenging task—the first contact.

For various reasons, a sentient culture may have been overlooked. Some of these reasons are:

The race is barely sentient. It is sometimes difficult to distinguish a true semi-intelligent lifeform from a quasi-intelligent lifeform. A good example is the Minlad of Kaiid (Lishun 0621), finally determined in 1104 to be true sentients, rather than just semi-intelligent animals. This is perhaps the most difficult and most controversial reason why a sentient race may be overlooked.

The race leaves little evidence of its existence. Even given the sophistication of modern tech 15 sensors, it is impossible to adequately scan and explore every square centimeter of a world's surface without allocating decades or even centuries to the task. Without an adequate reason to devote to such an effort, races that do little to change their environment are hard to find.

Such races are probably small in number, and possess a relatively low technology. Other times, the race may live in an unusual environment, such as underground or underwater, or even in a jungle or ice-field on a low population or low tech world. Or the race may not want to be found.

The race may be an unrecorded transplant, or in an unexpected location. From time to time, stories surface of a shipwrecked crew found on an out-of-the-way world—if they are able to survive, and they go undiscovered long enough, their descendants could develop into an entirely new local culture where none existed before.

Wal-ta-ka (Deneb 2713) is an example of such a culture. The miners on Wal-ta-ka were forced from their protective domes onto the bright side of the tidally-locked planet when a disaster occurred in 234. Visiting traders found the mining colony destroyed and presumed all were dead. The descendents of the surviving miners weren't found until 130 years later—by which time they had developed a full-fledged subculture with unique customs and a new language descended from Galanglic.

The race may live on a world with a hostile environment, not capable of supporting life as we know it. This situation is a double jeopardy—not only may the world be difficult and dangerous to explore, the explorers will not be expecting to find sentient life.

The race may be undiscovered for a combination of the above reasons. The race might be barely sentient and live in an unexpected or hostile environment. The race may be an unrecorded transplant that leaves little evidence of its existence. The race may be presumed to have died out long ago, when in fact a small number of them still exist. Many other possibilities exist.

CONTACTING A NEW RACE

The Scouts have defined procedures for making a first contact with a newly discovered sentient race. The procedures reflect the experience gained from the many first contacts made during the early centuries of the Third Imperium.

The procedures begin from the moment the Scouts enter a new star system, although such precontact procedures are seldom necessary any more. About the only time the Scouts use the precontact procedures is when dealing with developing cultures on interdicted worlds.

The following sections describe the Scouts first contact procedures in detail.

PRECONTACT PROCEDURES

The survey of a planet for intelligent life begins as the Scout ship enters a star system. The passive EMS array is set to pick up any signals being broadcast or beamed between planets.

Broadcast radio signals, if noted, are tech level 5 minimum, and should be recorded for linguistic analysis. Bearings should be taken to locate transmission source and probable destination: communications traffic between planets is tech level 7-8 minimum.

If computer analysis indicates coded transmissions, military or diplomatic use is probable and may indicate balkanization. An absence of transmissions does not rule out higher tech levels, since some races learn to contain their signals in tight beams, without leakage into space.

The habitable zone of the star is checked for life-bearing planets first. While densitometer crews make charts of all bodies in the system, the ship should take up a polar orbit around the planet being studied and conduct a ball-of-twine photographic survey, in visible and infrared light.

Visible light will locate any major cities on the night side as well as the day, while infrared will indicate cultivated areas (regular patches of "cool" color) and heat-producing industry. An absence of any construction suggests a primitive agrarian society, or perhaps a hunting and gathering culture.

The photographic survey should also have a number of comparison sequences run to locate any movement on the planetary surface. This is a critical item in finding sentient races, and in placing their tech level. For example: if a race is sentient and early tech level 0, they move very little and at slow speeds.

From late tech level 0 to tech level 3, there would be extensive association between sentients and their domesticated animals. Tech levels 1 through early 4 use sails in water travel if the planet has any hydrosphere to speak of. Above tech level 4, sentients usually use mechanical transportation instead of animals.

The infrared scans, when computer enhanced, show temperatures and weather patterns on the surface. This information frequently has a bearing on where the local sentients, if any, may be found. Spectrographic analysis (optical EMS) of the atmosphere gives the contact team information as to the conditions they will have to deal with on the surface of the planet.

Communications officers must remain alert for any attempted contact from a society showing some degree of industrialization. If broadcast language samples are available, Scouts skilled in linguistics and liaison must prepare a friendship message as soon as possible.

An advanced race should be contacted even if the messages are mutually unintelligible, simply to announce the ship's presence and indicate a willingness to talk. Refusal to answer a hail may be construed as a reason to send up missiles instead of messages! Pictorial communications, when mechanically possible, are usually best understood.

LANDING PARTY CONTACT PROCEDURES

The most common Scout survey and exploration starships are those of the *Donosev* class. Exploration Office landing parties are deployed in groups, three Scouts to an air/raft.

Several groups work in the same region, supporting each other and sharing information by radio or laser contact.

For a first landing, skills such as survival, sensor operation, survey, biology, chemistry, geology, and of course air/raft are needed.

The first contact landing party must wear uniform vacc suits and follow standard decontamination procedures on returning, pending the biological report on the planet. When cleared for unprotected exposure, Scouts must take prophylactic doses of antibiotics and antiviral agents.

Scouts can do a thorough biological survey even while avoiding the local populace. The chemical analysis "sniffer", linked to a hand computer, can determine food value of a plant from a 10 gram sample. Leaf, seed, fruit and root samples should all be tested. Soil and air bacteria should be cultured on a variety of media and tested for chemical activity.

Any potentially useful plant or animal must have natural enemies or controls. Since past experiences have taught the dangers of importing just one species, an interrelated group of species must be studied and approved for possible export to other planets.

Open contact should never be attempted with a pre-spaceflight culture. An exploration crew should be landed in a secluded area first, and attempt to observe without being seen. Neural activity sensor readings should be collected on each species noted. An extremely primitive race is difficult to distinguish from non-sentients, so extreme care is in order whenever the NAS reading is "intelligent" or "semi-intelligent". Oceans should not be overlooked as a possible home of intelligent life, but land is statistically more likely. See "Defining What Constitutes Sentience" for detailed procedures.

Not all planets have only a single sentient race. On rare occasions, two or more intelligent races may occupy non-competing niches; as for instance, one aquatic and one land-dwelling, or one tropical and one arctic or mountainous high-altitude. If two or more are found, all must be studied. If they are in competition, the Scout Service must not take sides.

If the intelligent race of a planet is human or humanoid, ship's stores will make up replicas of local costume from holophotos and the contact crew can pass themselves off as strangers to the territory at first. If the race is quite alien in form and apparently not scientifically sophisticated, no closer contact should be attempted. Holorecords and sound recordings will be stored and analyzed, but the race must be left alone until their technology develops further.

Sophisticated aliens present the most interesting problem in contact. An open landing in an unarmed ship's boat near a population center is standard procedure, but may be varied at the captain's discretion. Radio or light-signal contact is advised if a sufficient language base is worked out.

Under no circumstances is the first open contact to be made with weapons visible. (And some people wonder why Scouts have such poor survival statistics!) Attempt should be made to convey friendship, to indicate the existence of the Imperium, to show the advantages of technology and commerce, and to observe as much as possible of the new race's culture and science.

At least one member of a contact party must have linguistics skill, one should have liaison skill, and all should be broadly knowledgeable about science.

Not all cultures which are scientifically ready for contact will accept it. Hostility from natives should be a sign to Scouts to withdraw to a safe distance and try another plan.

A full survey of a contacted culture includes:
• ratings in all areas of technology
• census figures (recent local census data may be acceptable but should be spot-checked)
• analysis of government(s)
• recorded and written language with lexicons and grammars developed in cooperation with native scholars
• records of fine and practical art works
• summary of laws that may affect future visitors
• sociologist's report on attitudes, customs, and religion.

On balkanized planets this should be repeated for each major nation.

Large gatherings of people are very fruitful subjects of observation when determining government. However, it can be difficult to distinguish political rallies from religious services and either of them from sales meetings, sports, and entertainments until the language can be understood. If any large meetings are seen being broken up by uniformed forces, the government cannot be listed as charismatic and is not likely to be democratic. If the actions of the crowd appear violent or criminal, however, this does not apply.

Very isolated areas, of course, may not be responsible to the planetary government or even aware of it at all, but these do not affect the determination of government type.

Law levels can be estimated by observing any citizens who carry arms, watching police actions, and recording any broadcast or proclaimed information about laws and their enforcement.

Technology is the most openly displayed item and can usually be judged accurately within a week of observation.

PROCEDURES WHEN DIRECT CONTACT IS RISKY

Concealed surveys contain as much of the above as can be obtained with instruments and disguised landing parties. Such surveys are done when open contact is deemed unwise, and they present many challenges to a Scout's ingenuity.

City size can be estimated from aerial photos using formulas to determine how much food can be transported into the city regularly. Daily food needs of human and all known non-human races are on file in Scout Service shipboard library computers. Rural population can be estimated directly from photos.

Certain government types can be deduced, or eliminated, by remote observation as well. Obviously, if a definite war is in progress, the planet is balkanized or in revolt. A captive planetary government is not possible without spaceflight and interplanetary communications by the owners. No single bureaucracy (or oligarchy or dictator) can rule an entire planet without fast communications. If a non-balkanized planet lacks radio or telegraphy, it is probably feudal, having either nobles, priests, or technocrats in charge of limited areas.

It is often possible to locate the central authority by observing the movements of couriers and by finding the wealthiest area. Government seats are often large and ornate buildings compared

to their surroundings, so a spy camera (perhaps a "private eye" robot) introduced into one of these buildings will frequently provide valuable insights into the workings of a government. If discovered, the spy camera may also provide a measure of governmental paranoia.

Even with the best efforts possible, a concealed survey will make some mistakes and miss some major keys to planetary behavior. However, since visits to a planet that has not been openly contacted are not frequent, the damage done by such errors should be limited.

DEFINING WHAT CONSTITUTES "SENTIENCE"

What is an intelligent being? Variations in environment and physical form can lead to wide differences in a species's adaptations. Older definitions often need to be overhauled.

Before human colonization is permitted, a Scout exploration team has the responsibility of deciding whether a world has any native intelligent life. Any race that shows as "intelligent" or "semi-intelligent" on the neural activity sensor is closely observed for signs of sentient behavior.

Imperial xenologists find that three areas of development must interact to bring a species to the level labeled as "sentient". These are: language, social structure, and tools (environmental manipulation, in whatever manner is physically possible for that specific race). What follows are a series of steps for each level, from low animals to unquestioned sentients.

CONCEPTUAL THOUGHT

Conceptual thought, as evidenced by language, remains a major sign of intelligence. The key area is not the ability to label concrete objects but the ability to treat concepts as units in new concepts and thus to develop "conceptual ladders". Abstraction enables a race to envision the future and plan for it rather than to live in an eternal present, guided only by instinct.

Language begins, usually, with sounds or signals for emotions. A Terran cat's purr is an example, as is the harmonic hum of the Messieran nebon. Beyond this is the deliberate use of a sound to convey a message: the alarm snort of a deer or the slapping of a rouppa's tail would be in this category. A third step uses distinguishable sounds or signals to refer to different concrete objects. The Terran baboon gives a different warning cry for a tiger than for a hawk or eagle, and his group responds accordingly, climbing to high thin branches to avoid a tiger, but finding thick foliage to foil a hawk or eagle.

More difficult than naming a thing is referring to its attributes. Still, ro'bolla worms do this when describing the distance and direction to the best waterholes. This is a borderline behavior when determining intelligence.

Abstraction beyond attributes involves grouping things by some one common attribute and giving the group a single label. This is the key to conceptual ladders and the gateway to knowledge. There were aboriginal tribes on Terra as the Solomani entered their space age who still could not abstract, though they were definitely human.

Their language contained a name for every tree within their ken but no generic term "tree". They could not count beyond the number of their fingers. Their memories of the past were recited by rote, in detail, and they could not give a synopsis or state a length of time between events. These were primitive men, indeed!

Conceptual language enables a being to think of what is not immediately present, in time or space. Planning for the future, imagining new ways of doing things, and analyzing things logically all depend on this skill. Written language is a tremendous help for storing knowledge in something less volatile than a living brain. It facilitates cooperation and the bestowal of information to new generations.

Language comes in unexpected forms at times, such as the Hiver language of gestures. Even scents may be a form of deliberate communication. No translator machine exists which can cope with all the possibilities, so the Scout team must be alert to any means being used to exchange information. Psionics is the most difficult to discover.

SOCIAL STRUCTURE

Certain societal structures are necessary to a species' development into reasoning beings. One requirement, to which no exception has yet been found, is that adults must educate their young. If adults lay eggs and then leave them, or die before the eggs hatch, none of the adult's acquired knowledge and skills can be passed on to the young, and no cumulative learning can take place. Even Hivers, while they ignore their larvae, do teach their adolescents.

In many races, though not all, care for the young implies a pair bond that lasts at least through one breeding cycle. Others raise their young collectively.

Another great step forward occurs when members of the species group together rather than wander as solitary individuals. Cooperation then becomes possible, enabling the group to undertake tasks that a lone individual could not handle. Division of labor sometimes occurs in relatively low-level societies such as insect hives, but the different roles are instinctual rather than learned. The advantages of cooperation and the division of labor accrue when individuals, by concentrating their efforts, can improve their performance. More efficient work benefits both the worker and his group.

The dawn of sentience comes with the innovator. The being who invents a new way of dealing with problems is the cause of all technological progress. Instinctive behaviors are exactly alike in all members of the race, which gives the Scout a way of differentiating instinct from ingenuity. The absence of innovation is the reason why Terran bees, for all their highly ordered society, cannot be considered intelligent but are locked on the instinctual level.

Sometimes inaccurately labeled as altruism, the impulse to protect the group as a whole and not just oneself is another byproduct of cooperation in higher animals and sentients. Compassion and care for the sick and injured are also signs of greater development in animals. These behaviors promote the kind of social order the individual can best live in. Advanced sentients never outgrow the impulse to preserve their species and especially their own children.

USING TOOLS

A first definition of man was "a tool-using animal". However, many non-sentients use implements to aid them. The revised definition was "a tool-making animal", requiring modification of an

implement to make it usable. When Terran apes were seen to strip twigs to use as "fishing poles" in termite nests, anthropologists again revised their definition to say that sentients "make tools to make tools".

This is actually too restrictive, since a species without manipulative members may be highly intelligent despite its inability to use tools or fire. Special consideration must be given to psionic creatures, who may manipulate their environment by telekinesis with no material tools at all. A theory was advanced in 508 that psionics were linked to intelligence, but the theory was abandoned after the anolas of Pysadi were found to be psionic.

"Animals adapt to their environment; man adapts his environment to suit himself." Usually true, but what of the Terran beaver? He not only builds a lake to suit himself, but may dig a canal several hundred meters into the woods to float his chosen logs to the construction site. Sylean cultivator moths are farmers who create the soil in which to grow their fungi from bark. The means of adapting the environment must be judged.

Control of fire, in any atmosphere that permits it, was considered a definite mark of sentience until the maniku were found on Kimu in the Daibei sector. These primates observed that lightning-caused fires roasted the pods of a tree whose pods were poisonous when raw. The maniku began carrying torches from these fires to set off other patches of trees. Unfortunately this also sets off brush fires and trims the maniku population somewhat. The maniku are not sentient despite their use of fire.

The new Scout Contact Manual points out that the ability to make fire from scratch is a sign of intelligence, even more so than the making of stone knives or other tools. Carrying fire from place to place is not sufficient in itself.

Aesthetics are commonly an interest of more advanced species, but some lower animals decorate their homes (e.g., the agidda bird) while some advanced races disdain aesthetics entirely.

The domestication of other animals to one's own purpose can begin very low on the intelligence scale, as in the leading of aphids by honeydew ants on Terra, but such cases are rare. In general, a species that uses and cares for another (not in the sense of symbiosis) is a good candidate for a closer inspection.

ONCE SENTIENCE IS DETERMINED

If a race is in fact sentient, what then? A developing sentient race is placed under the protection of the Scout service. This occasionally means declaring the planet a red zone but this is not absolutely necessary.

A race with less than tech level 5 development is generally not informed of the existence of the Imperium as such, but trade is often conducted discreetly. This is for the protection of the Imperials quite as much as the natives, since technology is likely to be mistaken for magic on backward worlds and may start a witch hunt.

Without the proper license, it is against Imperial law to sell, to races below tech 5, artifacts which are more than one tech level above the planet's. (This assumes that the low-tech world is part of the Imperium and not a red zone.)

In any case, characters caught selling energy weapons to a stone-working race are in trouble. Once a race has the scientific outlook necessary to believe that beings could come from other planets, they may become actual members of the Imperium. Any

member race may buy any available technology, but the economics of intersystem trade usually prevent major abuses of this right. Most planets still develop their own sciences, though at an accelerated rate.

Killing any sentient without cause is murder. This is one of the few crimes that Imperial law defines, both on planets and between the stars.

Official decisions regarding the fate of a minor race whose sentience is in doubt must be settled by a panel including field experts in the Scout Service (one-half of the members), Scout administrators (one-fourth of the members), and Imperial nobility (one-fourth of the members).

An example of a mishap during language translation.

LANGUAGES IN THE IMPERIUM

Linguistics, the study of language, is an important skill for a Scout to have. The lack of a means of communication can be an additional hardship in contacting other cultures, so the ability to quickly and accurately develop study the grammar and vocabulary of a new language is critical to the success of an exploration mission, and Scouts who have these skills are often specialists.

With the linguistic diversity of the Imperium and the surrounding alien cultures, it is also important from a political and mercantile viewpoint that communication flow as smoothly as possible. To better understand the activities of the Scouts in learning a new language, we will look at the history of language in explored space.

A HISTORICAL AND CULTURAL OVERVIEW

The earliest language known to have existed in the Imperium is the language (or languages) of the Ancients, the mysterious and now-extinct race that roamed this part of the galaxy 300,000 years ago. While nothing is known of their languages today, speculation as to their forms is rife. Few Ancient artifacts show any sign of written language, although now and again one is found with external markings on it. The entire extant corpus of the written Ancient language would take fewer than 100 pages of actual-size photographs. Unfortunately, this body of writing is as diverse as other features of Ancient sites, and shows little uniformity from one world to another.

Some of the best evidence for the language of the Ancients was the site excavated at Antiquity/Ian (Corridor 0806). Sounds emanated from one room at the site, but scientists are unsure whether the noise was an audial language or music. Other artifacts recovered from the site included some visual display data, but an evident written language was never found. Unfortunately, this site was sealed up in an accident in 1101 and has not been reopened.

Since most devices we use today do include some written instructions or other insignia, some linguists have speculated that the Ancients did not have a written language, but instead relied on some form of audial or psionic communications. These scientists conclude that the few markings found are only religious symbols with mystical meaning.

One thing we do know about the Ancients is that they transported human stock from Terra throughout this area of space, although the reasons for this dispersal are still unknown. There are currently forty-six known and identified human subspecies within explored human space. Each developed a diversity of languages similar to that found on Terra, different numbers of inhabitants and societal structure notwithstanding.

Conclusive studies over a sufficient period of time have still not traced the beginnings of language in any sentient species, but most linguists today adhere to one of three theories; a discussion of these theories can be found in any linguistics textbook.

In any case, as humans spread on their respective worlds, their languages tended to split, developing new forms. At the time the Terrans reached tech level 8, almost 3,000 different languages were in use there, along with 8,000 dialects, although only 101 had over 1 million speakers. The Terran languages can be grouped into 12 main language families and 50 smaller ones.

The Terrans at that time had five official languages in their United Nations: Chinese, French, English, Russian, and Spanish. Since the United Nations controlled the first Terran excursions using jump technology, these five languages increased in importance. The technological primacy of English eventually brought it to the forefront, and it was made the official language of the Terran Confederation during the war with Vland.

The Vilani, who started into space about 9,000 years before the Terrans, had already codified their languages into what is now known as Old High Vilani. This language, with periodic additions from new technology, and the gradual changes any language experiences over time, served the First Imperium until the time of the Rule of Man.

Galanglic is short for "Galactic Anglic", the official language of the Third Imperium. Galanglic is a direct descendant of Anglic, the language used during the Rule of Man (-2204 through -1776). The popularization of Galanglic is important to the Imperium, because a common language known by all is beneficial to commerce. On many worlds, Galanglic is in fact a second language, used only in dealing with offworlders and Imperial officials. Although Galanglic is the official name for the language, it is often called Anglic by its speakers.

ALIEN LANGUAGES

For similar reasons, most of the major races each use only one language today. All Aslan (with the exception of a few lost colonies) share a common language and culture. All K'kree share a common language and culture, highly conservative and tradition-bound.

The language of the Zhodani is a constant throughout the Consulate, adopted as a standard in the 300th Olympiad. A few dialects exist, but they tend to arise from the jargon of specific occupations rather than being differences in language. The Zhodani enforce their common language and culture by means of psionic techniques against dissenters and overrapid change.

The Hiver written language has become the standard within the Hive Federation. Local cultures may retain their own languages, but any which have interstellar interactions are also conversant with Hiver written language.

In the case of the Droyne, for centuries only the vast distances separating their worlds from each other concealed the fact that all had a common language. That is not to say that every Droyne spoke the same language; indeed, different Droyne communities spoke different languages, often very different languages. But all Droyne communities shared one common language—Oynprith, the language used in the coyn casting ceremony. Outsiders missed Oynprith simply because it was not used in public very often; it had a status as a ritual or ceremonial language, much like the status of Latin on Terra.

In interstellar commerce, Oynprith was soon discovered by Droyne to be a universal language among their race; as trade increased, Oynprith became more commonly used, finally reaching a status as the universal Droyne language.

The Vargr are exceptional in that they are a major race which still shows a high degree of linguistic diversity, although a few languages do have high numbers of speakers. One of the Gvegh family of languages, for example, is spoken by about 60% of the Vargr encountered in the Spinward Marches and neighboring Gvurrdon sector. These languages include Gvegh, Gvegh-Aek, Knithnour, Uedhu, and Taeksu.

LINGUSTICS SKILL

Linguistics: Gives the ability to quickly learn and understand an unknown language based on language structure laws.

Optionally, you may assign separate skill levels for each language a character knows. A native speaker always has at least skill level 2 in his own language, and may have 3, 4, or 5 depending on his education. (Divide the character's education by 5, (round fractions up), and add to the base skill of 2 to determine the character's native language skill level.)

In this case, for every additional language learned, add one to the linguistics level, to a maximum of 4. Thus a character who knows two languages would have linguistics-1; a character who knows three languages would have linguistics-2, and so on. A character with a level of 5 in his own language automatically achieves linguistics-1. Do not count the skill level in the character's native language toward his maximum number of skills.

Sample UTPs:

To develop a minimal vocabulary in a language:
DIFFICULT, int, linguistics, 1 hour
REFEREE: This task can not be used for any language in which the character has skill. When successful, the character gains a basic "guidebook" understanding of the language. He will be able to express simple wants in simple language, but will not be able to hold extended conversations with a native speaker.

Typically, a character will attempt this skill while in jump space en route to a new destination. The skill enables the character to talk initially to local officials, until such time as a skilled translater (or computer language translator) can be found.

To develop a minimum working vocabulary of 1,500 words:
DIFFICULT, int, linguistics, 1 month
REFEREE: Typically, a knowledge of one to two thousand words is needed to "get by" in a simple conversation. Rather than roll 1,500 separate learning tasks for this, use this "macro" task. This task can be used to learn a new language, or to become more fluent in one already known. Each time this task is successfully accomplished, the skill level in the language increases by 1.

If the character is "immersed" in the language, so that all his activities are carried out in it and he does not use his native tongue, the difficulty level for this task drops to ROUTINE.

The time taken for this task represents study of five hours per week, while other activities go on as normal. Increasing this weekly time does not shorten the task, unless more than 20 hours per week are spent; in this case, use the immersion guidelines above.

To translate from one language to another:
[difficulty], [linguistics], int, [time] (fateful, hazardous)
REFEREE: The "linguistics" skill may be general linguistics or the specific language, depending on whether the translation is of a written text or of a spoken conversation. The time the task requires also depends upon the circumstances.

A character with linguistics skill, a grammar of the language, and a vocabulary list can use this skill to translate a written text. The time increment for this task is 2 hours per printed page, and the difficulty is ROUTINE. A character with specific skill in the language needs only 1 hour per printed page as time increment.

This task is not fateful, as the character has time to consider the translation carefully.

Simultaneous translation of a spoken conversation requires that the character know the language being spoken. The time is instant, as the task takes place while the conversation is going on. The difficulty level is DIFFICULT, and the task is fateful. If the task fails, immediately roll 3D for damage and use the following fateful consequences:

SUPERFICIAL — most meaning conveyed, but some nuances not conveyed

MINOR — some meaning not conveyed

MAJOR — no meaning conveyed

DESTROYED — wrong meaning conveyed; roll on reaction table for alien response.

If a computer language translator is being used, the task is "unskilled OK" for simultaneous translation, but still fateful. Assume that the CLT has a skill level in the language of 3. Commercial CLT memclips have a skill level of 3 in the languages concerned. If the memclip was custom made, use the rules below to determine the memclip skill level.

To create a CLT memclip:
DIFFICULT, [linguistics], edu, 1 month (uncertain)
REFEREE: Linguistics skill of at least level 2 is necessary to perform this task. If the character also has skill in the two languages to be recorded on the memclip (and to be translated between), those skill levels apply as DMs to the time, but not to the difficulty.

If the character's skill in the languages involved is less than 4 (or with no skill), he must have access to grammars and lexicons for the language, or work with native speakers for the time required.

The resulting memclip has a skill level of one less than the character's linguistics skill level. For example, a Scout with linguistics–3, Galanglic–2, and access to some friendly Aslan, could create a Galanglic–Aslan memclip with a skill level of 2.

As this is an uncertain task, the character will not know how successful his efforts have been until he uses the completed memclip for a period of time. Use the rules above for the memclip skill level on a result of TOTAL TRUTH. Lower the resulting memclip skill level by 1 for a result of SOME TRUTH. Lower it by 2 for a result of NO TRUTH.

For example, a character with linguistics–3 gathers the necessary reference materials to create a Pysadi–Droyne memclip. If he and the referee roll TOTAL TRUTH, the memclip has a skill level of 2. A roll of SOME TRUTH would give the memclip a skill level of 1. A roll of NO TRUTH would give the memclip a skill level of 0.

The character will not realize the memclip's actual skill level without using it for a period of time to translate between native speakers of the languages involved.

Computer Language Translator

Field Glasses
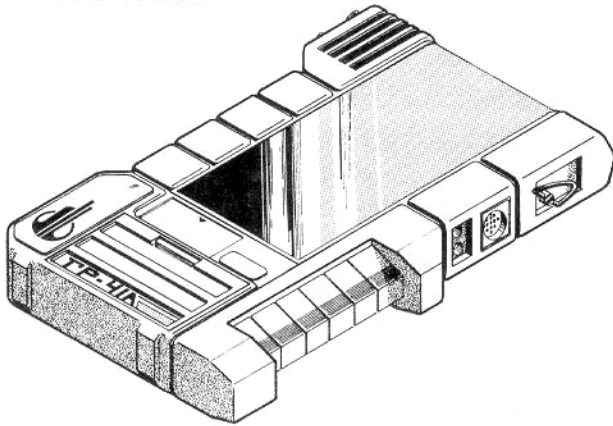
COMPUTER LANGUAGE TRANSLATOR

The standard Scout-issue Computer Language Translator (CLT) serves efficiently as a minimum translation device, and it is useful enough that many commercial models are available. At tech level 12 the device drops in price to Cr800.

Individual memclips for specific languages cost Cr150 with a skill level of 3 in the language. Blank memclips cost Cr10. To translate from Vargr to K'kree, for example, two memclips would be needed. The CLT can hold six memclips at a time. Four peripheral outlets support a variety of accessories for unique communication modes such as light, smell, ultra-high or ultra-low frequency sound, touch, and pictorial display. A fully-configured unit could cost as much as Cr18,000.

The device is *not* intelligent, and should not be confused with more powerful appliances such as the many translator robots on the market. This small computer can, however, perform a passable job of simultaneously translating one sentence after another in a variety of languages. Subtle nuances of meaning will not be preserved from one language to another; standard Scout policy is always to prefer a sentient translator over this device whenever possible.

The CLT has a hard-wired earpiece in the event of high background noise or where privacy must be assured. In the device pictured, the earpiece is stored in a compartment next to the Ling Standard Products logo. Normally, the translator transmits to a remote earpiece or commdot.

An internal memory allows the user to copy an entire memclip if necessary. The CLT comes with a retractable shoulder strap, but the unit is usually carried in a belt pouch.

Tech	Volume	Weight	Price
TL9	3 liters	2kg	Cr2,000
TL12	3 liters	2kg	Cr800

Memclips

Tech	Volume	Weight	Price
TL9	—	—	Cr150
TL9	—	—	Cr10 (blank)
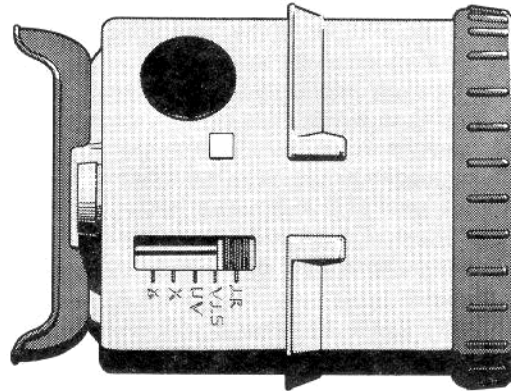
FIELD GLASSES

The Scout Service's portable radiation imaging system (PRIS) is still anachronistically called "field glasses" by most Scouts, but the PRIS has many more capabilities than the old-style binoculars.

For one thing, the PRIS can be set to observe images in the spectral range from infrared to gamma rays. (The PRIS will not detect radio waves.) The front surface of the PRIS is transparent to all radiation; just behind it is a series of lenses tailored to various specific bands.

Besides this, a tight beam laser rangefinder gives an accurate reading on the target within sight up to about 20km, depending on conditions. The range is displayed as a digital readout in the viewfinder. The PRIS also has a built-in clock and limited memory, so that the it can determine the velocity of the object being viewed by comparing its distance from the observer over time.

The unit can be calibrated to a standard self-precessing gyrocompass, in which case the bearing of the direction viewed will be digitally displayed in the corner of the viewfinder.

The magnification strength of the PRIS is adjustable up to 225x. A built-in flywheel for gyroscopic stabilization insures a steady field of view at all magnifications.

Besides its obvious uses in the field, the PRIS also finds itself used in a variety of industrial and engineering applications. Its infrared images can be color coded to show the ambient temperatures of objects in the viewfinder. A PRIS can therefore be found near every jump drive, to be used by the engineers looking for "hot spots" on the drive housing. In other areas of the ship, the PRIS can detect problems in electrical circuits, again by finding an area of higher temperature.

Tech	Volume	Weight	Price
TL12	3 liters	2kg	Cr3,500

Communicator

Commdots
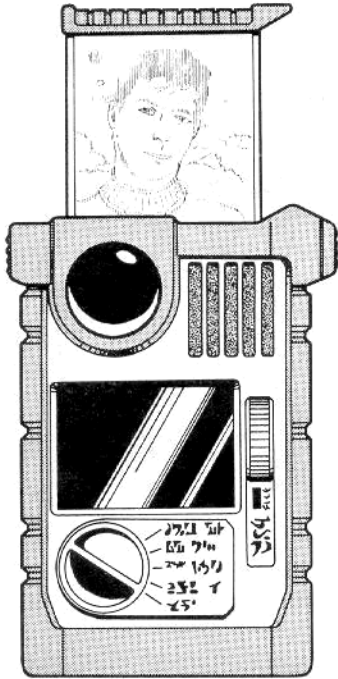
COMMUNICATOR

The IISS communicator transmits a voice and two-dimensional image over a range of 500km (regional). (If this range is insufficient to contact an orbiting ship, a laser communicator or landing vehicle radio can be used as a repeater.) With a size of 15cm by 10cm by 3cm and a weight of 0.2kg, the unit is small enough to be carried in a pocket or hung on a belt.

The communicator has a built-in microphone and video camera for input, and a small speaker and a polylucent cuprothallium display for output. The cuprothallium display slides into the main housing when not in use, and the video camera can be switched off if desired. Commdots can be used to speak and listen if the device is attached to a belt.

By opening the unit up, one can set interior controls to preselect five different frequencies for current use; one of these can then be chosen using the frequency selection knob on the front of the communicator. The communicator can transmit and receive simultaneously.

When used with commdots, the communicator can be used to set the commdot frequencies to itself; it will also automatically multiplex with a commdot for any of its five active frequencies.

Tech	Volume	Weight	Price
TL14	0.45 liters	0.2kg	Cr500
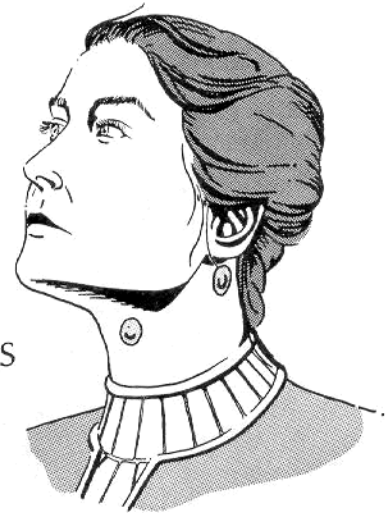
COMMDOTS

A commdot is most often found used as an adjunct to a communicator, although other uses are becoming more common. One commdot is temporarily affixed to the scalp just behind the ear; another commdot is stuck to the throat just above the Adam's apple. The microelectronics in the dots can transmit and receive for a distance of only about a meter, but this is far enough to put the dots in contact with a larger, more powerful device.

Scouts can thus use their communicators or hand computers and still keep their hands free for other tasks. Commdots are powered by ultraminiature superbatteries and can be tuned by using another device. Most communicators support this tuning cability.

When it is desired to communicate over more than one frequency at a time, or to operate more than one device, a commdot multiplexer is used. The multiplexer is worn on the belt, and coordinates activity between the commdot and several devices. The operator can then receive or transmit only on the channels desired, turning signals on or off at will.

The multiplexer accomplishes this by responding to a set of tone signals. The Scout hums a certain tone, higher or lower than his normal speaking voice, to signal the multiplexer to turn a device's transmissions through the commdots on or off. The multiplexer briefly plays the tones for this on an intermittent basis to remind the operator of the tones. The process is much simpler than it "sounds" here, and almost anyone can learn to do it in a few tries. If the operator is tonedeaf, he can switch the multiplexer manually.

Commdot Set

Tech	Volume	Weight	Price
TL10	—	—	Cr100

Commdot Multiplexer

Tech	Volume	Weight	Price
TL10	0.1 liters	0.1kg	Cr900

Laser Communicator

Data-display/Recorder Headpiece

DATA-DISPLAY/RECORDER HEADPIECE

This headpiece represents a significant breakthrough in holographic display technology at tech level 13. A small rectangle of polylucent cuprothallium provides a constant heads-up three-dimensional display for the wearer. Although useless by itself, the headpiece can be interfaced with virtually any number of tech level 13+ devices, using a multiplexer similar to that used with commdots. The multiplexer not only coordinates the information for the user but also synchronously records the multiple signals onto one standard holocrystal for later review.

On a Scout mission, it is common for any surveyor or explorer using equipment to wear one of these. Their use is also common among bridge and engineering personnel on starships as well as smaller craft. For example, a Scout flying in a grav belt while using a neural activity sensor handset would find it inconvenient to say the least to refer to the readout on his backpack. Instead, the sensor's output is immediately displayed on his headpiece. At the same time, he can monitor his altitude, airspeed, position, and the operational status of his grav belt batteries and grav units. If he is also wearing a vacc suit, he can read off his oxygen supply and internal temperature besides.

When desired, the headpiece can be swung out of the way above the head; when the display is turned off, the cuprothallium is transparent.

About three percent of the population find it difficult to focus properly on the headpiece and are unable to use the device. To determine this for a character, roll 2D once when he is generated. A result of 2 disqualifies the character from wearing the headpiece.

Tech	Volume	Weight	Price
TL13	0.1 liters	0.1kg	Cr5,000

LASER COMMUNICATOR

The Scout laser communicator is a line-of-sight device with a maximum range of 500km (regional). This distance is seldom needed on a world's surface, as the distance to the horizon limits the range first, but this range often allows contact with an orbiting ship as it goes overhead.

The laser communicator's main advantage to the Scouts is that it provides a tight beam, and therefore private, means of communication. Sets of laser communicators are often lined up in a "repeater" network. Spaced at a horizon to horizon distance, the units can instantly convey a message around a world by retransmitting it from station to station.

Tech	Volume	Weight	Price
TL10	5 liters	1.5kg	Cr2,500

Pocket Med Scanner

POCKET MEDICAL SCANNER

The pocket med scanner is an indispensable device in the satchel of any physician. Medical skill is not needed to operate the scanner, but the skill is necessary to properly interpret the readings. A doctor or nurse needs only to press against the patient's chest with the small disk-shaped probe. In five to ten seconds, the scanner accurately determines body temperature, blood pressure, pulse rate, respiration rate, level of neural activity, and fluid balance. This useful device greatly reduces the time increment on a medical diagnosis task, as shown in the sample UTPs below. The scanner probe can actually be used anywhere on the subject's body, but no respiration rate is available apart from the chest site.

Once the reading is made, pressing a small button on the device records the values in the scanner's memory. These records can be called up later for review. Setpoints on the scanner can be keyed in, so that if readings reach a certain level (either high or low), the scanner beeps to alert the attending physician. Small adhesive pads are used to attach the scanner temporarily to the chest for this purpose.

The med scanner is optimized for use on a given race, so using it on members of another alien race does not work. A character with electronic and medical skills could, however, try to modify a particular device to work accurately for another species. One exception to this rule does exist: the same device can be used for humans and Vargr.

Vacc suits at tech level 12 and above are designed with special contact points to allow a med scanner to be used without requiring removal of the suit.

To take medical readings using tech level 7 equipment:
SIMPLE, medical, int, 30 seconds

To take medical readings using a tech level 12 med scanner:
SIMPLE, medical, int, INSTANT (unskilled OK)

To modify a med scanner for another race:
DIFFICULT, [minimum of medical and electronics], int, 1 hour
REFEREE: Use the lower level of medical and electronics skills to determine the skill DM. If the character does not have both skills, the task is IMPOSSIBLE. Once the device is converted, it can not be used for the original race without successfully performing this task again.

Tech	Volume	Weight	Price
TL12	0.2 liters	0.1kg	Cr10,500

Med Scanner-Computer

MED SCANNER-COMPUTER

This larger, handheld version of the med scanner takes rapid readings just like the pocket scanner, and thus greatly reduces the time spent on a medical diagnosis task.

Where the larger scanner differs from the pocket version is that the handheld model includes a complete expert system diagnosis computer.

Effectively, any character using the handheld medical scanner increases his medical skill level by 1, to a maximum of 4. (Thus a character with medical-4 can not enhance his skill level any further using a med scanner-computer.)

On the other hand, if the character using the scanner has no medical skill, he may attempt the following task:

To gain a temporary skill level-0 using a med scanner-computer:
ROUTINE, int, edu, 1 minute
REFEREE: Success at this task allows the character to make the next series of UTP rolls as if he had skill level 0. The ease of this task for an unskilled character stems from the advantage of sensory input available directly to the diagnosis computer. Once this advantage is conferred, the use of the med scanner-computer does not give any other benefits to UTP rolls. That is, an unskilled character who succeeds at this task has a temporary medical-0 skill. He does not, then, achieve a medical-1 by using the scanner. His only benefit is that the task difficulty is not increased two levels due to his lacking the skill originally.

Tech	Volume	Weight	Price
TL12	2 liters	1.0kg	Cr25,000

"SNIFFER" BIO-SCANNER

An advancement of volatile chemical molecular analysis technology, the bio-scanner "sniffer" scans for evidence of biological/metabolic activity in the area. It is a highly advanced combination sampler/analyzer. The tech level 15 sniffer is a breakthrough in molecular analysis—the device provides both improved analysis speed and a cheaper price than sniffers of tech level 14 and less. Not only is the bio-scanner useful for biological studies, but it also helps with regular chemical analysis. (A cheaper and smaller tech level 15 chemical analyzer is available, but it is not very useful for biological scanning).

The portable tech level 15 unit pictured here incorporates both analyzer and collector into one. It has 2 modes and corresponding equipment: one mode for mass sampling of atmospheric content and the other for minute sampling (as described in Adventure 4 of the *Travellers' Digest*).

The evidence of biological activity must be within short range (5m) of the scanner—anything beyond short range is undetectable. The bio-scanner helps with biological tasks such as:

To recognize or categorize evidence of a familiar organism:
ROUTINE, biology, edu, 1 min (uncertain)
REFEREE: Success at this task allows one of the following: ecological classification, determination of potential hazards to other lifeforms, estimate of potential uses (form of food, commercial value). Total truth gives the exact identity of the familiar organism. Hunting serves as one level less in biology skill with familiar organisms.

To recognize or categorize evidence of an unfamiliar organism:
DIFFICULT, biology, edu, 2 min (uncertain)
REFEREE: Success at this task allows one of the following: ecological classification, determination of potential hazards to other lifeforms, estimate of potential uses (form of food, commercial value).

Tech	Volume	Weight	Price
TL15	8 liters	3.5kg	Cr350,000

"Sniffer" Bio-Scanner

Portable
NAS Sensor

NAS Handset

EXTENDED

RETRACTED
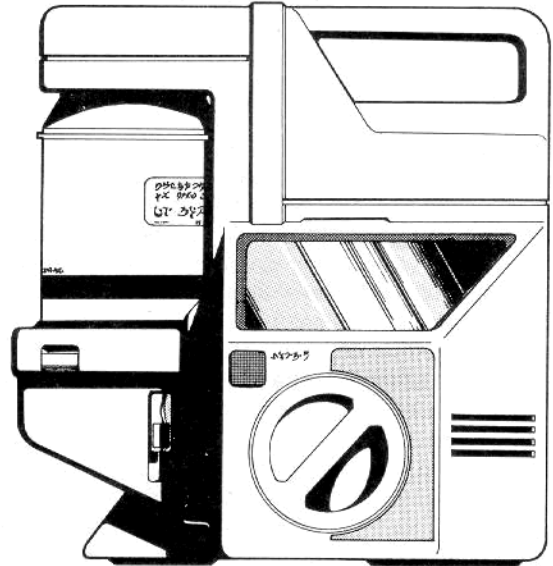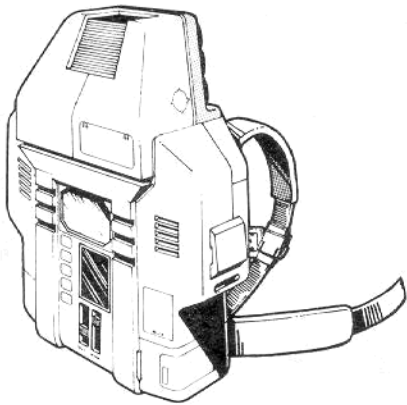
PORTABLE NAS SENSOR AND NAS HANDSET

Developed from tech level 12 psionic helmet theory, the neural activity sensor (NAS) remotely detects the electrical activity of a life form's central nervous system and classifies it according to amount and complexity. The data system compares the activity pattern to known types of life, especially intelligent life.

Complete details on the standard NAS can be found in *Grand Survey*. This portable unit is experimental, with a range of 500m (very long). It consists of a backpack and a handset, with a retractable parabolic dish focuser. The handset in fact is not attached to the backpack, and can be operated up to 100m distant, further extending the range.

Sample UTPs:

To perform an NAS area scan to locate lifeforms:
ROUTINE, sensor op, edu, 1 sec (uncertain)

To perform an NAS directional scan (classifies brain activity):
ROUTINE, sensor op, edu, 5 sec (uncertain)
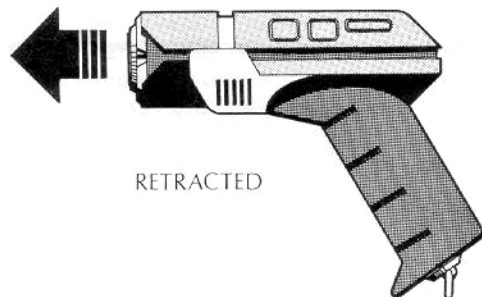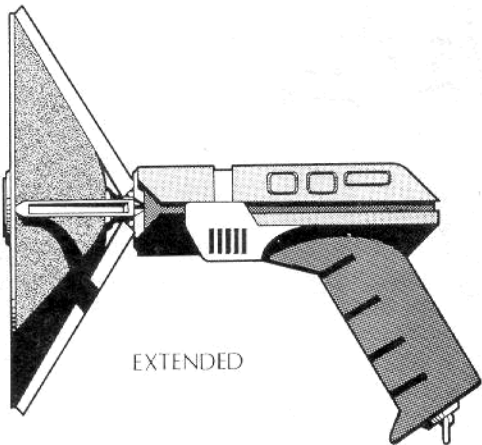
Backpack

Tech	Volume	Weight	Price
TL15	8 liters	3.5kg	Cr350,000

Tech	Volume	Weight	Price
TL15	0.5 liters	0.3kg	Cr20,000

TECH LEVEL 15 GRAV BELT

A standard-issue tech level 15 military harness-type grav belt looks like a short-sleeved suit, with pants that extend about two-thirds down the length of the thigh. Three light grav modules (totaling nine liters) and four units of batteries (four liters) are distributed over the area of the outfit. The grav belt weighs about 10kg, but once it is turned on, a neutral control setting eliminates this weight.

The belt can be controlled with a projecting chest control board, which the flyer adjusts with a chin or mouth control, and optionally a directional helmet. Fully equipped, the grav belt costs Cr106,000. Installed weaponry and armor increase this price.

This configuration provides 300kg of thrust for eight hours between charges. Considering that the typical flyer with his equipment masses out at 100kg, the grav belt has a maximum speed in a vacuum of 2,000km per hour and a vacuum cruising speed of 1,500km per hour. In an atmosphere, the belt has a top speed of 300kph, and a cruising speed of 225kph. In both environments, the nap-of-earth speed is 40kph.

Efficient use of the advanced maneuvering capabilities of a tech 15 grav belt requires a new skill, grav belt.

Grav Belt: The individual has training and practical experience using a grav belt in advanced quasi-military and military maneuvers. Regular grav vehicle or air/raft skill is sufficient to operate a grav belt in ordinary situations, but fancy maneuvers require the skill of grav belt.

Grav belt skill does not give any other skills, but grav vehicle or air/raft skill gives one level less of grav belt skill. For example, grav vehicle-3 would confer the benefits of grav belt-2. Any time a new character rolls grav vehicle skill or air/raft skill, grav belt skill may be taken instead.

Advanced maneuvers use the following UTP:

To perform complicated maneuvers with a grav belt:
ROUTINE, grav belt, dex (hazardous)
REFEREE: Time for this task depends on the maneuver. All complicated maneuvers are hazardous.

Complete details on the grav belt can be found in Adventure 6 of the *Travellers' Digest*.

Tech	Volume	Weight	Price
TL15	15 liters	10kg*	Cr106,000

*Only when the belt is off; the weight is neglible when on.

TL 15 Grav Belt

Enclosed 2-Man G-Tube

FRONT VIEW
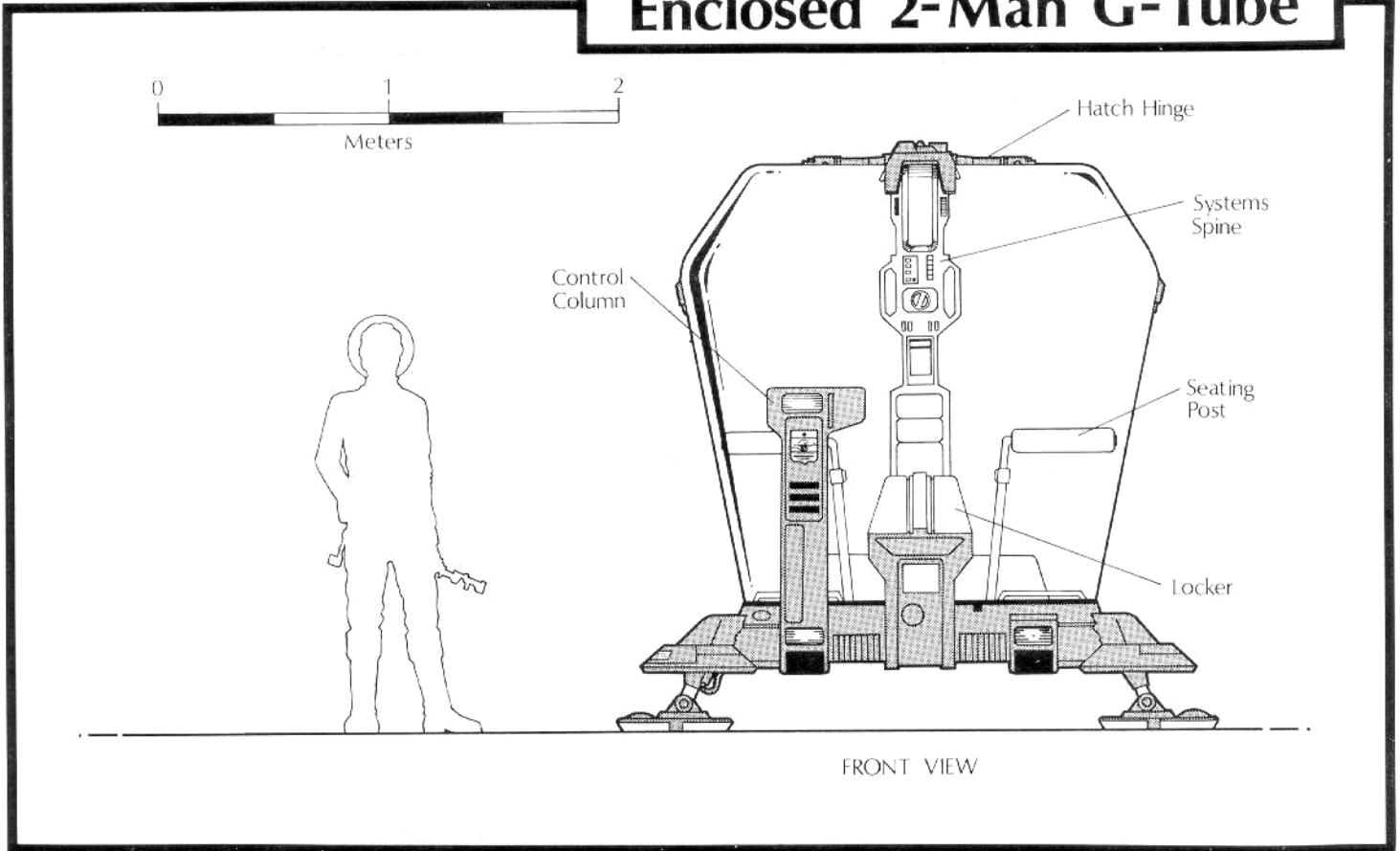
Enclosed Two-Man G-Tube

The Scout G-tube is essentially an enclosed, air-conditioned "grav belt" for two people. The G-tube includes a heads-up status display for the operator, who should have air/raft skill or grav belt skill for safe operation. It has 2 seating posts (side by side), a 100 liter locker, a control panel, a heater/air conditioner, landing and navigation lights, and a continental range communicator. Each passenger also has enough room to carry up to 25 liters of equipment (50 liters total). The occupants can fit in the G-tube while wearing a tech level14+ vacc suit or a tech level10+ light duty vacc suit. Standard vacc suits of tech level13 or less are too bulky to allow the occupants to fit in the G-tube.

A fuel capacity of 24 liters provides the power for 120 hours of 800kg thrust.

The ride in the G-tube is very smooth. Although riders are not sitting, but rather leaning against one of the seat posts with their feet slipped under floor straps, inertial compensators guarantee comfort. Even if the vehicle were flying upside down, with their eyes closed the riders would be unaware of any sensation of motion.

A special sealed environment model provides the equivalent of a Tech Level 9 PLSS B for two people (allows a duration of 24 hours; recharge takes 6 standard oxygen tanks).

Tech	Volume	Weight	Price
TL12	2000 liters	170kg	Cr35,000

Optional Sealed Environment Model:

Tech	Volume	Weight	Price
TL12	2000 liters	200kg	45,000

IISS Grav Bike

Flight Configuration – Tripod Gear Retracted
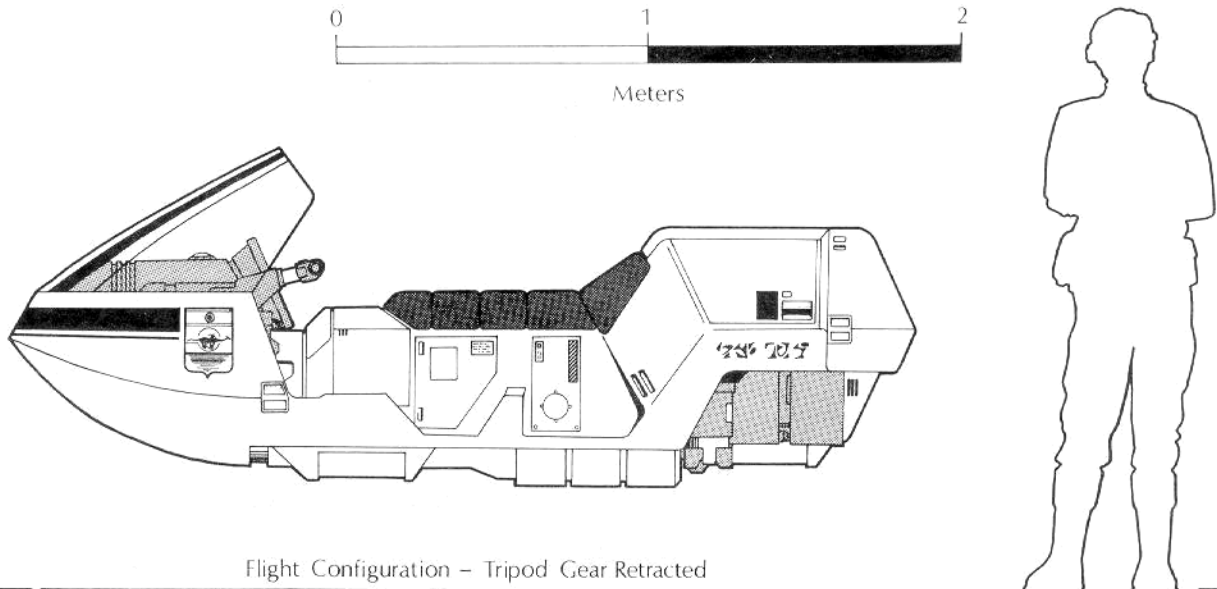
IISS Grav Bike

The Scout grav cycle can carry one driver and one passenger. Its parabolic nose and windshield are designed both for stream-lined flight and to protect its riders. Carrying 280 liters of fuel, the craft can mount 800kg of thrust for 78 twenty-four hour days. In 8 hour shifts, the fuel supply will last for 234 days.

Unloaded, the grav cycle weighs 110kg. Fully loaded at 360kg, the bike has a top speed of 300kph; a cruising speed of 225kph, and a NOE speed of 190kph. A hatch in the rear opens to a cargo space capable of holding 50 liters of equipment and supplies.

Grav vehicle or grav belt skill is needed to operate the grav cycle.

With so many other grav vehicles available, including a personal grav belt, why is the grav bike needed?

As a conveyance for individuals, the bike is considerably cheaper than the belt, and also has more cargo space. The bike can also carry a second rider, who can work (or aim) undistracted while the pilot steers the craft.

The grav bike has built-in avionics, giving it good nap-of-earth abilities which the belt does not have. Since, however, the bike has no inertial compensators, certain precautions are necessary for NOE flights.

To avoid nausea on a grav bike NOE flight:

DIFFICULT, grav belt, end, INSTANT (fateful)

REFEREE: Only one roll is necessary per NOE flight. A character who fails at this task suffers the following outcomes:

SUPERFICIAL — character is sick; roll again

MINOR — character must slow the craft or reroll as hazardous

MAJOR — character must stop the craft or reroll as hazardous.

Above tech level 10, drugs are available that make this task unnecessary. In any case, riders must wear proper seat belts or any trip is FORMIDABLE and hazardous.

Tech	Volume	Weight	Price
TL12	400 liters	110kg	Cr48,000

SPECIFICATIONS

Grav Generators=20 tons thrust
Crew=Driver/3 passengers
Cargo Space=0.25 tons (3375 liters)
    (0.50 tons (6750 liters) with seats folded)
Armor Factor=10
Fuel=3,240 liters; duration=360hrs; 15/45 days

Speed Performance (Loaded)=
    Top=200 kph
    Cruising=150 kph
    NOE=50 kph

Weight (unloaded) 12 tons; (loaded) 17 tons
Price: Cr 6,113,950
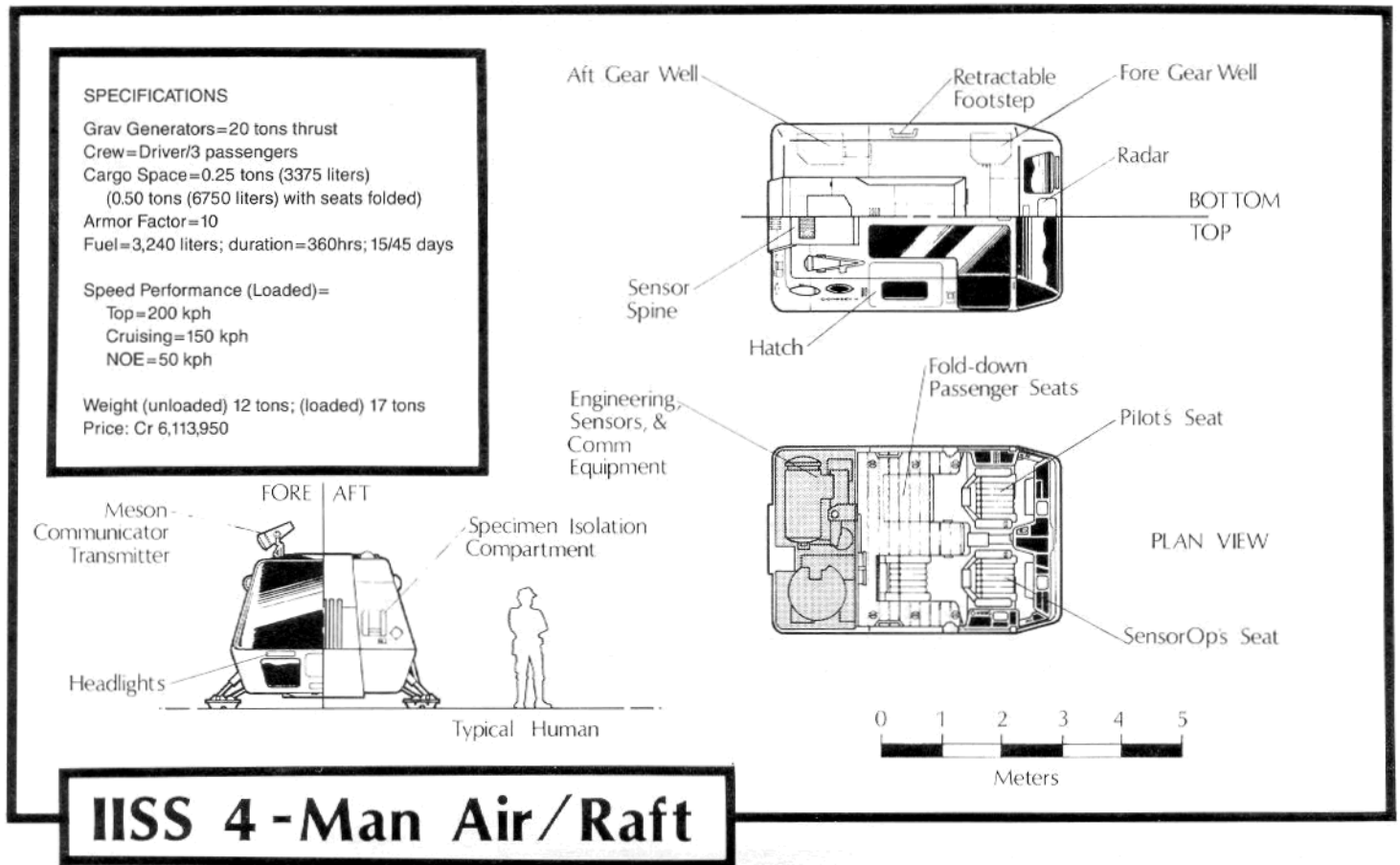
IISS 4-Man Air/Raft

IISS 4-MAN AIR/RAFT

This air/raft can be encountered literally anywhere there are Scouts. More than 120,000 of these vehicles are in use by the Scouts throughout the Imperium, although not all of them are the tech level 15 version. The four-man craft is 4.5m long, 3m wide, and 2m high, with a total volume of 27 kiloliters.

Covered with a 1cm thickness of light weight composite laminate, the vehicle has an armor factor of 10. With its fuel supply of 3,240 liters, the air/raft has an operational duration of 360 hours. Running around the clock, the vehicle can run for 15 days; this equates to 45 days of 8-hour shifts.

With its 20 ultraheavy grav modules providing 20 tons of thrust, the Scout air/raft has a top speed of 200kph, with a cruising speed of 150kph and a NOE speed of 50kph. With its avionics operating, the vehicle can achieve a top NOE speed of 190kph.

The air/raft's sealed environment can be pressurized to provide full life support for its crew. On the bridge, the basic controls are computer enhanced to increase the efficiency and safety of operation. EMS active and passive sensors, a neutrino sensor, and a densitometer give a full range of information to the surveyors on board. A meson communicator allows near-instant contact with any other station within continental range.

Besides the pilot and three passengers, the air/raft can carry 0.25 tons (3375 liters) of cargo. With two passenger seats folded out of the way, the vehicle can carry 0.50 tons (6750 liters) of cargo. Unloaded, the craft weighs 12 tons; with crew and maximum cargo, it weights 17 tons. The air/raft as described costs Cr 6,113,950.

Three air/rafts are typically carried by a *Donosev* class Scout survey ship.

IISS SURVEY G-CARRIER

The *Kankurur* class Scout survey G-carrier was designed in 1095; the first model was commissioned in 1097. Individual models are named after significant life forms on member worlds of the Imperium. The kankurur is a large bird of prey native to Vland. Capable of carrying up to 20kg in its talons, the bird was trained and used like the Terran carrier pigeon. The kankurur could carry not only paper messages, but also small cargoes.

The vehicle is of tech level 15 construction throughout, with features to support both survey and exploration missions with full crews. The G-carrier is 15m long, 5.25m wide, and 3m high, with a total volume of 236.25 kiloliters.

Covered with a 1cm thickness of light weight composite laminate, the vehicle has an armor factor of 10. With its fuel supply of 6,480 liters, the air/raft has an operational duration of 360 hours. Running around the clock, the vehicle can run for 15 days; this equates to 45 days of 8-hour shifts.

With its 120 ultraheavy grav modules providing 120 tons of thrust, the Scout G-carrier has a top speed of 240kph, with a cruising speed of 180kph and a NOE speed of 60kph. With its avionics operating, the vehicle can achieve a top NOE speed of 190kph.

The G-carrier's sealed environment can be pressurized to provide full life support for its crew. An airlock in the aft section opens to the roof as well as aft. A galley, four fold-up bunks, and a fresher allow extended missions. On the bridge, the basic controls are computer enhanced to increase the efficiency and safety of operation. EMS active and passive sensors, a neutrino sensor, and a densitometer give a full range of information to the surveyors on board. A meson communicator allows near-instant contact with any other station within planetary range.

Besides the pilot and five passengers, the G-carrier can carry 1.0 ton of cargo in the main cabin and 1.0 ton in the airlock. Unloaded, the craft weighs 72 tons; with crew and maximum cargo, it weights 100 tons. The G-carrier as described costs Cr11,858,560.
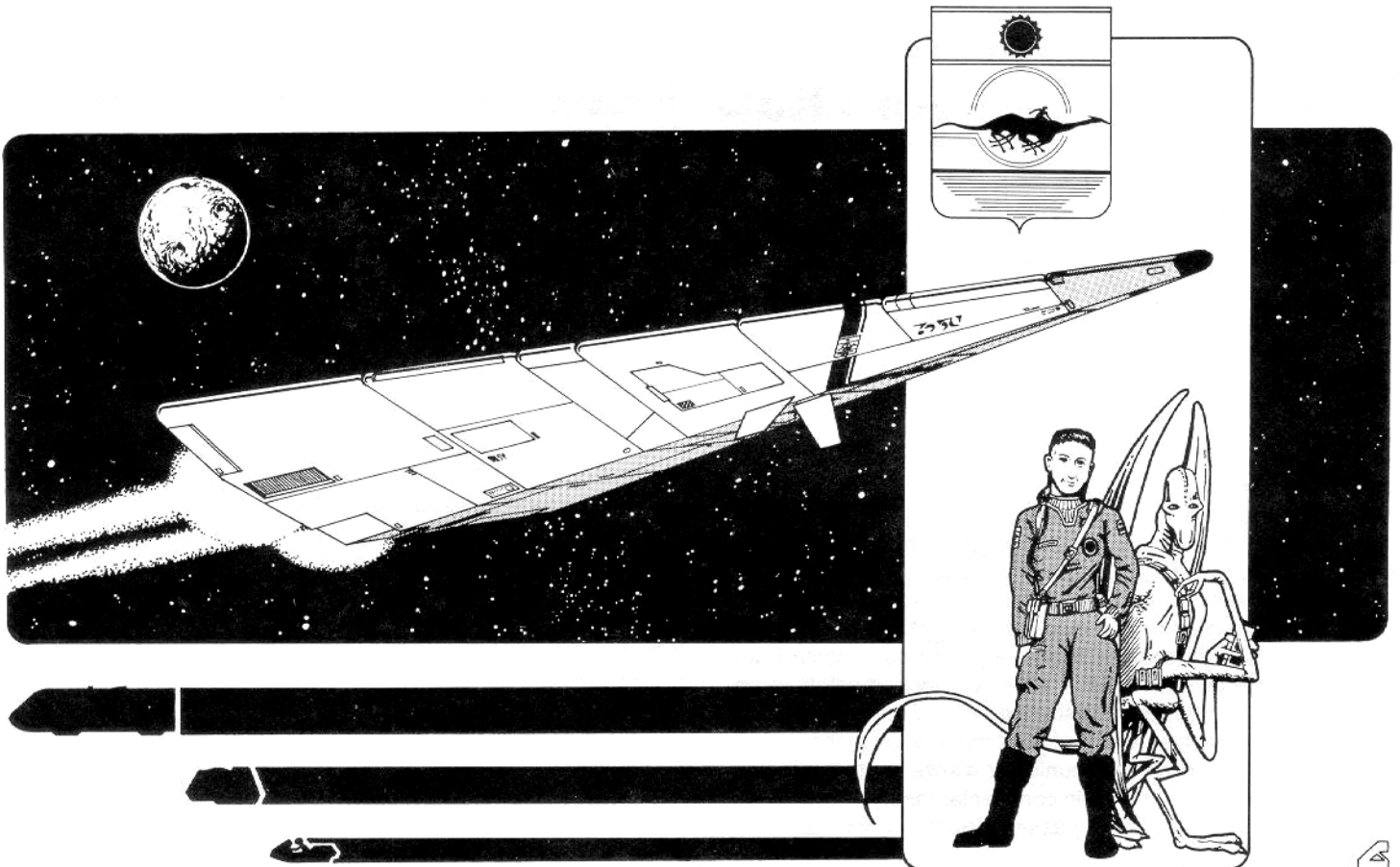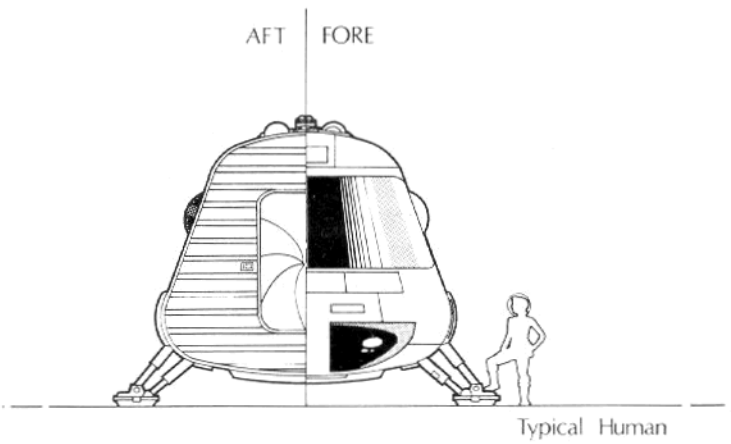
AFT | FORE

Typical Human

SIDE

Overhead Airlock Door
Meson Communicator Transmitter
NAS Sensor
Headlights
Specimen Isolation Compartments
Landing Gear
Grav Modules

PLAN VIEW

Power Plant & Fuel
Airlock
Meson Communicator
Fresher
Holo Tank (ceiling mtd.)
Pilot's Seat
Sensor Op's Seat
Equipment Locker
Environment Sensors
Galley & Life Support
Fold-up Bunks (4)

0 1 2 3 4 5
Meters
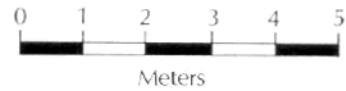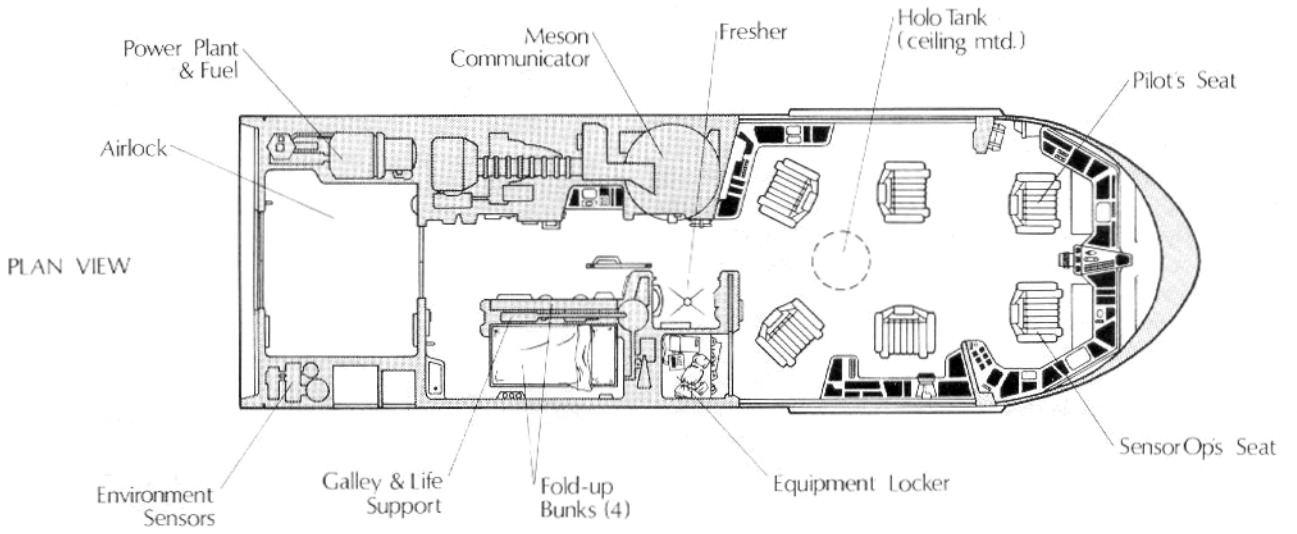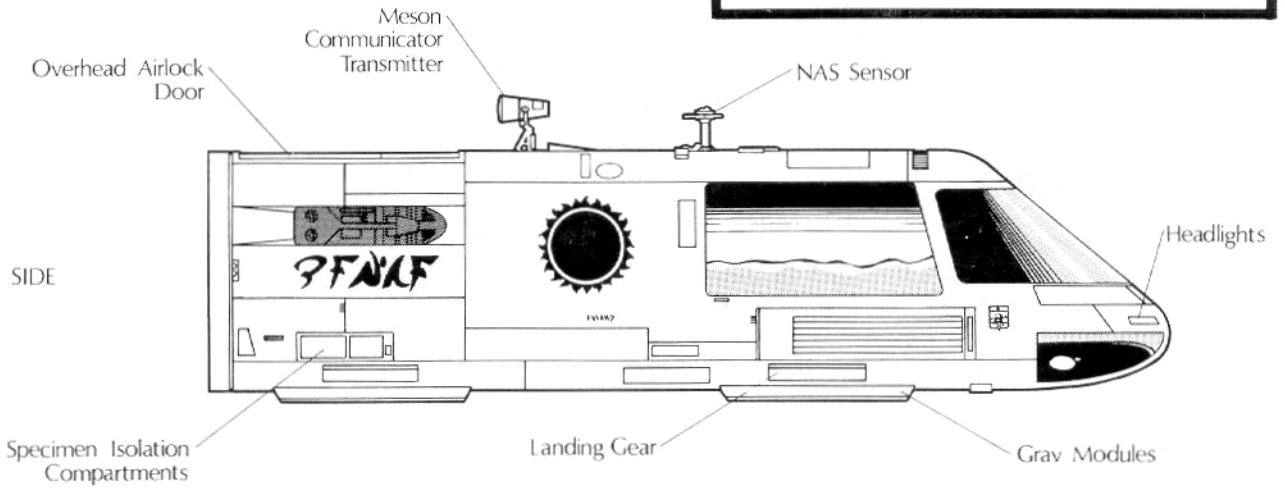
IISS Survey G-Carrier

This section describes how to expand and elaborate on a world's society, government, law, and technology. One of the referee's most difficult tasks (and likewise one of the most rewarding) is to present a world's society to the players in a manner which clearly distinguishes it as "alien". To that end, this section of *Grand Census* presents rules for detailing cultures, and introduces a new form for recording the data: IS 22, the Cultural Profile.

Sometimes just coming up with a reasonable interpretation for the last four stats of the basic world UPP (population, government, law level, and tech level) can be a real challenge. This section discusses difficult to interpret aspects of world data.

All of this information can be used to add extra spice to an adventure or campaign. *Grand Census* cultural data can be used to generate a rich homeworld background for player characters or major NPCs.

INTERPRETING WORLD UPP STATS

When trying to reconcile a world's UPP and data listing stats with one another, difficulties sometimes occur. This section examines the effects world data stats can have on each other. Understanding these relationships can make all the difference when deciphering a seemingly incompatible array of world stats.

Starports: The tech level of a world is seldom tied to the starport tech level. Most worlds consider the starport to be extraterritorial, and when the Scouts consider the world's technology ratings, they typically ignore any technology within the starport's bounds.

Even so, technology from a high-tech starport does "leak out" onto a lower tech world. This technology leakage is represented by the DMs used for starports when determining the world's tech level using the basic rules.

As an example of technology leakage, consider the US military bases in Vietnam in the early 1970s. The surrounding countryside was about tech level 4 to 5, while the military base was tech level 7. When a TL 7 truck was deemed unrepairable, the base might decide to sell the truck to the locals. The locals may get the truck running, although its performance is probably far short of what the base personnel consider acceptable.

The starport DMs also take into account the effects of interstellar trade on local tech levels.

No matter what the world's tech level is, starports always have a minimum tech level which exists within the starport's borders. These minimums are:

Class A Starport: TL 10
Class B Starport: TL 9
Class C Starport: TL 8
Class D Starport: TL 7
Class E Starport: TL 6
Class X Starport: TL 0

Thus if a world has a class A starport and a tech level less than 10, the starport tech level is always at least 10.

If the world's UPP tech level exceeds the minimum level for the starport, use the world UPP tech level as the tech level of the starport facilities.

Military Bases: The presence of Scout bases, Imperial Naval bases, and colonial Navy bases may or may not have an effect on the world's tech level.

In many cases, the base is ignored by the Scouts when considering tech level. To understand why, consider Edwards Air Force Base in California. Can commercial and private aircraft routinely use the Edwards Air Force Base facilities? No, they can't: it is a government military facility, and there are plenty of non-military facilities elsewhere. The same holds true of bases in most star systems.

On the other hand, some military bases *are* considered by the Scouts when they are determining the primary (i.e., the most prominent) world in the system, and its tech level. A corresponding example is the American Army forts of the old west. Anyone passing through could seek refuge in the fort and get supplies. The same holds true of bases in some star systems.

The bottom line on military bases is this: take your pick. The Scout base, Imperial Naval base, or colonial Navy base facilities can be declared as "included in the UPP" if you want to allow free access to the base's facilities. But the more common situation (especially if the world UPP doesn't seem to make sense in light of the military base) is to declare the military facilities as off-limits to commercial and private starships, and the base facilities as "not included in the UPP".

Zero Population Worlds: Some of the strangest planets in the Survey of the Imperium are listed as having no population, yet have a government, law level, or tech level. How can no people have government or technology? There are ways, and these ways can make a zero population planet into an exciting adventure situation.

First, remember that a zero population digit means from 0 to 9 people in *permanent* residence on or around the planet. Transients do not count, nor do military personnel stationed there for a few months or years. A zero-population world may be a park planet with a few caretakers, or a privately owned preserve of a noble; a tourist world without special facilities could have millions of visitors per year, yet a population digit of 0 and no permanent residents. It can be a research station, an automated starport, or a wilderness training planet for Imperial marines. Or it can be really empty, or have only developing races not yet counted as a true sentient race.

If a planet has a starport and tech level only, it is probably an automated port. The tech level does not necessarily refer to the starport. For instance, a B class port on a tech level 3 planet may be there as access to the remains of a vanished civilization,

whose relics are tech level 3. The tech level may refer to accommodations available on a hunting preserve world.

A class E starport, and a tech level of 5 or more (other digits 0) usually means a mechanical beacon of the indicated tech level. Occasionally an exile world or a hermitage also fits this class.

The range of governments (2D-7+pop) for zero-population worlds is 0–5. Here are some possible explanations for these governments when the world has a zero population digit:

0. "No government, or family bonds only" generally means that the few people on the world are responsible to someone offworld. Although rare, it is not unheard of that a single family will have laid claim a whole world and set out to tame it. This digit can also be used for the government of a military training ground, or any such situation where *all* the inhabitants are temporary.

1. "Company/corporation" means that this planet is wholly owned by a business. It may be a warehouse planet, or an executive resort, or it may be mined for valuable resources, either mechanically (with robots) or by crews in rotation, due perhaps to rigorous working conditions.

2. "Participating democracy" is the most natural government type for less than 10 people, but implies that they are on their own. A research group (self-supporting) might have such a government. So might a religious group in retreat. Castaways would develop one, but would be unlikely to remain on the world after a survey ship had arrived. Political exiles might rule themselves by mutual agreement.

3. A "self-perpetuating oligarchy" is usually rule by an elite noble class where blood line or some other selection process determines the succession. Many worlds in the core of the Imperium are privately owned by noble families and some are kept unpopulated except by those families and their retainers or robot servants. In addition, the Imperial government itself keeps a few worlds as parks or museums, and holds worlds with developing races in trust (under Scout management).

4. A "representative democracy" means that this world is represented in some other world's legislature (as a small colony perhaps), or that transients may be represented before a council of permanent residents. There are cases of planets claimed by educational institutions (often with relics of past civilizations) where students go, running the world with a representative government of their own. However, the students must still answer to the offworld faculty.

5. A "feudal technocracy" is likely to indicate a scientific group led by their top scholar. Under extreme conditions on a planet with valuable resources, prospectors might put themselves under the orders of a knowledgeable guide (a permanent resident) and this could be called a technocracy also.

A red zone with no population is usually either an exile world or a ruin with dangerous residues from a war. It may also be interdicted by Scout authority to protect indigenous flora and fauna.

All these factors and possibilities can be juggled to explain the particular UPP of any world with zero population. Thus, any zero population world can become an intriguing place, well worth exploring by your players.

CREATING THE CULTURAL PROFILE

Once the basic world UPP has been generated or looked up, a *Grand Census* Cultural Profile can be created. While not necessary, doing a *Grand Survey* World Profile (which determines the local world's conditions) before creating a Cultural Profile can sometimes be helpful.

This section produces an array of cultural details through die rolls. Keep in mind that random dice are no replacement for imagination—if you have an idea for a culture you'd like to see, ignore any roll you don't like and substitute what you want instead.

On the other hand, always changing a roll you don't like can be a cop out. Sometimes, forcing yourself to rationally describe a difficult combination of random results can lead to a culture which becomes the highlight of an adventure.

Balkanized Worlds: Worlds with a government code of 7 are balkanized, and rival governments compete for control. Roll 1D+1 for the number of major rival governments on the world. For each rival government, roll a separate government code and law level (use the world's UPP population code in the government roll). Reroll a government result of 7.

When doing a cultural profile for balkanized worlds, do a separate profile for each rival government.

SOCIAL OUTLOOK

The first section of the Cultural Profile deals with a society's basic outlook. Three areas are defined: *progressiveness, aggressiveness,* and *extensiveness.*

Progressiveness: Deals with a society's basic desire to improve and progress.

Progressiveness Attitude: Indicates how the local inhabitants will react to an idea or action that is new, unusual, or contrary to local precedent. Roll 2D on the Attitude column of the Progressiveness Table (Table 1.1). The possible results include:

Radical: The population prefers change to static conditions. In extreme cases, any new idea, no matter what its merits, is a good idea.

Progressive: The population believes change to be good and healthy. They readily accept promising new ideas.

Conservative: The population tends to be afraid of change. Extensive effort may be needed to convince them a change is needed.

Reactionary: The population believes all change to be bad and reacts strongly whenever change is suggested.

Example: We locate the Attitude column of the Progressiveness Table for the world Regina (Spinward Marches 1910 A788899-C). Regina has a population digit of 8 (DM +1) and a law level of 9 (no DM). A roll of 2D+1 results in 6, giving a Progressiveness Attitude of "Progressive".

Progressiveness Action: Indicates the likelihood that the society will change or be in a state of flux. Roll 2D on the Action column of the Progressiveness Table (Table 1.1). The possible results include:

Enterprising: The population exhibits a significant drive and desire to progress. Progress tends to be far-reaching.

Advancing: The population has a fair measure of drive. Definite measurable progress exits.

Indifferent: The population lacks a drive to progress. Some progress exists, but its movement borders on immeasurable.

Stagnant: The population's progress has ground to a complete standstill. In extreme cases, the lack of progress may have become regression.

Social changes of this type occur over a period of years, decades, and sometimes even a century or more. It is left to you to determine just how frequently the social changes occur. Changing the situation on a world is useful for reminding the players that the universe is not a static one.

Example: We roll 2D on the Action column of the Progressiveness Table for the world Regina. We get a 7, giving a Progressiveness Action of "Advancing".

Aggressiveness: Describes the society's basic combativeness and belligerence.

Aggressiveness Attitude: Indicates how the local inhabitants react to the thought of forcing themselves on others. Roll 2D on the Attitude column of the Aggressiveness Table (Table 1.2). The possible results include:

Expansionistic: The population prefers to use force; compromise is rarely an option.

Competitive: The population prefers the use of force, but does not rule out compromise as an option.

Unaggressive: The population prefers compromise to the use of force.

Passive: The population prefers inaction to the use of force.

Example: Rolling 2D on the Attitude column of the Aggressiveness Table for the world Regina, we get a 9. This gives us an Aggressiveness Attitude of "Unaggressive".

Aggressiveness Action: Indicates likelihood that the locals will resort to the use of force to impose their will on others. Roll 2D on the Action column of the Aggressiveness Table (Table 1.2). The possible results include:

Militant: The population openly displays their military might. They readily express their support for solving problems using military means.

Neutral: The population seldom flaunts their military might. They readily express their willingness to fight in self-defense if needed.

Peaceable: The population never flaunts their military might. They suggest using force to solve problems only as a last resort.

Conciliatory: The population refrains from building any significant military might. They will do anything to avoid a military confrontation.

Example: We roll 2D on the Action column of the Aggressiveness Table for Regina. We get a 10, giving an Aggressiveness Action of "Peaceable".

Extensiveness: Tells how cohesive the world's populace is on a local level, and how open the population is to being among the interstellar community.

Global Extensiveness: Indicates the likelihood that a given individual or group conforms to the local social views. Roll 2D on the Global column of the Extensiveness Table (Table 1.3). The possible results include:

Monolithic: The world's population stands solidly united in its views. No observable dissension exists.

Harmonious: The world's populace generally agrees on major issues, although observable dissension may exist.

Discordant: The world's population strongly disagrees on major issues. Dissension definitely exists.

Fragmented: The world's population holds widely diverse views. Dissension is the rule.

Example: Regina has no DMs for either government or law lev-

el. We roll 2D on the Global column of the Extensiveness Table. We get a 7, giving an Global Extensiveness of "Harmonious".

Interstellar Extensiveness: Indicates the general reaction of the local population to obvious offworlders. Roll 2D on the Interstellar column of the Extensiveness Table (Table 1.3). The possible results include:

Xenophilic: The local populace prefers offworlders. In extreme cases, the locals treat offworlders with a nauseating devotion.

Friendly: The populace is congenial to offworlders. Locals often treat offworlders favorably.

Aloof: The populace reacts coolly to any offworlders. The local population may sometimes even be downright unfriendly.

Xenophobic: The populace has xenophobic tendencies. At the very least they have a severe distrust of any offworlders. In extreme cases, the locals abhor offworlders.

Example: Regina has a class A starport which gives a DM of -2 on the Interstellar column of the Extensiveness Table. We roll 2D-2 and get a 6, giving an Interstellar Extensiveness of "Friendly".

GOVERNMENT AND LAW LEVEL

It is impractical, if not impossible, for an intelligent being to live by itself, apart from others. Living in a society gives one tremendous advantages, both for basic survival and to enhance one's quality of life. But living in close proximity with others can cause problems of its own: disagreements are bound to arise, and sometimes these disagreements can not be settled in peaceful ways. For this reason, governments are instituted, and laws are written that individuals are to follow.

When an individual breaks a law, the government reacts, to prevent the lawbreaker from committing the same crime again, to exact retribution for the victim, and to punish the wrongdoer.

Different civilizations conduct these tasks in different ways.

GOVERNMENT ORGANIZATION

Any government must perform three functions, and whether or not the bodies performing these functions are differentiated by the government, it is instructive to look at them abstractly.

Legislative: The legislative branch of a government makes law. In simpler terms, the legislative branch tells everyone what to do.

Executive: The executive branch of a government enforces the law. In simpler terms, the executive branch makes sure that it is done.

Judicial: The judicial branch of a government interprets the law. In simpler terms, the judicial branch decides whether it was done right.

Naturally, no government is so cut and dried, even the early Terran example upon which this model is based. But it is convenient to distinguish these three functions for game purposes.

These duties may overlap, so one person or governmental body subsumes both the legislative and executive functions, for example. It may also be that the separate parts of the government share these functions. For example, a Ministry of Trade might set import taxes (legislative), collect those taxes (executive), and judge cases where the taxes have not been paid (judicial). In this case, the Ministry would exercise all three functions, but only in the arena of trade. Other parts of the government would have

jurisdiction over other aspects of life.

The government digit assigned by the Scouts to a world corresponds most often to the legislative "branch", but may be derived from the structure of the executive or judicial "branches" if they seem more significant in their workings.

Use Table 2.1 to determine the division of government authority into one, two, or three parts. Then use Table 2.2 or Table 2.3 to determine which branches are the "representative authority" corresponding to the government digit assigned by the Scouts.

In game terms, characters will have many more dealings with individuals from the executive part of the government. Of course, if characters disobey laws they may also find themselves introduced to the judicial functions after being arrested by the executive branch.

GOVERNMENT TYPES

Descriptions corresponding to the government digit can be found in the regular **Traveller** rules. For more variety and detail, you may also apply one or more of the following organizational structures to those governments. Use Tables 2.4 and 2.5 for the representative authority to determine its type of organization. Roll directly on table 2.5 for any remaining branches of authority.

Ruler: One to three powerful individuals control the functions of the government.

Elite Council: One group, with from four to a thousand members, confers and decides upon the acts of the government.

Several Councils: Several councils, whether equal in power or ranked according to some system, each exercise influence over the government.

Demos: The entire population decides the acts of the government. In many cases, various qualifications will be established to lessen the participation of some classes of citizens.

SOME GOVERNMENT EXAMPLES

Rhylanor: Rhylanor (Spinward Marches 2716 A434934-F) is a small, crowded, high-tech world in the Spinward Marches. It has a government type 3, self-perpetuating oligarchy, and a law level 4, relatively low.

Rolling 1D on Table 2.1, a value of 3 determines that the government is split in a 2-way division of authority. Moving then to Table 2.2, a roll of 6 means that the "main" branch of the self-perpetuating oligarchy is composed of an authority sharing both legislative and judicial powers. The other branch of the government is the executive branch.

From Table 2.4, we learn that we should roll 1D to determine the exact organization of the oligarchy. A roll of 5 tells us that it consists of several councils.

Finally, rolling 2D on Table 2.5, we learn that the executive branch (from our roll of 3) is composed of one elite council.

What will characters find when they reach Rhylanor? We can flesh out the details to give a more exact picture for the players. Rhylanor's government consists of two groups, both of which are filled with Rhylanor's nobles. Membership in the government is handed down to the oldest child in a noble family, after the death of the parent (self-perpetuating oligarchy).

One group is known as the "Three Councils", which make laws and determine the guilt or innocence of lawbreakers. Each council is in charge of one area of law. The Council of Rhylanor makes all local laws. The Council of Space makes all laws concerning visitors to the planet and relations of the planetary government to the Imperium and other worlds. The Council of Revenue sets taxes.

The second main group in Rhylanor's government, performing the executive function, is know as the "Little Council". Its fifteen members each oversee the activities of the government in one of fifteen administrative areas. Thus separate police and armed forces are organized differently in each area, although all must enforce the same laws set by the Three Councils. (This corresponds also to Rhylanor's "fragmented" global extensiveness, as determined in the social rules in this book.)

With a law level of 4, inhabitants of Rhylanor live peaceful lives. Police are occasionally visible, but citizens are not harassed and have nothing to fear from governmental excesses. Rhylanor's economy is relatively free, and taxes are low.

Incidentally, this government is relatively new to Rhylanor, the result of a constitutional convention held in 1056. (This fact was invented to correspond to the world's "progressive, enterprising" philosophy, as determined in the social rules in this book.)

Mora: Mora is the sector capital for the Spinward Marches, but of course it has its own local government. Rolling a 1 on Table 2.1 tells us that the government of Mora (Spinward Marches 3124 AA99AC7-F) is split into three authorities, corresponding roughly to one for each branch. Rolling 6 on Table 2.3 determines that the judicial branch is the representative authority, so we know that it is a charismatic oligarchy from its government characteristic digit of C. Using Table 2.4, we roll a 2 and discover that this judiciary function is carried out by an elite council.

For the other two branch organizations, we roll on Table 2.5. A value of 5 tells us that the executive branch is also an elite council, and a value of 6 gives us a single ruler for the legislative branch.

Now to flesh out this information. Mora is a matriarchy, in which most of the governmental positions are held by women (determined by a flash of inspiration.) The courts of the world are headed by the "Eleven Brides", so called because their duties to the government are so demanding of their time that they do not take husbands, but rather are "married" to their work as judges. Laws (with a characteristic of 7) are stricter and more intrusive than those on Rhylanor, but are still about average for most of the worlds in the Imperium.

The executive branch is the "Caucus", 33 women who oversee the administrative activities of the government. There is no separate police force on Mora; the laws are carried out by the planet's army. (This was decided by looking at the "unaggressive" yet "militant" attitudes determined using the social rules of this book.)

The legislative branch consists of the Duchess Delphine the Matriarch, in her own right a charismatic dictator (although the Scouts published the world's government statistic based on the structure of the judicial branch). The Duchess makes all the laws herself, and so far she has done well enough at it that most Morans are happy under her rule.

Regina: This subsector capital (Spinward Marches 1910 A788899-C) is an impersonal bureaucracy. Rolling a 2 on Table 2.1 tells us it has three separate branches of government, and a 6 on Table 2.3 tells us that the judicial branch is most prominent.

Looking at Table 2.4, we see that impersonal bureaucracies always have government organizations of "several councils"; rolling twice on Table 2.5 tells us the executive branch is an elite council, and the legislative branch is a demos.

Time again for the details: with its law level of 9, and an impersonal bureaucratic court system, being arrested on Regina is unpleasant to say the least. Suspects may be rounded up en masse when a crime has been committed, and it might be weeks after a trial has convicted one of them before the rest are finally cleared. Meanwhile, those arrested must report their whereabouts and activities to the police every two hours. Notwithstanding this inconvenience, trials are usually fair.

The executive branch consists of four persons chosen by lot. Each year, four citizens are chosen at random to share the oversight of the government's administration. Each has veto power over the other, providing a check against tyranny at the cost of inefficiency and no small degree of confusion. Once a citizen has served in this capacity, he is ineligible to serve again.

The inhabitants of Regina as a whole make the laws for the world. Specific laws are proposed by the judicial and executive branches, and weekly elections are held to confirm or reject these laws. A complicated computer network is used to conduct these elections, and while in theory every law on the books or newly proposed is voted on, in fact citizens vote only on those laws most important to them. Unfortunately, it is easier to pass a new law than to repeal one. All native-born Reginans are eligible to vote in these plebiscites, with no other restrictions. This means that immigrants never have any voice in the government, but newborn babes, criminals, and the insane do, as long as they have Regina birth certificates.

LAW

Law is the influence that a government has over a population. At one end of the scale, anarchy prevails, and all are free to act under whatever whims move them at the moment. At the opposite extreme, the insidious fingers of the government reach into every nook and cranny of activity, no matter how personal.

It is important for the referee to realize when reading this section that it is more difficult to make precise rules for law levels than for government types. The suggestions made here are only guidelines, and must be tempered by the referee's sense of the game.

The degree to which the law interferes with individual actions is affected to some degree by the type of government prevalent in the area. Still, two very similar governments may have widely different law levels. As a general rule of thumb, bureaucracies and dictatorships try to exert finer degrees of control than do democracies.

Law level also indicates how vigorously laws are enforced. At low law levels, there may be no police: individual citizens must bring charges against lawbreakers themselves. Minor infractions of the law may be ignored, and judges may be lax in punishing wrongdoers hauled into court. At higher law levels, police may be unrelenting in their pursuit of criminals, and statutes of limitations may not exist.

Enforcement can be particularly important to the characters, because they may commit a crime unobserved. At a low law level, the transgression may be ignored by the authorities. If the law level is high, police will continue to hunt for the characters

using any available evidence.

The law can involve itself in many different spheres of conduct. If the referee wishes, he can roll separate law levels for each of these domains, or use one law level for all of them. (Each domain is listed on the cultural profile form for your convenience, but we have found that using one law level for all of them usually works as well. Use the individual values only when you desire to set up some special situation for your characters to encounter.) Roll 2D - 7 + government type for each law level.

Once the law level is known, it is a simple matter for the referee to roll to determine whether a character is challenged in the course of his activities. The law level scale is a sliding one; when characters are engaged in a certain type of activity, the referee rolls at that time to determine if the characters run afoul of the law.

If the law level for the activity is less than 12, throw 2D for greater than the level once per day to avoid an encounter with the authorities. If the law level is 12 or greater, throw 2D +10 for greater than the level four times per day to avoid unwanted police intrusion.

Weapons: How law level applies to possession and use of weapons is already detailed in the regular rules; keep in mind that these are general guidelines and may vary slightly from one government to another. The stricter the law level, the more weapons are restricted.

Trade: In the realm of business, the law can intrude in a number of ways. At the lowest levels, the only law might be *caveat emptor*—let the buyer beware. At higher levels, laws against fraud and deception may be enforced. At still higher levels, the state may prohibit certain types of businesses or regulate them by requiring licenses or other permits.

For example, weapons and drugs might be legally sold only by authorized companies. At the highest levels, the state may set prices and wages, and even decide for the individual what work he should do.

Criminal Law: What activities are considered to be crimes? At lower law levels, actions which use physical force to harm other individuals or their property are the only ones prohibited. At higher levels, almost any activity can be considered criminal.

Oftentimes, these stricter laws define individual choices or actions against "the state" rather than against other individuals, whether the prohibited activities harm anyone or not. For example, the government of Ohasset (Ley Sector 1435) punishes shaving with a prison term until the offender's beard grows out again. For whatever reason, red-headed men are exempt from this law.

Civil Law: Even if a particular action is not criminal, the situation may involve a wrong committed against another person or his property, and the government may set up rules that allow the harmed individual to collect from the perpetrator. Often, such losses are the result of negligence.

At lower law levels, each individual must fend for himself against his fellows. At middle levels, the government sets up rational rules of recompense for one citizen against another. At high law levels, a portion of the funds collected in these cases go to the government to support all victims rather than to the individual harmed.

Personal Freedom: What may a person say? With whom may he associate? Where can he travel? What books may he

read? How can he worship? What can he think? The degrees of influence a government claims in these areas can run the gamut from low law levels (where anything is allowed) to high law levels (where everything is restricted).

UNIFORMITY OF LAW

Who is required to observe the law? Do some laws apply to one group and not to another? Or do the laws apply equally to all? Three main categorizations answer these questions.

Undivided: In many governments, one set of laws applies equally to all inhabitants. Advantages of this system are a consistency of justice and the resulting simplification of the judicial function.

Territorial: In some governments, different laws apply differently depending on where a person is. By moving across a territorial boundary, a given act may change in status from legal to illegal, or vice versa, even though the government in authority has not changed.

Personal: It is not uncommon, unfortunately, for different laws to apply to different persons under the same governmental authority. The distinction applied by the government may be based on sex, religious beliefs, race, wealth, age, job, caste, tribal membership, or world of birth.

It is also possible for a government to combine these types of influence. For example, one set of laws may apply to Vargr in one area, while a second legal code applies to Vargr in another, while a third governs humans in both regions.

To determine the uniformity of law, roll 2D on the Uniformity of Law Table (Table 3.1).

Example: Regina (Spinward Marches 1910 A788899-C) has a global extensiveness of Harmonious (no DM) and a law level of 9 (no DM). Rolling 2D on the Uniformity of Law Table gives 9, for a result of "Undivided". The laws on Regina apply equally to every inhabitant.

LAW IN THE IMPERIUM

With 11,000 worlds to choose from, there are a variety of law-making bodies in the Imperium. Depending on where the characters are, one or more of these may apply to their actions.

Local Law: At the local level, laws are different for each world, or even each country on balkanized worlds. These laws then extend only to behavior on that particular world, and characters can not be punished for actions they commit elsewhere.

In particular, note that the "law level" digit is meant to apply principally to the urban areas near a starport. Wilderness areas on a world usually have lower law levels, especially in the area of enforcement: where there are no police, there are no laws, as the Vargr say. At high tech levels, of course, it is easier for police to observe wrongdoings and collect clues even in uninhabited areas, so this distinction does not apply.

Local Interstellar Law: Sectors and subsectors can and do establish laws that must be obeyed on every world within their boundaries. Usually, these laws concern themselves with diplomatic relations and Imperial taxes. Characters should be aware, however, that laws at this level often establish extradition procedures. Adventurers who flee a world after committing a crime there may gather undue attention from police everywhere they go.

In a few cases, several member worlds in the Imperium may have a closer governmental relationship. The most common reason for this is a captive world or colony, but there are instances of worlds banding together into small political units. Local laws in these situations may extend over all the worlds involved.

Imperial Law: The Imperium for the most part is a trade protectorate, and its principal legal duties are protecting the space between member worlds from piracy and foreign attack. Imperial laws also set up a minimum standard of behavior for every world within its borders.

For example, murder (killing a sentient being without provocation) is an Imperial crime. Where local laws do not adequately prohibit murder, Imperial law would apply. Naturally, this rarely happens except in open space.

Imperial law is enforced by Imperial nobility and Imperial troops. Where possible, criminals are brought to the nearest world where a fair trial can be held under the procedures of the local law.

CRIME AND PUNISHMENT

Once a court has tried and convicted a criminal, it usually imposes some punishment. These vary by type, usually according to the kind of crime committed.

Fines: Small fines are often imposed for minor, non-violent offenses, but fines for trade law violations might be up in the millions of credits. For minor offenses, determine the fine by rolling 4D x Cr10. The fines for trade law violations are up to the referee.

Corporal Punishment: Usually applied for more serious crimes, corporal punishments are of three types.

Restrictions on activity are the mildest of corporal punishments, usually involving a prison term for some specified time. Under certain arrangements, criminals may be released early, but must report their activities to the authorities for some time after this release. For minor crimes, the jail term is usually 2D days. For local major crimes, on a 2D roll for less than the law level, the prison term is 4D years. If the 2D roll is equal or greater than the law level, the prison term becomes 1D+2 decades.

Injury and death may be inflicted upon the criminal as a punishment. Limbs are sometimes removed for theft, and murder and other serious crimes are often punished by death. Of particular note is Easter (Solomani Rim 1802), where looking at the ruler's face is punishable by being blinded. The referee must determine if this type of punishment exists for a given crime.

Banishment seems like a lenient punishment, but it is severe to the person who must leave his world or country and live apart from his family and friends. The early Greeks on Terra banished one of their countrymen every year by a vote of all the citizens (demos as defined above). Those punished in this way could return only after ten years of enforced absence. As with injury or death, the referee must determine if this type of punishment exists for a given crime.

Guidelines on Setting the Severity of Punishment: The harshness with which criminals are dealt varies considerably from world to world. A crime punishable by death on one world might merit only a small fine on another. Since it is impossible to give strict rules for every world, the following guidelines should help.

The severity of punishment varies inversely to the law level. That is, punishments are lax at the highest law levels and more

severe the lower the law level gets. This variation is easy to understand.

At low law levels, only the most serious offenses are considered to be criminal, and so naturally punishment for any crime is harsh. At the highest law levels, where every act is a crime and every citizen is a criminal, it is virtually impossible to punish every infraction, so minor offenses are often overlooked. Unfortunately, a character who upsets a minor bureaucrat on such a world may find himself receiving special visits from the police for these "crimes". (This is not to imply, either, that serious crimes are punished in a modest manner at high law levels.)

COORDINATING GOVERNMENT AND LAW LEVELS

The law level of a world can give an extra glimpse into the "enthusiasm" which the three branches of government show for their work. An infinite variety is possible by combining all the possible values of the different characteristics.

On a low law level world, the legislative branch will "keep it's nose out of people's business", promulgating only a minimum of laws to protect its citizenry. The small executive branch will also exert its influence in a minimal way to make sure that these laws are enforced. When lawbreakers are apprehended, the judicial branch will conduct quick trials, although often meting out harsh sentences for serious crimes.

On a high law level world, the legislative branch will interest itself in every sphere of activity, producing a multitude of laws. The executive branch, often weighed down in an inefficient bureaucratic structure, will enforce these laws in a heavy-handed way, often over the objections of the citizens. Trials might drag on for years, with the judicial branch swamped by a heavy work load made worse by overprecise procedural rules.

INTELLIGENT NATIVE LIFE: MINOR RACES

On rare occasions, if a world harbors locally evolved native life (determined using *Grand Survey*), the native life will be intelligent. When playing **Traveller** against the official background of the Imperium, determining that native life is intelligent means you have located the homeworld of a *minor race*.

As of the current Imperial date of 1113, there are 426 identified minor races inside the borders of the Imperium. Of those 426 minor races, about 40 of them are minor human races (which amounts to an occurance of roughly 10%).

To determine if a world with native life is the homeworld of a minor race, roll 3D for 17+, with a DM of +3 if the world's population digit is 6+. If the minor race roll is successful, a further 3D roll of 15+ indicates the minor race is a minor human race.

Example: Kidulaar (Fornast 0819) has locally evolved native life. Kidulaar has a UPP population digit of 9, giving us a DM of +3 on the 3D roll. We roll 3D+3 and get 17, which means Kidulaar is the homeworld of a minor race. An additional roll of 3D gives us 7, which is far short of the 15+ needed for the minor race to be a human minor race.

What is this minor race like? We must resort to our imagination for these details. Let's say the minor race is refered to as the Kidulans. A good trick is to start with the animal encounter classes in the **Traveller** basic rules and decide on an animal group. Just for fun, we'll say the Kidulans are descended from herbivore/filter stock, and are large, multi-tentacled creatures

that will eat any plant life in their path. They originally dwelled on the floor of dense jungles. But when environmental shifts on their world dried-up the jungle vegetation and turned it into steppe land, their struggle for survival pushed them to intelligence. They had achieved tech level 4 by the time they were contacted by the Vilani over 6,000 years ago.

PARTIAL LIST OF MINOR RACES

Here is a list of identified minor races taken from official **Traveller** publications. This list includes only those minor races that are within Imperial borders. The specific published source with the most detail about the minor race is listed.

PARTIAL LIST OF MINOR RACES

Minor Race	Source
Ael Yael	Contact, *Journal* #15
Answerin (minor human race)	*Travellers' Digest* # 5, p40
Bwaps (Newts)	Contact, *Journal* #11
Cafadans (minor human race)	*Travellers' Digest* # 3, p47
Chirpers	Alien Module 5
Dynchia (minor human race)	Contact, *Journal* #24
Ebokin	*Traveller Adventure*
Geonee (minor human race)	Supplement 8, *Library Data* (A-M), p34
Githiaskio	Contact, *Journal* #16
Gl'lu	*Travellers' Digest* # 1
Ilthara (minor human race)	*Pilots Guide to Drexilthar*, p22
Irdu	*Travellers' Digest* #3
Jgd-Il-Jagd	Contact, *Journal* #22
Kidulans	*Grand Census*
Kolzar	*Travellers' Digest* #5, p42
Lalendrians	Contact, *Journal* #26
Llellewyloly	*Traveller Adventure*
Minlad (just barely sentient)	*Travellers' Digest* #6
Prt'	Contact, *Journal* #26
Shriekers	Adventure 10
Suerrat (minor human race)	Supplement 8, *Library Data* (A-M), p34
Tahavi	*Travellers' Digest* # 5, p47
Vegan	Supplement 11, *Library Data* (N-Z), p28
Virushi	Contact, *Journal* #12

SOCIETY AND CULTURE

With 11,000 worlds in the Imperium, a startling variety of cultures has sprung up. Since society consists of living individuals who change and grow, culture itself, which is transmitted by society as a whole, also changes and grows. Much of the culture extant 10,000 years ago is now gone forever. Some of the culture of only a few years ago has also passed into history.

Customs come into being on some world, and may be modified until unrecognizable over the years. Eventually, the custom may disappear entirely, only to spring up later on another world.

Historically, those who studied culture were known as "anthropologists", because they studied man, or *anthropos* in Greek. Today, these scientists are called "sophontologists", because they study all intelligent (*sophos*) life. This term is sometimes applied to those who study the biological mechanisms of humans and aliens; here we are concerned only with cultural sophontology.

To discuss the cultures of the Third Imperium and the surrounding areas, we need first to understand what culture is. Culture includes all the non-instinctual behavior patterns of a sophont that are learned from other members of society. A sophont abandoned as a baby on a desert island would grow up without a culture if it survived at all.

Culture defines how sophonts work, how they play, how they worship (or even whether they worship). Art, music, architecture, literature, and language are all outgrowths of culture. How laws are made, how individuals obey them, and how lawbreakers are dealt with all reflect the culture of the society.

What do they eat? Where do they live? With whom do they live? Who are their relatives? How are children reared? Who works and who plays? How are the sick, elderly, and deceased treated? All these questions are in the domain of the cultural sophontologist.

Not counting the Ancients, of whom we have too little knowledge to do more than speculate, sophontologists study cultures spanning from the present back about 50,000 years. Naturally, some of this study deals with cultures long dead: archaeology, a branch of sophontology, is able to unlock the keys to these cultures.

BASIC CULTURAL TYPES

Every culture changes over time, since the individuals belonging to that culture change over time. Typically, a developing race of sophonts passes through several stages once it achieves intelligence. While these stages correspond roughly to the development of technology, none of these cultures are "simple" just because their technology is simple. Some of the most puzzling knots sophontologists must unravel are found among the earlier stages of subsistence techniques.

It is also important to understand that, in the view of sophontologists, no culture is "better" or "worse" than another culture. The purpose of every culture is to help its members survive. If the culture fails in this task, it will disappear (or evolve into something different) as its members die. For those untrained in sophontology, it is particularly difficult not to believe that one's own culture is the "best". This belief is known as "ethnocentrism", and sophontologists must be careful not to let it contaminate their studies.

At the earliest stage, the members of the race practice a "hunting-gathering" culture. (In fact, more gathering than hunting is usually done, but the order of the terms was established eons ago.) Individuals in the society usually do not have fixed dwellings, but wander from place to place in search of the basic necessities of food and water. Although these cultures are usually at the lowest tech levels, this should not imply that they lack gadgetry. Some very sophisticated ways of dealing with one's environment can be found even at tech level 0.

Although hunter-gatherers seldom live exclusively in one place, temporary shelters may be built at different stops along the trail and family bonds may be particularly strong. Small groups typically band together for a period of time and roam over a particular area before breaking up and re-forming other groups. Hunter-gatherers are individualistic, usually with little formal government.

A society next reaches the level of "horticulture". At this stage, more permanent structures are built for housing and the cultivation of the soil begins. Carnivorous and omnivorous sophonts start to raise animals on a small scale at this stage of cultural development. With the establishment of larger villages, governmental institutions start to appear, usually under the rule of a village chief or council.

Horticultural societies may be widespread, with literally thousands of villages, and yet have no formal government at a level higher than that of the individual village.

The dividing line between horticulture and the next level is one of degree. "Agriculture" requires better tools and more efficient techniques over a wider area, with correspondingly better results. Horticultural societies dig gardens; agricultural societies farm. With food more plentiful, life is more secure, and the members of the society have more leisure time. This gives rise to more art, music, and literature. It also gives time for scientific development, necessary before highly technological cultures can be established.

At the horticultural and agricultural stages of development, some societies adapt to their environments by practicing "pastoralism", domesticating animals and raising them as a principal food source, rather than growing plants for food.

TECHNOLOGY AND CULTURE

It is the claim of some sophontologists that technology determines culture: these scientists, given a description of the science and gadgetry used by the society, believe they can accurately predict all other aspects of the culture. Whether this is true or not, a certain degree of consistency has come into being in the Imperium, particularly on worlds at tech level 8 and above.

True, the basic culture of the Imperium has changed much through the more than 10,000 years of recorded history. Political influences, brought about by the changes in power, have brought with them changes in the way people live together.

But most worlds in the Imperium share certain basic cultural postulates, remarkably similar to those found among Terran technological societies at tech level 8.

THE ROOTS OF IMPERIAL CULTURE

As a species, humans were alien to the world of Vland, imported there by the Ancients for reasons unknown today. When the Final War was over, these humans found themselves alone in an

unfriendly environment. Native plant and animal life was not edible to the Vilani, but special means were developed to process foodstuffs for human use. This aspect of Vilani culture, surprisingly enough, is not unique, and parallels can be found on a variety of worlds. Even on Terra, poisonous manioc (after being processed) comprised 85 percent of the diet for one group of South American Indians.

In the case of the Vilani, the "shugilii" (as these food processors were known) kept their techniques secret, exerting influence over the primitive Vilani culture in this way. As the Vilani advanced technologically and domesticated more plants and animals, the shugilii developed more techniques, but continued to guard these carefully from outsiders.

Some sophontologists believe that a social structure for the Vilani was developed by the Ancients, and that the Vilani clung to this after their captors were gone. Groups of Vilani from widely separated geographic areas had similar (albeit primitive) governmental structures.

The nobility of Vland can trace itself back to these village chiefs. The early Vland society allowed nobles to marry more than once; this tended to preserve the property owned by a family. Not only could a noble man have more than one wife, but a noble woman could have more than one husband. The third child of any noble was noble; other children were commoners.

By the time the Vilani reached tech level 4, monogamy prevailed, but the custom of passing nobility on only to the third child continued until their conquest by the human culture of Terra. This tended to keep the number of nobles constant, but there were other ways to achieve this special status. New, lower level nobles could be created by the actions of higher nobles.

The languages of Vland diverged over time. Glottochronologists have attempted to reconstruct the original Vilani language, hoping thereby to get a glimpse into the culture of the Ancients, but these efforts have been largely unsuccessful. Vilani art eventually developed into a written form for these languages. By the time the Vilani had achieved the power of space flight (around -10,000), one language (Old High Vilani) was dominant on the world.

Vilani traced kinship through both parents. When a young couple married, residence was bilocal: the couple would decide whether to live with the bride's family or the groom's family.

Vilani culture was conservative and indifferent, competitive and peaceable, harmonious and aloof.

THE TERRAN IMPACT

With the conquest of the Vilani by the Terrans, the culture of Vland and the First Imperium was greatly altered. The conquering humans spoke a different language and had different social customs.

Many Vilani reacted to this influx of Terrans in ways that helped preserve them as a distinct race even while adopting Terran customs to conform to their conqueror's ways. For the first time in 30,000 years, the Vilani were not at the top of the social ladder, and they imitated culturally their social betters.

For one thing, the Vilani nobles adopted the Terran custom of passing nobility on to all children of a noble. With the diminishing political importance of Vilani nobles, this change meant the difference between survival and death of the Vilani noble classes.

Anglic, the official Terran language, was the language spoken by these new rulers, and the Vilani gradually adopted it.

When the Rule of Man ended, the isolation imposed by the technological regression of the Long Night allowed widely scattered worlds to again develop cultural uniqueness. Worlds with large Vilani populations tended to revert toward their original social institutions and customs; other minor human races did the same.

When Cleon finally forged the Sylean Federation into the Third Imperium, again establishing a central government over the human worlds, a mixed Vilani-Terran culture became dominant; a certain homogeneity is guaranteed by the intercommunication between worlds afforded by the mass media. This "typical" Imperial culture today is remarkably similar to that of the pre-jump humans of Terra. Many worlds still show their peculiarities, however, especially those at lower tech levels.

In the Solomani Rim area, political pressures have produced a radical and advancing, expansionistic and militant, monolithic and aloof social structure, quite different from either the old Vilani or old Terran cultures.

REFEREE NOTES

For practical purposes, you can use twentieth-century Western civilization as a cultural model for the Imperium. The cultural profile is progressive and advancing, competitive and neutral, discordant and friendly.

The Local Customs Tables (Tables 5.1 through 5.8) can be used even if no other part of this book is used, to quickly give a local flavor to a world.

To determine how many times to roll on this table, roll one die for even or odd. If the roll is even, roll once on the table; if the roll is odd, roll twice on the table. If the tech level of the world is 7 or less, roll an extra time (twice or three times) on the table. After deciding how many times to roll, use the following procedure for each roll.

For each special custom, roll 1D on the Local Custom Table (Table 5.1) to determine which specific table (dressing habits, eating habits, etc.) to use. Roll on the specific table using one die plus one die.

If the result has an asterisk, roll on the Applicable Group Table (Table 5.8) to determine which segment of society has the special custom. These peculiarities add spice to an adventure, and it is surprising how often characters remember "that world where men had to keep their ears covered to be modest" long after other details are forgotten.

Example: We want to develop local customs for Regina, which has a tech level of 12. Since 12 is greater than 7, we do not roll the extra custom. We roll one die and get a 5, which is odd, so we will roll once on the Local Custom Table (Table 5.1). We roll a 2, which tells us we need to roll on the Eating Habits table.

Rolling 1D twice on the Eating Habits Table (Table 5.3) gives us a 1 and a 5, for a result of 15, which is "Unusual Foods*" on the table. The asterisk means we need to also roll on the Applicable Groups Table (Table 5.8) to find out who eats the unusual foods. We roll 61 on the table, which tells us the low social classes have the unusual food.

Now our imagination must fill in the details. We decide that Reginans believe strongly in a "gleaning custom", where the lowest class citizens are expected to clean the tailings from a harvested field for much of their food supply.

TECHNOLOGY

The basic **Traveller** technology code presents a broad view of common planet-wide technology. Social, economic, and cultural pressures may produce widely differing patterns of scientific and technical achievement from culture to culture. To provide a more detailed description of planetary technology, the Cultural Profile divides the basic UPP tech level into key areas of technological achievement, each with a separate tech level.

The tech levels given for each category are based on a hypothetical culture which follows the technology development guidelines set down in basic **Traveller**. However, every society grows at its own rate, with emphasis on different areas; a culture conceivably could have a tech level of 0 in one area (say Personal Military), but a tech level of 15 in another (such as Medicine). Generally however, technology will tend to be more or less consistent across the categories.

In **Traveller,** the technology code is a 1-character code which represents the *highest* level of sophistication commonly available. As explained above, anomalies are possible—which may help explain unusual world UPP combinations.

THE TECHNOLOGY PROFILE

The *Grand Census* Technology Profile provides a breakdown of major technological areas. It consists of 14 entries detailing both the levels of technology commonly enjoyed by the populace and the levels of technological achievement on the world.

The Technology Profile is divided into three blocks of information:

- Common Tech Levels
- Achievement Tech Levels
- Novelty Tech Level

The Common Tech Levels: The common tech levels are further divided into two values: *high* common, and *low* common.

High common represents the highest level of technology commonly enjoyed by the world's population. This is the tech level typically encountered near the starport and in the most modern urban areas. This is also the tech level value listed in the world's UPP stats.

Because high common represents the tech level of manufactured goods typically available near the local world's starports, most forms of equipment that a character might acquire near a starport will be of this tech level.

Low common represents the level of technology enjoyed by the bulk of the world's population. It can be significantly lower than the technological level of goods commonly available near the starport.

Low common indicates the minimum tech level the characters can always find on the world no matter where they go. The low common tech level may be the same as the high common tech level, indicating the population enjoys a consistent level of technology worldwide.

When comparing the two common tech levels, the referee should decide who has access to any tech levels above the low common figure. This could be important in resolving encounters or in describing surroundings during an adventure.

As an illustration of how the high common and low common tech level works, consider Terra circa 1985. The high common tech level is 8, and the low common tech level is early tech level 6. Globally, the tech level enjoyed by the bulk of Terra's 5 billion

population is the low common tech level of 6, even though certain areas (mostly urban North America, Europe, and some parts of Asia) possess the high common tech level of 8.

The Achievement Tech Levels: The achievement tech levels represent the best technology the world has been able to achieve locally. In the cases where the achievement tech level exceeds the high common tech level, the achievement tech level represents the forefront of technological research: a level of technology not yet available to the the general population.

The achievement tech levels are divided into three subgroups: *quality of life* tech levels, *transportation* tech levels, and *military* tech levels.

Quality of Life technology encompasses five basic areas: energy production, computer/robotics, communications, medical, and environmental engineering. These technology areas are essential to the world's quality of life and form the basis for the technological achievements in the two other subgroups.

Energy Production Technology: Indicates the culture's ability to make use of energy. Use of energy is fundamental to many other technological developments. Once cheap fusion power comes on the scene, it supersedes all other forms of energy production. Where fusion plant size becomes a problem, batteries or fuel cells are still required.

Computers/Robotics Technology: Indicates the culture's progress in the creation and use of high-tech computer circuitry. The development of computers is fundamental to many other technological developments. The computers/robotics tech level determines the basic availability of computers and robots.

Communications Technology: Indicates the culture's use of long-range communication devices. Communications technology depends largely on developments in computers/robotics.

Medical Technology: Indicates the quality of biological research and medical care available. Medical technology also depends heavily on developments in computers/robotics.

Environmental Engineering Technology: Indicates the ability of the culture to manipulate their environment. It establishes the chance of local terraforming projects being underway, and dictates the ways in which cities and other large civil engineering works are constructed.

Transportation technology covers the four fundamental transportation areas: land, water, air, and space. Transportation technology depends in a large part on the achievements in the quality of life group.

Land Transport Technology: Indicates the population's methods of land transport. Once grav locomotion arrives, land, water, and air transport merge.

Water Transport Technology: Indicates the population's achievements with regard to transport over oceans and seas. Special cases are *waterworlds* (where land transport technology does not exist) and planets where gravitic vehicles are present, since grav locomotion blends land, sea, and air transport into a unified whole.

Air Transport Technology: Represents the availability of various forms of air transportation. Vacuum worlds have no air transport until gravitics are invented. Again, gravitic vehicles blend the various planet bound transportation technologies into a single technology. As grav locomotion continues to improve, air transport ultimately merges with orbital space transport.

Space Transport Technology: Indicates the world's local

achievements in space travel. Space transport is independent of breakthroughs in gravitics.

Military technology defines the two key technological areas: personal military and heavy (vehicle-based) military. Personal military technology depends a lot on the achievements attained in the quality of life group, while heavy military technology depends mostly on the achievements in the transportation technology group.

Personal Military Technology: Indicates the culture's advancements in personnel-carried weapons and armor. Personal military technology covers everything from clubs to disintegrator weapons.

Heavy Military Technology: Indicates the culture's advancements in long-range vehicle-oriented weapons and armor. Heavy weapon systems include such things as artillery, support weapons, and combat vehicles.

The Novelty Tech Level: The novelty tech level indicates the tech level that may sometimes be found on the world, but is far from common. The novelty tech level represents a level of local technology that is rarely encountered unless specifically sought out.

The novelty tech level is frequently higher than the high common tech level. Novelty technology can be the artifacts or products of a previous (sometimes more highly advanced) culture, imported goods from nearby advanced worlds, or local experimental prototypes.

DETERMINING A WORLD'S TECHNOLOGY PROFILE

This section describes how to determine a world's technology profile by starting with the world's overall UPP tech level. Before you determine the Technology Profile, you should first determine the world's Social Outlook.

The Technology Profile uses the same tech level codes for each detailed technological area as is used for the world's UPP tech level. Thus a world UPP tech level might be 8 and the technology profile might also list a medical technology of 8. In both cases a tech level of 8 means the same thing: the technology is Terra circa 1980 to 1989.

High Common Tech Level: Use the world's UPP tech level code. By definition, the world's high common tech level *is* the world's UPP tech level code.

Example: The world Regina has a UPP of A788899-C. The UPP tech level is 12 (C), so the high common tech level for Regina is also 12.

Determining the Technology Limits: Determine the upper and lower tech limits for each remaining technology area. No matter what, the resulting tech level from subsequent steps can not exceed these limits.

If the computed lower limit is less than zero, then the lower limit becomes zero. If you are using the official **Traveller** universe, the upper tech limit can never be more than 16 (except in *extremely rare* cases).

Low Common Limits:
- Upper limit = high common
- Lower limit = high common / 2 (drop fractions)

Example: Using Regina (high common tech level of 12), we compute: low common upper limit = 12; lower limit = 6 (12/2).

Energy Limits:
- Upper limit = high common + high common / 5 (drop fractions)
- Lower limit = low common lower limit

Example: Continuing with Regina, which has a high common tech level of 12, we compute: energy upper limit = 14 (12 + 12/5); lower limit = 6.

Computers/Robotics Limits:
- Upper limit = energy upper limit
- Lower limit = upper limit - 3

Example: Using Regina, which has an energy upper limit of 14: computers/robotics upper limit = 14; lower limit = 11 (14 - 3).

Communications Limits:
- Upper limit = energy upper limit
- Lower limit = upper limit - 3

Example: Again using Regina, which has an energy upper limit of 14: communications upper limit = 14; lower limit = 11 (14 - 3).

Medical Limits:
- Upper limit = energy upper limit
- Lower limit = 0

Example: Again, with Regina, which has an energy upper limit of 14: medical upper limit = 14; lower limit = 0.

Environment Limits:
- Upper limit = energy upper limit
- Lower limit = upper limit - 5

Example: Using Regina, which has an energy upper limit of 14: environment upper limit = 14 ; lower limit = 9 (14 - 5).

Land Transport Limits:
- Upper limit = energy upper limit
- Lower limit = upper limit - 5

Example: Using Regina, which has an energy upper limit of 14: land transport upper limit = 14; lower limit = 9 (14 - 5).

Water Transport Limits:
The water transport tech level limits depend on the final land transport tech level, to be determined later.

Air Transport Limits:
As with the water transport limits, the air transport tech level limits depend on the final land transport tech level, to be determined later.

Space Transport Limits:
- Upper limit = energy upper limit
- Lower limit = upper limit - 3

Example: Regina has an energy upper limit of 14 which gives a space transport upper limit = 14 and a lower limit = 11 (14 - 3).

Personal Military Limits:
- Upper limit = energy upper limit
- Lower limit = 0

Example: Regina has an energy upper limit of 14 which gives a personal military upper limit = 14 and a lower limit = 0.

Heavy Military Limits:
- Upper limit = energy upper limit
- Lower limit = 0

Example: Regina has an energy upper limit of 14 which gives a heavy military upper limit = 14 and a lower limit = 0.

Determining the Actual Tech Levels: The overall procedure for the rest of the technology areas involves these steps:

1. For each area, take the high common tech level, and apply any indicated tech level modifiers (hereafter refered to as "TL Mods") to it;

2. Roll 2D on the Tech Level Modifier Table. Apply the resulting modifier (which may vary from -6 to +6) to the modified high common tech level from step 1.

3. Record the result as the tech level for that technology area—making sure the final tech level does not exceed the upper or lower limits determined previously. In some cases, the final tech level may also depend on the tech previously determined for another area.

Low Common Tech Level: Apply the following TL Mods to the high common tech level:
- If the world's...
  population UPP is 5-, TL Mod +1
  population UPP is 9+, TL Mod -1
- If the *global extensiveness* is...
  "monolithic", TL Mod +1
  "discordant", TL Mod -1
  "fragmented", TL Mod -2

Next, determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified high common tech level becomes the low common tech level.

Example: Using Regina (high common tech level of 12), we compute the following:

1. World population 9, TL Mod = -1 ; global extensiveness = "harmonious" giving no TL Mod; the modified high common=11 (12-1);

2. Roll of 2D on Tech Level Modifier Table results in 4, giving a further modifier of -1, for a resultant low common tech level of 10 (11-1);

3. This fits within the low common upper limit of 12 and lower limit of 6.

Energy Tech Level: Determine the TL Mod by rolling 2D on the Tech Level Modifier Table, and applying the result to the high common tech level. The modified high common tech level becomes the energy tech level.

Example: Using Regina, which has a high common tech level of 12, we compute the following:

1. Roll of 2D on Tech Level Modifier Table results in 4, giving a modifier of -1, for a resultant energy tech level of 11 (12-1).

2. This fits within the energy upper limit of 14 and lower limit of 6.

Computers/Robotics Tech Level: Apply the following TL Mods to the high common tech level:
- If the world's...

population UPP is 5-, TL Mod +1
population UPP is 9+, TL Mod -1

Determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified high common tech level becomes the computers/robotics tech level.

Example: Using Regina, which has a high common tech level of 12, we compute the following:

1. World population 9, TL Mod = -1 ; modified high common TL=11 (12-1);

2. Roll of 2D on Tech Level Modifier Table results in 7, giving no modifier, for a computers/robotics tech level of 11;

2. This fits within the computers/robotics upper limit of 14 and lower limit of 11.

Communications Tech Level: Determine the TL Mod by rolling 2D on the Tech Level Modifier Table, and applying the result to the *computers/robotics* tech level. The final modified computers/robotics tech level becomes the communications tech level.

Example: Using Regina, which has a computers/robotics tech level of 11, we compute the following:

1. Roll of 2D on Tech Level Modifier Table results in 9, giving no modifier, for a communications tech level of 11;

2. This fits within the communications upper limit of 14 and lower limit of 11.

Medical Tech Level: Apply the following TL Mods to the *computers/robotics* tech level:
- If the *interstellar extensiveness* is...
  "xenophilic", TL Mod +1

Determine the TL Mod by rolling 2D on the Tech Level Modifier Table, and applying the result to the computers/robotics tech level. The modified computers/robotics tech level becomes the medical tech level.

Example: Using Regina, which has a computers/robotics tech level of 11, we compute the following:

1. Interstellar extensiveness = "friendly", giving no TL Mod; use the computers/robotics tech level of 11 unmodified;

2. Roll of 2D on Tech Level Modifier Table results in 6, giving no modifier, for a resultant medical tech level of 11;

3. This fits within the medical upper limit of 14 and lower limit of 0.

Environment Tech Level: Apply the following TL Mods to the *energy* tech level:
- If the world's...
  atmosphere UPP is not 5, 6, or 8; TL Mod +1
  hydrosphere UPP is 0 or 10, TL Mod +1

Determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified high common tech level becomes the environment tech level.

Example: For Regina, with an energy tech level of 11, we compute the following:

1. Atmosphere 8 and hydrosphere 8, TL Mod = 0 ; use the energy tech level of 11 unmodified;

2. Roll of 2D on Tech Level Modifier Table results in 6, giving no modifier, for an environment tech level of 11;

3. This fits within the environment upper limit of 13 and lower limit of 8.

Land Transportation Tech Level: Apply the following TL Mods to the *energy* tech level:
- If the world's...
  hydrosphere UPP is 10, TL Mod -1

Determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified energy tech level becomes the land transport tech level.

Example: For Regina, with an energy tech level of 11, we compute the following:

1. Hydrosphere 8 gives a TL Mod of 0 ; use the energy tech level of 11 unmodified;

2. Roll of 2D on Tech Level Modifier Table results in 9, giving no modifier, for a land transport tech level of 11;

3. This fits within the land transport upper limit of 13 and lower limit of 8.

Water Transport Tech Level: Apply the following TL Mods to the *land transport* tech level:
- If the world's...
  hydrosphere UPP is 0, TL Mod -1

If the land transport tech level is 10 or more, use the land transport tech level as the water transport tech level.

Otherwise, determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified land transport tech level becomes the water transport tech level. However, the water transport tech level can never exceed the land transport tech level.

Example: For Regina, with a land transport tech level of 11 (and thus a land transport tech level of 10 or more), the water transport tech level becomes 11 also.

Air Transport Tech Level: If the land transport tech level is 10 or more, use the land transport tech level as the air transport tech level.

Otherwise, determine any additional TL Mod to the *energy* tech level by rolling 2D on the Tech Level Modifier Table. The final modified energy tech level becomes the air transport tech level, with these exceptions:
- If the land transport tech level is 9 or less, the air transport tech level can never exceed 9.
- If the world's atmosphere UPP is 0, and the land transport tech level is 9 or less, the air transport tech level automatically becomes 0;
- If the air transport tech level is 2 or less, then it automatically becomes 0.

Example: For Regina, with a land transport tech level of 11 (which is 10 or more), the air transport tech level becomes 11 also.

Space Transport Tech Level: Apply the following TL Mods to the lower of the energy tech level or the computers/robotics tech level:
- If the world's...
  starport is A or B, TL Mod +1
- If the *interstellar extensiveness* is...
  "friendly" or "xenophilic", TL Mod +1
  "aloof" or "xenophobic", TL Mod -1

Next, determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified energy or computers/

robotics tech level becomes the space transport tech level, with these exceptions:
- If the space transport tech level is 4 or less, the space transport tech level automatically becomes 0;
- If the starport is X, use the lower of tech level 8 or the space transport lower limit: whichever value is less automatically becomes the space transport tech level.

Example: Using Regina, which has an energy tech level of 11 and a computers/robotics tech level of 11, we use the energy tech level of 11 (it doesn't matter which we use, since both are the same) and compute the following:

1. Starport A, TL Mod = +1; interstellar extensiveness of "friendly", TL Mod = +1, for a modified energy TL of 13 (11+1+1);

2. Roll of 2D on Tech Level Modifier Table results in 9, giving no further modifier, for a space transport tech level of 13;

3. This fits within the space transport upper limit of 14 and lower limit of 11.

Personal Military Tech Level: Apply the following TL Mods to the *energy* tech level:
- If the *aggressiveness attitude* is...
  "expansionistic", TL Mod +1
  "passive", TL Mod -2
- If the *aggressiveness action* is...
  "militant", TL Mod +1
  "conciliatory", TL Mod -1

Next, determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified energy tech level becomes the personal military tech level.

Example: Using Regina (energy tech level of 11), we compute the following:

1. Aggressiveness attitude of "unaggressive", no modifier; aggressiveness action of "peaceable", no modifier; use the energy tech level of 11 unmodified;

2. Roll of 2D on Tech Level Modifier Table results in 10, giving a modifier of +1, for a personal military tech level of 12 (11+1);

3. This fits within the personal military upper limit of 13 and lower limit of 0.

Heavy Military Tech Level: Apply the following TL Mods to the land transport tech level:
- If the *aggressiveness attitude* is...
  "expansionistic", TL Mod +1
  "passive", TL Mod -2
- If the *aggressiveness action* is...
  "militant", TL Mod +1
  "conciliatory", TL Mod -1

Next, determine any additional TL Mod by rolling 2D on the Tech Level Modifier Table. The final modified land transport tech level becomes the heavy military tech level.

Example: Using Regina (land transport tech level of 11), we compute the following:

1. Aggressiveness attitude of "unaggressive", no modifier; aggressiveness action of "peaceable", no modifier; use the land transport tech level of 11 unmodified;

2. Roll of 2D on Tech Level Modifier Table results in 3, giving a modifier of -2, for a heavy military tech level of 9 (11-2);

3. This fits within the heavy military upper limit of 14 and lower limit of 0.

Novelty Tech Level: This tech level is determined by the referee, following these guidelines:

• Find the highest UPP tech level from among the nearest class A starport worlds; this represents the "novelty import" tech level. If the local world's starport class is X, the novelty import tech level is zero.

• Find the highest achievement tech level; this represents the "local prototype" tech level.

• The referee can assign a tech level to a prior culture if he wishes; this represents the "local artifact" tech level. Otherwise, use zero for the local artifact tech level.

The highest of these three tech levels becomes the novelty tech level.

Example: Of the class A starport worlds near to Regina, Efate has the highest tech level: tech level 13.

The highest achievement tech level for Regina is the space transport tech level of 13.

We decide that there was no prior culture on Regina, so the prior culture tech level is zero.

In comparing the three areas, we have a tie between the novelty import tech level of 13 and the prototype tech level of 13. So the novelty tech level of Regina is obviously 13.

UNDERSTANDING THE TECHNOLOGY PROFILE

The basic tech level in a world's UPP provides a general guide to the technology available on the world. The *Grand Census* Technology Profile provides a detailed picture of the world's technological abilities.

By examining the achievement tech levels and comparing them to the high and low common tech levels, it is possible to draw some useful conclusions about conditions on the world.

Achievement Tech Level Greater Than High Common: This represents a technological area in which the world is forging ahead through experiments and research. Breakthroughs are occurring, but little practical use has yet to be made of the discoveries or inventions.

Characters may be able to locate and make use of this technology in an adventure if they are desperate, but any such technology likely consists of a handful of prototypes of dubious reliability.

Achievement Tech Level Between High Common and Low Common: This represents a technological area in which the world has local manufacturing and distribution capability. Research and development are ongoing, but no major breakthroughs have been made recently.

If the tech level is below high common, any high common items in this specific technology area are imported and likely cost more than usual.

Achievement Tech Level Less Than Low Common: This represents a technological area in which the world has great technological difficulty.

Many explanations for this exist:

• The world, for whatever reason, has no pressing need for this area of technology;

• The world may actually be expending great energy and resources trying to advance in this area, but efforts have yet to produce meaningful results. A technological disaster could be the cause of this; alternatively, some sort of "cultural block"

could make research in this area impractical.

• The populace may prefer offworld goods to local goods—in other words, there is no market for this type of technology if it is locally manufactured.

If characters want items of low common tech level or above, and the technology area has an achievement level below low common, the items will be imported and very expensive.

THE TECHNOLOGY CHARTS

Grand Census provides tech level breakdown charts for each major area covered in the Technology Profile. The charts list official **Traveller** technology through tech level 21. These charts form the most complete technology listings ever compiled for **Traveller**: many of the items listed for the higher tech levels are appearing in print for the first time in *Grand Census.*

Each chart has two main columns: index development and associated developments. The Scouts look for the index development when they evaluate a world's tech level: it provides the primary key to the world's likely tech level. The associated developments are often seen at the indicated tech level, but are not seen as essential developments as are the index developments.

The maximum tech level commonly encountered in the Imperium is 15, with an occasional tech level 16. Tech levels over 16 are almost never encountered in the official **Traveller** universe except as artifact tech levels. There is only one exception to this in the entire Imperium: Sabmiqys (Antares 2117). Sabmiqys possesses an active, developing tech 17 culture. But because of social reasons the population of Sabmiqys is planet bound. Their space transport tech level is 8: they are without jump drive capability.

Tech levels to 21 are possible with basic **Traveller** world generation; because of that, the charts list technology to that tech level.

OTHER TECH LEVEL NOTES

Worlds with a tech level of 10 or less often contain some areas on the world that have only been superficially explored. In cases where the tech level is 11 or more, then if the world's population code is less than 6, the world typically contains some superficially explored areas. Worlds with a tech level of 7 or less generally have *several large* unexplored regions.

High Common: Enter the Tech Level directly from the world UPP.

Low Common: Upper Limit = High Common TL
Lower Limit = High Common TL/2 (drop fractions)
Base = High Common TL
If pop 5-, TL+1
If pop 9+, TL-1
If Global Extensiveness is...
monolithic, TL+1
discordant, TL-1
fragmented, TL-2

Energy: Upper Limit = High Common TL+ High Common TL/5 (drop fractions)
Lower Limit = Upper Limit-5
Base = High Common TL

Computers/Robotics: Upper Limit = Energy Upper Limit
Lower Limit = Upper Limit-3
Base = Energy TL
If pop 5-, TL+1
If pop 9+, TL-1

Communications: Upper Limit = Energy Upper Limit
Lower Limit = Upper Limit-3
Base = Lower of Energy TL or Computers/Robotics TL

Medical: Upper Limit = Energy Upper Limit
Lower Limit = 0
Base = High Common TL
If Interstellar Extensiveness Xenophilic, TL+1

Environment: Upper Limit = Energy Upper Limit
Lower Limit = Upper Limit-5
Base = Energy TL
If atm not 5,6,8; TL+1
If desertworld or waterworld, TL+1

Land Transport: Upper Limit = Energy Upper Limit
Lower Limit = Upper Limit-5
Base = Energy TL
If water world, TL-1

Water Transport: Limits depend on Land Transport TL
Base = Land Transport TL
If Land TL>9, use Land TL
If desert world, TL-1

Air Transport: Limits depend on Land Transport TL
Base = Energy TL
If Land TL≤9, Air Tran TL can not exceed 9
If Land TL>9, use Land TL
If vacuum world and Land TL≤9, TL=0
If Air Tran TL≤2, TL=0

Space Transport: Upper Limit = Energy Upper Limit
Lower Limit = Upper Limit-3
Base = Lower of Energy TL or Computers/Robotics TL
If TL≤4, TL=0
If Starport A or B, TL+2
If Starport X, TL=Lower Limit
If Interstellar Extensiveness Friendly / Xenophilic, TL+1
If Interstellar Extensiveness Aloof / Xenophobic, TL-1

Personal Military: Upper Limit = Energy Upper Limit
Lower Limit = 0
If Aggressiveness Attitude Expansionistic, TL+1
If Aggressiveness Action Militant, TL+1
If Aggressiveness Attitude Passive, TL-2
If Aggressiveness Action Concillatory, TL-1

Heavy Military: Upper Limit = Energy Upper Limit
Lower Limit = 0
If Aggressiveness Attitude Expansionistic, TL+1
If Aggressiveness Action Militant, TL+1
If Aggressiveness Attitude Passive, TL-2
If Aggressiveness Action Concillatory, TL-1

Novelty: Referee assigned.
Imports: TL of nearest class A starport world; zero if local world has X starport
Prototypes: TL of highest achievement
Prior Culture: Referee assigned
Use highest of the three.

Land Transportation Technology

TL	Index Development	Associated Developments
0	Foot Travel	Domesticated Animals, Rollers
1	Crude Wheel	Carts, Wagons, Chariots
2	Advanced Wheel	Movable Axle, Replaceable Rims
3	Extensive Road System	High-Speed Coach (Stagecoach)
4	Early Self-Propelled Vehicles	Massive Ground Vehicles (Trains)
5	Personal Self-Propelled Veh.	Ground Cars, Tracked Vehicles
6	Amphibian Vehicles	Advanced ATVs and AFVs
7	Hovercraft	High Speed Trains (to 500 kph)
8	Triphibian Vehicles	
9	Early Grav Vehicles	Ultra HS Trains (to 1000 kph)
10	Advanced Grav Vehicles	
11	*TL 11— TL15: see Air Transport*	
12		
13		
14		
15		

-----------------above Average Imperial Technology-------------------------

TL	Index Development	Associated Developments
16	Matter Transport Experiments	As Energy(Raw Materials Only)
17	Matter Transport Experiments	As Signal(Matter Transmutation)
18	Matter Transport Experiments	Circumvention (Portal Tech)
19	Practical Portal Technology	Regional Range Maximum
20	Crude External Energy Sink	Continental Range Maximum
21	Starship-Sized Portals	

Notes:

Access to circumvention transport pocket universe — TL 25

Pinching off pocket universe — TL 35

Matter Transport experiments begin at tech level 16, but practical matter transport (using circumvention techniques) does not occur until tech level 18. See Adventure 12, *Secret of the Ancients* for a detailed discussion of matter transport methods.

Water Transportation Technology

TL	Index Development	Associated Developments
0	Rafts and Canoes	Dugouts, Rowboats
1	Rowed Galleys	Small, Crude Sailing Vessels
2	Early Multi-mast Sailing Ships	Crude Navigation
3	Advcd Multi-mast Sailing Ships	Advanced Navigation
4	Early Self-Propelled Ships	Ironclads, Steamships
5	Personal Self-Propelled Boats	Steel Hulls, Early Submersibles
6	Practical Submersibles	Scuba Gear, Amphibious Veh.
7	Hydrofoils	Hovercraft
8	Triphibian Vehicles	Crude Artificial Gills
9	Early Grav Vehicles	Advanced Artificial Gills
10	Grav Vehicles	Water/Land Transport Merge
11	*TL 11— TL15: see Air Transport*	
12		
13		
14		
15		

-----------------above Average Imperial Technology-------------------------

TL	Index Development	Associated Developments
16	*TL 16— TL 21: see Land Trans*	
17		
18		
19		
20		
21		

Notes:

Water and land transport merge at tech level 10.

Air Transportation Technology

TL	Index Development	Associated Developments
0		
1		
2	*Flight Impossible at TL 2 or less*	
3	Hot Air Balloons	
4	Dirigibles	Experimental Gliders
5	Airplanes	Seaplanes
6	Early Jet Aircraft	Helicopters
7	Supersonic Jet Aircraft	Personal Gliders (Hang Gliders)
8	Triphibian Vehicles	Hypersonic Jet Aircraft
9	Early Grav Vehicles	Rocket Assist Suborbit Shuttles
10	Advanced Grav Vehicles	UH Grav Modules
11	Personal G-Tubes	HV Grav Modules
12	Personal Grav Belts	LT Grav Modules
13	*TL 13 — TL 15: Grav Vehicles Merge With Orbital Spacecraft*	
14		
15		

-----------------above Average Imperial Technology-------------------------

TL	Index Development	Associated Developments
16	*TL 16 thru TL 21: see Land Trans*	
17		
18		
19		
20		
21		

Notes:

Air, water, and land transport merge at tech level 10.

Space Transportation Technology

TL	Index Development	Associated Developments
0		
1		
2		
3		
4		
5	*Space Travel impossible at TL 5 or less*	
6	Early Manned Rockets	Unmanned Rockets Common
7	Unmanned Deep Space Probes	Non-gravitic Manvr Drives 1 - 2
8	Space Shuttles, Space Stations	Non-gravitic Manvr Drives 3 - 5
9	Jump-1 Invented	Sublight Stellar Travel
10	Interstellar Travel Common	Gravitic Maneuver Drives
11	Jump-2	Thruster Technology
12	Jump-3	
13	Jump-4	
14	Jump-5	
15	Jump-6	

-----------------above Average Imperial Technology-------------------------

TL	Index Development	Associated Developments
16		
17		
18	Self-Aware Starships	
19		
20		
21	Starship-Sized Matter Trans Portals	

Notes:

Going beyond a controlled jump-6 (to jump-7 and beyond) is not possible with the physics of jump technology.

Gravitic Maneuver Drives have difficulty operating away from large masses (they need the strong gravity field to push against).

Thruster Technology a combined spin-off of gravitic and damper technology, uses a strong molecular repelling force to produce reactionless thrusters. Thrusters do not require the presence of a large gravity field to operate effectively. Thrusters are highly localized with virtually none of the projection ability of anti-grav.

Energy Technology

TL	Index Development	Associated Developments
0	Muscles	Domestic Animals, Slave Labor
1	Water	Water Wheels
2	Wind	Windmills
3	Electricity	Primitive Storage Batteries
4	Coal	Steam Engines
5	Petrochemicals	Internal Combustion Engines
6	Nuclear Fission	
7	Solar	Primitive Fuel Cells
8	Geothermal	
9	Primitive Fusion Plants	Improved Batteries
10	Fusion Plants 2000 Liter Minimum	Geothermal Superseded by Fusion
11	Fusion Plants 1000 Liter Minimum	
12	Fusion Plants 250 Liter Minimum	Advanced Fuel Cells
13	Fusion Output 3 kw per Liter	Miniaturized Super-Batteries
14	Fusion Plants 100 Liter Minimum	
15	Fusion Output 6 kw per Liter	

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	Fusion Output 7 kw per Liter	Fusion Plants 80 Liter Minimum
17	Primitive Antimatter Plants	
18	Antimatter Output 1 Mw/Liter	Fuel Pods 750 Liter Minimum
19	Antimatter Output 2.5 Mw/Liter	Fuel Pods 200 Liter Minimum
20	Antimatter Output 15 Mw/Liter	Fuel Pods 40 Liter Minimum
21	Antimatter Output 50 Mw/Liter	Fuel Pods 5 Liter Minimum

Notes:

Advanced Fuel Cells dispose of by-products automatically.

Antimatter Fuel Pods contain a measured quantity of antimatter enclosed in a strong artificial gravity "bottle". The bottle's gravity fields are maintained by an array of super-batteries. Fuel pods are the heart of an antimatter power plant, and they typically provide "fuel" for up to a year before needing replaced.

Antimater power plant output per hour increases dramatically as the ability to safely contain a progressively larger annihilation mass occurs. This means that a given fuel pod is "burned up" at a correspondingly faster rate, however.

Communications Technology

TL	Index Development	Associated Developments
0	Runners	
1	Long Distance Signaling	Smoke Signals, Heliograph
2	Printing Press	
3	Telegraph	
4	Telephone	Crude Audio Recorders
5	Radio	Radar
6	Television	Advanced Audio Recorders
7	Early Satellite Communications	Video Recorders
8	Fiber Optics Signal Transmission	Optical Recording Medium
9	Video Telephones	Flat Screen Television
10	Text Transcription, Holovision	Extensive Satellite Commun.
11	Personal Global Communicators	
12	Real-Time Multilingual Translators	
13	Holovideo Recorders	Handheld Still Holocameras
14	Experimental Meson Commun.	
15	Meson Communicators	Pseudo-Reality Communications

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	Personal Meson Communicators	Pocket Holovideo Recorders
17	Pocket Meson Communicators	
18	Pseudo-Reality Communications Commonplace	
19		
20	Matter Transport Eliminates All Global Communication Barriers	
21	Matter Transport Eliminates All Intra-Solar System Commun. Barriers	

Notes:

Pseudo-reality communications allow the computer to query you extensively on a subject and to act as your stand-in when delivering the message. The receiver of the message can discuss the message with your computer image just as if you were there. Pseudo-reality communications begin at tech level 15, but become cheaper and more reliable as the tech levels increase. By tech level 18, pseudo-reality communications become infallible when acting as the sender's stand-in.

Starting at tech level 20, matter transport becomes so powerful that transportation ceases to become a barrier on a global level. By tech level 21, matter transport eliminates all transportation barriers to intra-solar system communications.

Computers/Robotics Technology

TL	Index Development	Associated Developments
0	Primitive Mathematics	
1	Abacus	Geometry, Trigonometry
2	Development of Algebra	
3	Development of Calculus	
4	Mechanical Adding Machines	
5	Electric Calculating Machines	Massive Model/1
6	Early Electronic Computers	Large Model/1 bis
7	Desktop Computers	Expert Systems, Model/2
8	Massive Parallel/Low Data	Optical Data Storage, Model/2 bis
9	Non-Volatile Memory/High Data	Vocal Input and Output, Model/3
10	Voice Transcription Commonplace	Early Synaptics, Model/4
11	Synaptic Processors That Learn	Hand Computers, Model/5
12	Low Autonom. Robots Practical	Model/6
13	Holocrystal Data Storage	High Autonom. Robots, Model/7
14	Comp/Brain Implants Possible	Model/8
15	Pseudo-Reality Computers	Convincing Pseudobio Robots

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	Low Artificially Intelligent Robots	Robots in All Facets of Life
17	High Artificially Intelligent Robots	Self-Aware Robots/Computers
18	Robots/Computers Become Society's Basic Work Force	
19		
20		
21		

Notes:

Robots and Computers essentially free their creators to pursue higher interests of their choice, while the robots and computers perform the mundane tasks of running society. This becomes particularly true at TL 18 and above. For example, adventurers on a merchant vessel may travel from world to world, letting the robots totally run the ship. The robots must make the ship turn a profit (still as important at TL 18 as it was at TL 9). Meanwhile, the adventurers see the worlds with unbounded freedom.

Thus, a new era of unfettered creativity and adventure dawns at tech levels 18 and above, where sentients no longer need to nursemaid their technological devices. Reliable self-running, self-repairing technology has truly arrived. (This is still the real world; problems can occur on rare occasions in even the most reliable system.) The epitome of these tech levels is that a device is permanently broken when it can no longer fix itself!

Medical Technology

TL	Index Development	Associated Developments
0	Mystical Medicine	Herbal Medicine
1	Diagnosis of Disease	
2	Understnding of Internal Anatomy	
3	Crude Surgery	
4	Vaccination Experiments	Anesthetics, Antiseptics
5	Vaccination of the Masses	X-Ray Diagnosis
6	Understanding of Viruses	Crude Prosthetics
7	Major Organ Transplants	Medical Slow Drugs
8	Artificial Organ Replacements	Slow Drugs, Metabolics
9	Limb Regeneration	Cryogenic Susp., Fast Drugs
10	Antiviral Vaccinations	Cancer Cure, Growth Quickening
11	Surgical Nerve Refusion	Artificial Eye Replacements
12	Broad Spectrum Anti-toxins	Enhanced Prosthetics
13	Cloning of Replacement Parts	Reanimation Soon After Death
14	Genetic Engineering	Memory Erasure
15	Anagathics, Antianagathics	Advanced Pseudobio Prosthetics

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	Brain Transplants	Crude Memory Transfer
17	Selective Memory Erasure	Intelligent Antibodies
18	Partial Memory Transfer (Dupe)	
19	Non-cryogenic Suspension	Advanced Bioengineering
20	Total Memory Transfer (Dupe)	
21	Total Rejuventation	

Notes:

Growth quickening allows accelerated growth of biological tissues.

Anagathics allow aging to be retarded.

Antianagathics allow aging to be accelerated.

Intelligent Antibodies are ultra-miniaturized computer devices that can track down and kill even a single foreign body in an organism's body.

Advanced Bioengineering allows living organisms to be directly manipulated into variant lifeforms.

Total Rejuvenation begins at tech level 21. It is a combination of many techniques which allow a being to get an entirely new body. The technique is tremendously expensive and somewhat risky, but this improves with subsequent tech levels.

Environment

TL	Index Development	Associated Developments
0	Cave Dwellings	Crude Huts
1	Settlements, Towns	Irrigation, Dams, Agriculture
2	Cities	Canals, Bridges, Roads
3	Cement Structures	
4	Cities in Rugged or Desert	Crude Terraform. Using Irrigation
5	Sealed/Conditned Cities Possible	
6	Skyscrapers	Weathr Predict, Undergrnd Cities
7	Cities Possible in Jungles	
·8	Orbital Settlements Possible	Primitive Weather Control
9	Fully Enclosed Cities Possible	Arcologies, Orbital Cities
10	Undersea/Under-ice Cities	
11	Gravitic Suppl. Structure Support	
12	Major Terraforming Possible	Advanced Weather Control
13	Non-mobile Gravitic Cities	
14	Mobile Gravitic Cities	
15	Complex Terraforming Possible	

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	Global Terraform. Hostile Worlds	
17	Tot. Terraform. Worlds to 800 km	
18	Tot. Terraform. Worlds to 4000 km	
19	Tot. Terraform. Any Sized World	
20	Mobile Worlds (Sublight Speeds)	
21	Mobile Worlds (via Jump Space)	Ability to Create Rosettes

Notes:

Dysan Spheres (with many capsules): TL 23; Ringworlds: TL 25

Rigid Dysan Spheres: TL 27

Orbital Settlement means an orbital station (not closed-cycle) with a permanent population UPP of 2+.

Orbital City is a closed-cycle orbital station with a permanent population UPP of 3+.

Global Terraforming involves making substantial improvements in a world with an unfavorable global environment. For example, transforming a world with an insidious atmosphere to a world with a standard atmosphere is global terraforming.

Total Terraforming involves complete transformation of a world's basic environment to a radically different basic environment of one's choosing. For example, transforming a barren vacuum world to a lush, rich world with a dense atmosphere is total terraforming.

Heavy Military Technology

TL	Index Development	Associated Developments
0	None	
1	Catapult	
2	Small Cannons	
3	Cannons	
4	Howitzers	Gatling Gun, Soft Steel Armor
5	Mortars	
6	Nuclear Weapons	Missiles, Hard Steel Armor
7	Beam Lasers	Composite Laminate Armor
8	Particle Accelerators	Target Designated Missiles
9	Lt Wt Composite Laminate Armor	
10	Plasma Guns	Crystaliron Armor, Repulsors
11	Meson Guns	
12	Fusion Guns	Suprdense Armor, Nuclr Dampers
13	X-Ray Lasers	
14	Bonded Superdense Armor	
15	Experimental Black Globes	

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	Short Range Tractor Beam	
17	Short Range Disintegrators	Antimatter Missile Warheads
18	Long Range Disintegrators	Long Range Tractor Beam
19	Proton Screen	Plastic Metal Armor
20	Relativity Beam	White Globes, Proton Beam
21	Jump Projector	Jump Damper

Notes:

Proton Screen/Proton Beam: Renders antimatter missile warheads ineffective.

Tractor Beams: Reduces the target's agility rating. An advancement of anti-grav technology (pulls instead of pushes). Works as a form of jump damper as well by projecting a pseudo-gravity well into the vicinity of the target ship (only when the target's agility has been reduced to zero).

Jump Projector: Induces a jump field around the target, forcing the target to immediately misjump. Unreliable in a gravity well at less than 100 diameters; Non-functional at less than 10 diameters.

Jump Damper: Two versions exist: first as a ship screen to protect against jump projectors; later in the period developed as a bay weapon to restrict the enemy's ability to enter jump space.

Personal Military Technology

TL	Index Development	Associated Developments
0	Club	Spear, Cudgel
1	Early Ranged Wpns (Bow, Sling)	Sword, Pike, Dagger, Jack Armor
2	Early Guns (Arquebus, Musket)	Matchlck Musket, Wheelck Pistol
3	Rifled Firearms	Flintlock Weapons
4	Cartridge Firearm Ammunition	Mesh Armor
5	Explosive Grenades	Shotgun, Filter Mask
6	Automatic Weapons	SMG, Autorifle, Autopistol
7	Grenade Launchers	Cloth Armor, Flak Jacket
8	RAM Grenade Launchers	Early Laser Carbine
9	Laser Weapons	Laser Rfl, Laser Pstl, Ablat Armor
10	Advanced Combat Rifle	Reflec Armor, Combat Env Suit
11	Combat Armor	
12	PGMP-12	Gauss Rifle
13	PGMP-13	Battle Dress, X-Ray Lasers
14	FGMP-14	
15	FGMP-15	

--------------------above Average Imperial Technology--------------------------

TL	Index Development	Associated Developments
16	FGMP-16, Plasma Rifle	Neural Gun, Neural Shield
17	Fusion Rifle, Plasma Pistol	Advanced Neural Gun
18	Disintegrator Rifle	Fusion Pistol, Personal Damper
19	Disintegrator Pistol	
20	Disintegrator Wand	
21	Relativity Rifle	Personal White Globe

Notes:

Neural Gun: Remotely disrupts brain activity. Generally causes unconsciousness (i.e., a stun), although sometimes has other random effects (see the Advanced Neural Gun for other possible effects).

Neural Shield: A protective brain activity shield. Generally designed as a belt, provides a protective "field" around the wearer, jaming neural weapon fire. Also an effective psionic shield.

Advanced Neural Gun: As with the TL16 gun, except the weapon's effects are now controllable; different settings allow for disorientation, unconsciousness, mind assault, or death.

Disintegrator Weapons: An advancement of the nuclear damper, these weapons weaken the strong nuclear force in the atomic nucleus, causing the target's atoms to literally "fly apart"; thereby disintegrating the target.

Personal Damper: Developed as protection against disintegrator weapons; when hit with disintegrator fire, the personal damper field strengthens the strong nuclear force and thus attempts to counteract the disintegrator's effect.

Relativity Rifle: Creates a relativistic time-distortion in the immediate vicinity of the target, briefly altering the passage of time for the target. The weapon's effect is controllable, allowing the attacker to slow down the passage of time by a selectable ratio for the target. At an extreme ratio, it is possible to temporarily put the target into a form of suspension. The effect is location dependent however, so the attacker must avoid the target's immediate location for a few moments or be subject to the same time distortion effects (cancelling out the effect of the weapon). The higher the time distortion ratio, the greater the energy drain on the weapon.

Personal White Globe: An advancement of the black globe, creates a one-way impenetrable field around the wearer. The wearer can see out, fire weapons, and the like; all the attacker sees is a shimmering white globe around the wearer. Protects against all prior developed weapons except the relativity rifle.

ECONOMICS

Economics, as dealt with in *Grand Census*, involves introducing some variation into the local price of goods to the characters as they travel from world to world. To do this, we use the export resources identified using *Grand Survey*, and the Technology Profile defined here in *Grand Census*.

Record all the exports identified using *Grand Survey* on the Cultural Profile form under "Exports". When the characters want to buy a product that falls into one of the export categories, reduce its price by 30%.

Next, look at the Technology Profile. If the tech level of the item is between high common and low common, inclusive, then no further price modification is needed. If the tech level of the item is below low common, increase the cost of the item by 10% for each tech level below low common.

If the tech level of the item is above high common add 20% to the price per tech level, to the limit of the novelty tech level. If the tech level of the item is above novelty, the item is unavailable on this world.

Trying to get items above high common involves a time delay (need to order from offworld, look for a local experimental prototype, hunt up an artifact, etc.) Use the following task to determine this:

To locate anything with a TL above high common:
DIFFICULT, [applicable skill], edu, [time]
REFEREE: To compute time increment, count the number of parsecs to the nearest class A starport and multiply by 0.2 weeks. Divide time increment by 2 if the given TL being sought exists as an achievement TL for the item's area. If the achievement TL exists also roll this task:

To determine the reliability of a local "prototype" device or artifact:
DIFFICULT, [applicable skill], edu (uncertain)
REFEREE: If some truth, report "looks okay to you" and implement a device failure in 1D weeks.

Economic rules also apply to repairs, spare parts, and so on.

RELIGION

Most sophont species develop religions during their climb to civilization. Religion begins as an attempt to explain the world and the many questions of life, the universe, and existence. Religions often evolve into philosophical schools which set down modes of conduct intended to lead the believer to a better existence.

In the Imperium, there is freedom of religion. So long as the actions of a church or sect do not threaten the peace and security of the Imperial populace, the religious belief is acceptable. Religious organizations not in conflict with Imperial harmony are welcome on all civilized worlds. Planets with governments which persecute major religions (and these do exist) are placed in Amber or Red Zone Status to protect adherents from pogroms and persecutions. Otherwise, the Imperium expends little effort legislating religion.

Including religion in **Traveller** is optional—those who are offended by the idea of developing new religions, or those who feel that religion will be passe in 50th Century and beyond can ignore the concept entirely.

Those who do wish to create religious groups to spice up a **Traveller** adventure or campaign can invent the details of the beliefs, teachings, sacred texts, and so on for themselves.

On these pages, we focus on a mechanism, the Religious Profile, which forms a framework for expressing the basic facts about how a religion is organized and regulated. Such facts can be important to the flavor of the religion in the game. The same profile can, with only slight modification, be used to describe an individual's religious outlook as well.

These rules are quite useful for determining the nature of the government religion on a world with a government type D (religious dictatorship) or type E (religious autocracy).

ELEMENTS OF THE RELIGIOUS PROFILE

The Religious Profile is a series of seven codes describing the various aspects of a religion. For a Personal Religious Profile (outlook of a single character), the first six entries are used, but not the seventh. Each of the codes is described below.

God View: This entry describes the religion's basic beliefs of a supreme being or beings and the part played by the deity/deities in everyday life. It is found by rolling 2D-2, and adding a DM of the religion's home planet tech level divided by 3 (round fractions down).

When the religion is widespread, with an interstellar following, or the referee does not know (or doesn't want to create) the tech level of the home planet, use an unmodified roll of 3D-3 instead. Tech level in this situation refers to the tech level recorded in the planet's UPP.

Spiritual Aim: Describes the central tenet of the religion: the belief which defines the religion's appeal and promise. Actually, any given religion may have several of the beliefs given on the list in its scriptures, but the Spiritual Aim stat singles one out as dominant.

To determine the Spiritual Aim, roll 2D-2. Add a DM of the God View divided by 3 (round fractions down). Note that the aims listed still leave the referee with quite a bit of input into the actual religious beliefs and goals.

Devotion Required: Indicates the degree to which individual

believers are involved in religion-oriented activities such as prayers, sacrifices, meditation, teaching, studying, and so on. It suggests both the "fanaticism" of the religion (how much it controls daily life) as well as the importance of religious activities to belief and acceptance by the religious community. In game terms, it adds insight into how the religion functions.

To find the Devotion Required, roll 2D-7 + Spiritual Aim.

Organization Structure: Conveys the structure of the religious group. Rigid church hierarchies tend to be large, ponderous, dogmatic, shrouded in ritual or mysticism, and inaccesiblle to the common worshipper—while much looser organizations gernerally fail to recruit, collect, or direct in ways that promote the religion.

Roll 2D-7+Devotion Required to find the Organization Structure of the religion.

Liturgical Formality: Itemizes the nature of worship. "High Church" services, long on ritual but with little or no input allowed from the common worshipper, contrast sharply with less formal sects that freely discuss, even question, the fundamental elements of their faith in the process of fully exploring its meanings and ramifications.

To find the Liturgical Formality code, roll 2D-7+Organization Structure.

Missionary Fervor: Describes the degree to which the religion seeks out converts and supporters. Missionary Fervor indicates how likely an adherent is to strike up a religiously-oriented conversation, or how often church members may be pressured into contributions of time, money, or other support. To determine Missionary Fervor, simply roll 2D-2.

Numbers of Adherents: Used only in the code describing a religious group, not in the Personal Religious Profile for individual characters. It is similiar to the **Traveller** world population code.

When creating a church for a single world or balkanized nation, roll 1D-1 and subtract the result from the UPP population digit. When creating a church that is not limited to a single world, roll 3D and subtract the Missionary Fervor stat. A result of 0 indicates that religion is limited to a handful of people; it may be a brand new sect, or it might be a revival of some defunct religion. Results greater than B (hundreds of billions) should be reduced to B or less.

USING THE RELIGIOUS PROFILE

The religious profile is primarily descriptive in nature, although some of the codes can be used for specific purposes. For instance, Missionary Fervor can come into play when contacting worshippers, as follows:

To avoid a religious conversion attempt by an adherent NPC:
DIFFICULT, [Missionary Fervor-2],int (fateful, uncertain)
REFEREE: Use the missionary fervor value of the adherent minus 2 in the DM for this task. Treat mishaps as follows:
SUPERFICIAL: Roll a reaction for the NPC using 1D+4
MINOR: Roll a reaction for the NPC using 1D+2
MAJOR: Roll a reaction for the NPC using 1D
DESTROYED: Roll a reaction for the NPC using 1D-2

To gain access to religious teachings or paraphernalia:
FORMIDABLE, [Liturgical Formality], int
REFEREE: Use Liturgical Formality directly as a DM. If the Liturgical Formality is less than 7, this task becomes hazardous.

To be appointed to a responsible church position:
FORMIDABLE, [Organizational Structure], int
REFEREE: Use Organizational Structure directly as a DM.

To contact someone in the church who can make policy decisions:
FORMIDABLE, [Organizational Structure], int
REFEREE: Use Organizational Structure directly as a DM.

In the Imperium, any religion or philosophy which receives ratings of 0 in any 3 areas (except God View and Numbers of Adherents) is considered a danger to Imperial order and harmony. Such groups are placed out of bounds (Red or Amber Zones) when possible; where they are too widespread, they are monitored or suppressed by Imperial authorities.

AN EXAMPLE
URP: BD8696-6
God View: Agnosticism
Spiritual Aim: Self-improvement through training
Devotion Required: Monthly
Organization Structure: Loose regional hierarchy
Liturgical Formality: Communal teaching/limited ritual
Missionary Fervor: Ordinary/any race
Number of Adherents: Millions
Ethical Batar (EBites): The name comes from the Solomani term "Ethical", pertaining to moral priciples and vaues, and the Vilani "batar", referring to the improvement of the self or spirit. EBites (as a common media nickname has dubbed them) believe that the ultimate questions of life cannot be answered, but that logic shows the way towards improving one's own life by adherence to the EB codes. Organizations are found on the major worlds of the Imperial portions of the Spinward Marches, Deneb, and Corridor Sectors.

Selected gurus teach from the EB Book of Wisdom, a massive tome of moral, physical, mental, and emotional precepts designed to cleanse the spirit of destructive thoughts and beliefs. The book, developed over the past 800 years, is used as part of a rigid schedule of training. Meetings take place on each day of the Imperial year evenly divisible by 20. The EB gurus generally train 5 years at a sector headquarters. Participants in EB meetings are expected to donate 2% of their income during the course of their membership, the money going to train new gurus and maintain EB facilities.

Some 8 million Imperial citizens are members of Ethical Batar. Five million of these live within the Spinward Marches. EB is most popular at tech level 13+.

Table 1.1

PROGRESSIVENESS			
ATTITUDE (2D)		**ACTION (2D)**	
2	Radical	2	Enterprising
3	Radical	3	Enterprising
4	Progressive	4	Enterprising
5	Progressive	5	Enterprising
6	Progressive	6	Advancing
7	Progressive	7	Advancing
8	Conservative	8	Advancing
9	Conservative	9	Advancing
10	Conservative	10	Indifferent
11	Conservative	11	Indifferent
12	Reactionary	12	Indifferent
13	Reactionary	13	Stagnant

+1 if Pop 6+   +3 if Conservative
+2 if Pop 9+   +6 if Reactionary

+1 if Law A+   +1 if Law A+

Table 1.2

AGGRESSIVENESS			
ATTITUDE (2D)		**ACTION (2D)**	
2	Expansionistic	2	Militant
3	Expansionistic	3	Militant
4	Competitive	4	Militant
5	Competitive	5	Neutral
6	Competitive	6	Neutral
7	Unaggressive	7	Neutral
8	Unaggressive	8	Neutral
9	Unaggressive	9	Peaceable
10	Unaggressive	10	Peaceable
11	Passive	11	Peaceable
12	Passive	12	Conciliatory
13	Passive	13	Conciliatory

+1 if Law A+   -2 if Expansionistic
                   -1 if Competitive
                   +2 if Passive

                   +1 if Law A+

Table 1.3

EXTENSIVENESS			
GLOBAL (2D)		**INTERSTELLAR (2D)**	
2	Monolithic	2	Xenophilic
3	Monolithic	3	Xenophilic
4	Harmonious	4	Friendly
5	Harmonious	5	Friendly
6	Harmonious	6	Friendly
7	Harmonious	7	Friendly
8	Discordant	8	Aloof
9	Discordant	9	Aloof
10	Discordant	10	Aloof
11	Discordant	11	Aloof
12	Fragmented	12	Xenophobic
13	Fragmented	13	Xenophobic

+1 if Gov 2-   -2 if Starport A
+4 if Gov 7   -1 if Starport B
-1 if Gov F   +1 if Starport D
                +2 if Starport E
+1 if Law 4-   +3 if Starport X
-1 if Law A+

                +2 if Conservative
                +4 if Reactionary

                +1 if Law A+

SOCIAL OUTLOOK TABLES

Use these tables to determine a culture's social outlook. The social outlook defines how the general population feels about new ideas (progressiveness), forcing one's viewpoint upon another (aggressiveness), how pervasive these views are on the world (global extensiveness), and how amiable the world is toward offworlders (interstellar extensiveness).

Progressiveness and extensiveness are each divided into two component parts: *attitude* and *action*. Attitude represents the culture's professed mindset, while action tells what the culture actually does—which may be radically different from their espoused attitude.

To determine a culture's social outlook, use the following procedure:

1. Roll 2D (with DMs) on the Progressiveness Attitude table.
2. Roll 2D (with DMs) on the Progressiveness Action table.

3. Roll 2D (with DMs) on the Aggressiveness Attitude table.
4. Roll 2D (with DMs) on the Aggressiveness Action table.

5. Roll 2D (with DMs) on the Global Extensiveness table.
6. Roll 2D (with DMs) on the Interstellar Extensiveness table.

7. Record the results on the Cultural Profile form.

Table 2.1

DIVISION OF GOVERNMENT AUTHORITY (1D)

Die	Division of Authority
1	3-way division
2	3-way division
3	2-way division
4	2-way division
5	No division
6	No division

Table 3.1

UNIFORMITY OF LAW

Die	Uniformity
2	Personal
3	Personal
4	Personal
5	Personal
6	Territorial
7	Territorial
8	Undivided
9	Undivided
10	Undivided
11	Undivided
12	Undivided

DMs:
+2 if Extensiveness
Monolithic
-1 if law level A+

Table 2.2

2-WAY GOVERNMENT AUTHORITY (1D)

Die	Representative Authority	Other Authority
1	Executive & Judicial	Legislative
2	Executive & Judicial	Legislative
3	Executive & Legislative	Judicial
4	Executive & Legislative	Judicial
5	Executive & Legislative	Judicial
6	Legislative & Judicial	Executive

Table 2.3

3-WAY GOVERNMENT AUTHORITY (1D)

Die	Representative Authority	Other Authorities
1	Executive	Legislative, Judicial
2	Executive	Legislative, Judicial
3	Legislative	Executive, Judicial
4	Legislative	Executive, Judicial
5	Judicial	Executive, Legislative
6	Judicial	Executive, Legislative

GOVERNMENT TABLES

Use these tables (2.1 through 2.5) to detail a culture's government authority organization.

UNIFORMITY OF LAW TABLE

Use table 3.1, Uniformity of Law, to determine how uniformly the culture's laws apply to the populace.

Table 5.8

APPLICABLE GROUP

Die+Die	Practicing Group
11	All the populace
12	All the populace
13	All the populace
14	Men
15	Men
16	Men
21	Men
22	Men
23	Women
24	Women
25	Women
26	Women
31	Women
32	Children
33	Children
34	Certain races
35	Certain races
36	Certain races
41	Religious figures
42	Religious figures
43	Religious figures
44	Political figures
45	Political figures
46	Political figures
51	Medical figures
52	Medical figures
53	Medical figures
54	Certain age groups
55	Certain age groups
56	Certain age groups
61	Low social class
62	Low social class
63	Low social class
64	High social class
65	High social class
66	High social class

Table 2.5

ORGANIZATION TYPES

Die	Organization
2	Demos
3	Elite Council
4	Elite Council
5	Elite Council
6	Ruler
7	Ruler
8	Several Councils
9	Several Councils
10	Several Councils
11	Several Councils
12	Demos

Table 2.4

GOVERNMENT ORGANIZATION GUIDE

Gov Type	Description	Action to take for... Representative Authority
0	No government structure	No authority—no roll needed
1	Company/Corporation	Roll on Table 2.5
2	Participating Democracy	Always *Demos*
3	Self-Perpetuating Oligarchy	Roll 1D: 1–4, *Elite Council*; 5–6, *Several Councils*
4	Representative Democracy	Roll on Table 2.5
5	Feudal Technocracy	Roll on Table 2.5
6	Captive Government	Roll on Table 2.5
7	Balkanization	See text.
8	Civil Service Bureaucracy	Always *Several Councils*
9	Impersonal Bureaucracy	Always *Several Councils*
10	Charismatic Dictator	Roll 1D: 1–5, *Ruler*; 6, *Elite Council*
11	Non-Charismatic Dictator	Roll 1D: 1–5, *Ruler*; 6, *Elite Council*
12	Charismatic Oligarchy	Roll 1D: 1–4, *Elite Council*; 5–6, *Several Councils*
13	Religious Dictatorship	Roll on Table 2.5, reroll if result is *Demos*
14	Religious Autocracy	Roll on Table 2.5, reroll if result is *Demos*
15	Totalitarian Oligarchy	Roll 1D: 1–4, *Elite Council*; 5–6, *Several Councils*

Table 5.2

DRESSING HABITS	
Die+Die	Local Custom
11	Same clothes for men/women
12	Unusual clothes*
13	Unusual clothes*
14	Unusual clothes*
15	Unusual clothes*
16	Unusual clothes*
21	Shaved heads*
22	Shaved heads*
23	Shaved heads*
24	Hair never cut*
25	Hair never cut*
26	Hair never cut*
31	Unusual hairdos*
32	Unusual hairdos*
33	Unusual hairdos*
34	Unusual hairdos*
35	Unusual hairdos*
36	Unusual hairdos*
41	Unusual fingernails*
42	Unusual fingernails*
43	Unusual cosmetics*
44	Unusual cosmetics*
45	Unusual cosmetics*
46	Unusual cosmetics*
51	Unusual cosmetics*
52	Unusual jewelry*
53	Unusual jewelry*
54	Unusual jewelry*
55	Unusual jewelry*
56	Unusual jewelry*
61	Tattooing on face*
62	Tattooing on face*
63	Tattooing on face*
64	Tattooing on body*
65	Tattooing on body*
66	Hidden tattooing*

*Roll on the Applicable Group Table to determine which group practices the custom.

Table 5.3

EATING HABITS	
Die+Die	Local Custom
11	Unusual foods*
12	Unusual foods*
13	Unusual foods*
14	Unusual foods*
15	Unusual foods*
16	Unusual foods*
21	Segregated during meals*
22	Segregated during meals*
23	Vegetarians*
24	Vegetarians*
25	Vegetarians*
26	Carnivorous*
31	Carnivorous*
32	Carnivorous*
33	Omnivorous*
34	Omnivorous*
35	Omnivorous*
36	Certain colored food taboo*
41	Certain colored food taboo*
42	Certain shaped food taboo*
43	Certain shaped food taboo*
44	Eat in special location*
45	Eat in special location*
46	Eat in special location*
51	Eat only at home*
52	Eat only at home*
53	Eat only at home*
54	Eat at unusual times*
55	Eat at unusual times*
56	Eat at unusual times*
61	Eat at unusual times*
62	Men eat women's leftovers
63	Women eat men's leftovers
64	Children eat leftovers
65	Low class eats leftovers
66	Cannibalistic

*Roll on the Applicable Group Table to determine which group practices the custom.

Table 5.4

LIVING QUARTERS	
Die+Die	Local Custom
11	Live apart from others*
12	Live apart from others*
13	Live apart from others*
14	Live apart from others*
15	Live apart from others*
16	Live apart from others*
21	Live at place of work*
22	Live at place of work*
23	Live at place of work*
24	Live at place of work*
25	Live at place of work*
26	Live at place of work*
31	Have extravagant quarters*
32	Have extravagant quarters*
33	Have extravagant quarters*
34	Have extravagant quarters*
35	Have extravagant quarters*
36	Have extravagant quarters*
41	Have minimal quarters*
42	Have minimal quarters*
43	Have minimal quarters*
44	Have minimal quarters*
45	Have minimal quarters*
46	Have minimal quarters*
51	Quarters are taboo**
52	Quarters are taboo**
53	Quarters are taboo**
54	Quarters are taboo**
55	Quarters are taboo**
56	Quarters are taboo**
61	Live with extended families
62	Live with groom's family
63	Live with wife's family
64	Live in communal housing
65	Live in communal housing
66	Live in communal housing

*Roll on the Applicable Group Table to determine which group practices the custom.
**Roll twice on the Applicable Group Table to determine whose quarters are taboo to whom.

Table 5.1

LOCAL CUSTOM (1D)	
Die	Which Table
1	Dressing Habits
2	Eating Habits
3	Living Quarters
4	Family Practices
5	Miscellaneous Customs 1
6	Miscellaneous Customs 2

LOCAL CUSTOMS TABLES

The tables on this page and the next page list an array of local customs that can be found in various cultures throughout the Imperium. The Applicable Group Table (on the previous page) is used for certain customs to find out which group practices the custom.

Table 5.5

FAMILY PRACTICES	
Die+Die	*Local Custom*
11	Child named by ...*
12	Child named for living relative
13	Child named for dead relative
14	Child named for cultural hero
15	Child named for ...*
16	Child named for an object
21	Marriage arranged by ...*
22	Marriage arranged by ...*
23	Marriage arranged by ...*
24	Marriage arranged by parents
25	Marriage arranged by parents
26	Marriage arranged by parents
31	Marriage allowed within caste
32	Marriage allowed within caste
33	Marriage allowed within caste
34	Marriage allowed out of caste
35	Marriage allowed out of caste
36	Remarriage prohibited*
41	Remarriage prohibited*
42	Remarriage prohibited*
43	Groom's family pays dowery
44	Groom's family pays dowery
45	Bride's family pays dowery
46	Bride's family pays dowery
51	Very short marriages the rule
52	Very short marriages the rule
53	Remarriage required*
54	Remarriage required*
55	Remarriage required*
56	Remarriage required*
61	Widow marries brother-in-law
62	Widower marries sister-in-law
63	Polyandry practiced
64	Polygyny practiced
65	Polygyny practiced
66	Polygyny practiced

*Roll on the Applicable Group Table to determine which group practices the custom.

Table 5.6

MISCELLANEOUS CUSTOMS 1	
Die+Die	*Local Custom*
11	Unusual sleep period*
12	Unusual sleep period*
13	Unusual sleep period*
14	Special language for ...*
15	Special language for ...*
16	Special language for ...*
21	Unusual responsibilities for..*
22	Unusual responsibilities for..*
23	Unusual responsibilities for..*
24	Drinking/drugs prohibited*
25	Drinking/drugs prohibited*
26	Drinking/drugs prohibited*
31	Drinking/drugs required*
32	Drinking/drugs required*
33	Drinking/drugs required*
34	Special privileges for ...*
35	Special privileges for ...*
36	Special privileges for ...*
41	Special privileges for ...*
42	Special privileges for ...*
43	Special privileges for ...*
44	Unusual greetings
45	Unusual greetings
46	Unusual leavetakings
51	Unusual secret societies*
52	Unusual secret societies*
53	Unusual secret societies*
54	Unusual training for ...*
55	Unusual training for ...*
56	Unusual training for ...*
61	Free education for ...*
62	Free education for ...*
63	Free education for ...*
64	Unusual giftgiving customs*
65	Unusual giftgiving customs*
66	Unusual giftgiving customs*

*Roll on the Applicable Group Table to determine which group practices the custom.

Table 5.7

MISCELLANEOUS CUSTOMS 2	
Die+Die	*Local Custom*
11	Unusual responsibilities*
12	Unusual responsibilities*
13	Unusual responsibilities*
14	Fixed times for visiting ...*
15	Fixed times for visiting ...*
16	Fixed times for visiting ...*
21	Fixed times for visiting others
22	Fixed times for visiting others
23	Fixed times for visiting others
24	Bargaining/haggling required
25	Bargaining/haggling required
26	Bargaining/haggling required
31	Bargaining/haggling required
32	Bargaining/haggling required
33	Bargaining/haggling required
34	Unusual holidays
35	Unusual holidays
36	Unusual holidays
41	Unusual leisure/recreation
42	Unusual leisure/recreation
43	Unusual leisure/recreation
44	Unusual maturity ceremony
45	Unusual maturity ceremony
46	Unusual maturity ceremony
51	Unusual attitudes toward ... *
52	Unusual attitudes toward ... *
53	Unusual attitudes toward ... *
54	Unusual significance of flora
55	Unusual significance of flora
56	Unusual significance of flora
61	Unusual significance of fauna
62	Unusual significance of fauna
63	Unusual significance of fauna
64	Daytime rest period (Siesta)
65	Daytime rest period (Siesta)
66	Daytime rest period (Siesta)

*Roll on the Applicable Group Table to determine which group practices the custom.

Table 4.1

TECH LEVEL MODIFIER	
Die	*TL Mod*
2	−1D
3	−2
4	−1
5	—
6	—
7	—
8	—
9	—
10	+1
11	+2
12	+1D

LOCAL CUSTOMS TABLES, PAGE 2

The tables on this page and the previous page list an array of local customs that can be found in various cultures throughout the Imperium.

TECHNOLOGY MODIFIER TABLE

Use this table to determine the modification (if any) to the base tech level for the specific area of technology.

Table 6.1

GOD VIEW

Level	View
0	Animism. All natural phenomena and objects (trees, rivers, wind, etc.) are caused or inhabited by spirits or demigods.
1	Polytheistic animism. Certain natural phenomena are associated with specific gods or goddesses, arranged in a distinct hierarchical order.
2	Polytheism. Multiple gods (probably with lingering animistic associations or titles) exist, each of roughly the same importance.
3	Rational polytheism. A multiplicity of gods is viewed as numerous different aspects of a handful of true divinities.
4	Dualism. Two mutually antagonistic gods or principles, one good and one evil, exist; their struggle is mirrored in nature and in moral/ethical problems.
5	Interactive Monotheism. A single god exists and is interested in the daily actions of sophonts.
6	Influential Monotheism. God interacts with sophonts only at key moments in life.
7	Crisis Monotheism. God is involved in mortal affairs only at crucial moments of history.
8	Remote monotheism. God exists, but is not generally available. A select few interactions in mortal affairs may occur from time to time.
9	Deism. God created the universe, but thereafter took no part in mortal affairs, and is permanently out of reach.
A(10)	Pantheism. God is not a personality--God is everything and everything is God.
B(11)	Agnosticism. It is impossible to know whether or not there is a God.
C(12)	Rational Atheism. A rejection of the existence of a Supreme Being on the basis of science, logic, or reasoning.
D(13)	Skeptical Atheism. A rejection of the existence of a Supreme Being on the basis of personal, non-rational conviction ("faith").
E(14)	Atheism. A total rejection of the existence of a Supreme Being; complete lack of religious beliefs.
F(15)	Philosophical Atheism. A failure to understand the concept of a Supreme Being. The question of religious beliefs is meaningless.

Table 6.2

SPIRITUAL AIM

Level	Aim
0	Worshippers are a chosen elite who deserve to dominate.
1	Worshippers will be rewarded in this life. Prayers are answered, regardless of their nature.
2	Worshippers will be saved from some imminent disaster.
3	Reincarnation with a karma doctrine. One's level in the next life is based on one's devotion and/or morality in this one.
4	Reincarnation is accomplished via personal choice of the next vehicle for the soul. Strength of character enables the individual to choose the best possible form for a new incarnation.
5	Statistical reincarnation causes a return in an essentially random form, but how one faces each life builds merit for an ultimate, distant afterlife.
6	Worshippers will be received into paradise when they die.
7	Worshippers will avoid being condemned to a place of eternal punishment (presumably, again, by going to paradise).
8	Ethical and moral standards are their own reward, regardless of the possibility of heavenly rewards or punishments.
9	Believers perform charitable acts to build a better society for posterity.
A(10)	Believers seek to promote peace, harmony, and order to improve the quality of life for all.
B(11)	Believers seek to expand the frontiers of knowledge through inquiry and speculation.
C(12)	Believers seek to preserve the knowledge and wisdom of the past.
D(13)	Believers seek to improve their own lives by self-discipline and training.
E(14)	An Epicurean philosophy--"Eat, drink, and be merry, for tomorrow we die." Hedonism is the only proper purpose in life.
F(15)	Nihilism--there is no purpose to life, and nothing to be gained by living. Beliefs along these lines are often symptomatic of a maladjusted or dangerously unstable society or personality.

RELIGION TABLES (OPTIONAL)

Use the tables on this page and the next page to detail the "state religion" for a culture with a government type of D (religious dictatorship) or government type E (religious autrocracy). Also, use these tables to detail any religion you wish to develop.

These tables are optional, however. Those who prefer to avoid the question of religion in **Traveller** may freely do so.

Table 6.3

DEVOTION REQUIRED

Level	Frequency
0	Constant devotion. No word, act, deed, or thought that isn't connected with religious belief should ever be tolerated.
1	Several times per hour
2	Hourly
3	Several times per day
4	Daily
5	Several days per week
6	Weekly
7	Semi-weekly
8	Monthly
9	Semi-monthly
A(10)	Quarterly
B(11)	Bi-annually
C(12)	Yearly
D(13)	Several times during life
E(14)	At least once before death
F(15)	None

Table 6.5

LITURGICAL FORMALITY

Level	Description
0	"Word of God" is pronounced by living oracles (statues, computers, deified leaders, prophets, mediums, etc.). Services are tightly controlled by priesthood.
1	Holy writings exist, but are accessible only to the highest church authorities.
2	Holy writings are accessible only to certain specific levels of authority.
3	Services are conducted by rote in a "holy tongue" few worshippers understand.
4	Services are conducted by rote in common languages.
5	Very formal church ritual coupled with minimal teaching of holy writings.
6	Formal church ritual and very limited teaching.
7	Rituals are combined with moderate teaching.
8	Rituals are combined with an open teaching policy.
9	Emphasis is laid on communal teaching with limited ritual.
A(10)	Formal study groups focus on discussion and interpretation of church writings.
B(11)	Formal study groups include philosophical inquiry into questions not covered in holy writings, but under rigid methods of preserving the sanctity of fundamental topics.
C(12)	Informal study groups with extensive limitations on allowable subject matter.
D(13)	Highly informal liturgy with some limitations on topics of references.
E(14)	Complete informality. Open exchange of ideas and concepts in a conversational setting.
F(15)	Religion does not enter into conversations at any time; although some philosophical questions may crop up from time to time, no one organizes "services" or "worship" around such matters.

Table 6.4

ORGANIZATION STRUCTURE

Level	Structure
0	The religious hierarchy assumes the functions of government. A theocracy or religious dictatorship.
1	Rigid hierarchy answerable to a central authority with minimal decision-making at lower levels.
2	Rigid hierarchy with most decisions on a regional level.
3	Rigid hierarchy with most decisions on a planetary level.
4	Rigid hierarchy with most decisions on a local level.
5	Loose hierarchy answerable to a central authority with minimal decision-making at lower levels.
6	Loose hierarchy with most decisions on a regional level.
7	Loose hierarchy with most decisions on a planetary level.
8	Loose hierarchy with most decisions on a local level.
9	Loose hierarchy with most decisions up to individual worshippers.
A(10)	No organization above regional level.
B(11)	No organization above planetary level.
C(12)	No organization above local level.
D(13)	Local organization without regulations.
E(14)	Loose, highly informal organization.
F(15)	No organization of any kind.

Table 6.6

MISSIONARY FERVOR

Level	Description
0	Zealous and willing to convert any sophont.
1	Zealous among a limited number of sophont races.
2	Zealous but intolerant of other sophont races.
3	Active and willing to convert any sophont.
4	Active among a limited number of sophont races.
5	Active but intolerant of other sophont races.
6	Ordinary and willing to convert any sophont.
7	Ordinary among a limited number of sophont races.
8	Ordinary but intolerant of other sophont races.
9	Occasional.
A(10)	Conversion attempts are highly infrequent.

Table 6.7

NUMBER OF ADHERENTS

Level	Number
0	1-9
1	10-99
2	100-999
3	1000-9999
4	10,000-99,999
5	100,000-999,999
6	1,000,000-9,999,999
7	10,000,000-99,999,999
8	100,000,000-999,999,999
9	1,000,000,000-9,999,999,999
A(10)	10,000,000,000-99,999,999,999
B(11)	100,000,000,000-999,999,999,999

INDEX

IISS Survey Uniform

IISS Service Patch
(right arm)

Field Branch Patches
(left arm)

Exploration Office

Communications Office

Imperial Grand Survey

Vacuum Mode

Standard Mode

FIELD DUTY SCOUT UNIFORM (TECH LEVEL 15)

When Scouts are in the field away from civilization, (for example, when on shipboard survey or planetside wilderness exploration), the field duty uniform is the tailored Tech Level 15 vacc suit.

These suits protect against temperatures from +100°C to -110°C and pressures of up to 5 atmospheres. The suit includes a soft helmet and gloves, and can be used with either a TL14+ PLSS (Portable Life Support System) A, PLSS B or PLSS C unit. By far the most common configuration used in the field is the soft helmet, gloves, and PLSS A combination.

When the environment doesn't call for a sealed vacc suit, the soft helmet and gloves can be folded up and stored in one of the pockets on the vacc suit. Even unsealed, the suit is comfortable: it provides uniform cooling or heating—making it particularly comfortable in hot or cold environments (+50°C to -10°C).

The various field combinations include:

Configuration	Duration	Weight	Price	Armor
Soft helmet, gloves, PLSS A	6 hours	0.5kg	Cr16,000	cloth-2
Soft helmet, gloves, PLSS B	12 hours	2.0kg	Cr20,000	cloth-2
Soft helmet, gloves, PLSS C	24 hours	3.5kg	Cr36,000	cloth-2
Hard helmet, gloves, PLSS A	12 hours	1.5kg	Cr17,200	cloth-2
Hard helmet, gloves, PLSS B	24 hours	3.0kg	Cr21,200	cloth-2
Hard helmet, gloves, PLSS C	48 hours	4.5kg	Cr37,200	cloth-2

Adding a thermal-meteoroid garment increases the suit's operating range to +130°C to -160°C. A hard helmet is also required for this extended protection.

Grand Census

**A State-of-the-Art Supplement
Approved for Use With *TRAVELLER***

Looking for adventure? New cultures? Strange new societies with unusual customs? Travel can be a broadening experience, as long as you go where things are different.

Here, in one book, is all the information that players and referees need to discover the diversity in the 11,000 worlds of the Imperium. Starting with the basic Traveller UPP for a world, *Grand Census* leads you step-by-step to detailed cultural characteristics, including details of the social structure, governmental institutions, languages, and technology.

Whether you're a Traveller player or a referee, *Grand Census* tells what you want to know when you arrive at a new world.

Chapters include—

• **Cultural Design:** Extensive rules, charts, and tables to tell you everything about the cultural characteristics of a world: details of social outlook, types of governments, organizational structures, detailed law levels, unusual customs, and intelligent native life.

• **Detailed Tech Levels:** A complete, official breakdown of tech levels, with different classifications for energy, computers/robotics, communications, medicine, environmental control, transport systems, weapons, and more.

• **Cultural Profile Form:** The new Imperial Scout Form 22, to record all the cultural details of a world.

• **Landing Party Contact Procedures:** How contacts with alien civilizations are made, including new skills for Scout characters.

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For Use With *Traveller*

This module is intended for use with *Traveller.* It requires that you have a copy of the Traveller rules. You also need at least two six-sided dice, paper, and pencil.

The minor alien race known as the Bwaps (sometimes called "Newts" by humans) was first contacted by Vilani traders more than 7000 years ago. Because their skin must be kept moist, Bwaps are uncomfortable in a humidity of less than 98%. They can, however, exist in humidities as low as 25% when wearing their special kaftan-like garment, which has an inside surface kept constantly moist. The hood of this garment drapes loosely over the head, giving rise to the whimsical nickname of "towel-heads".

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