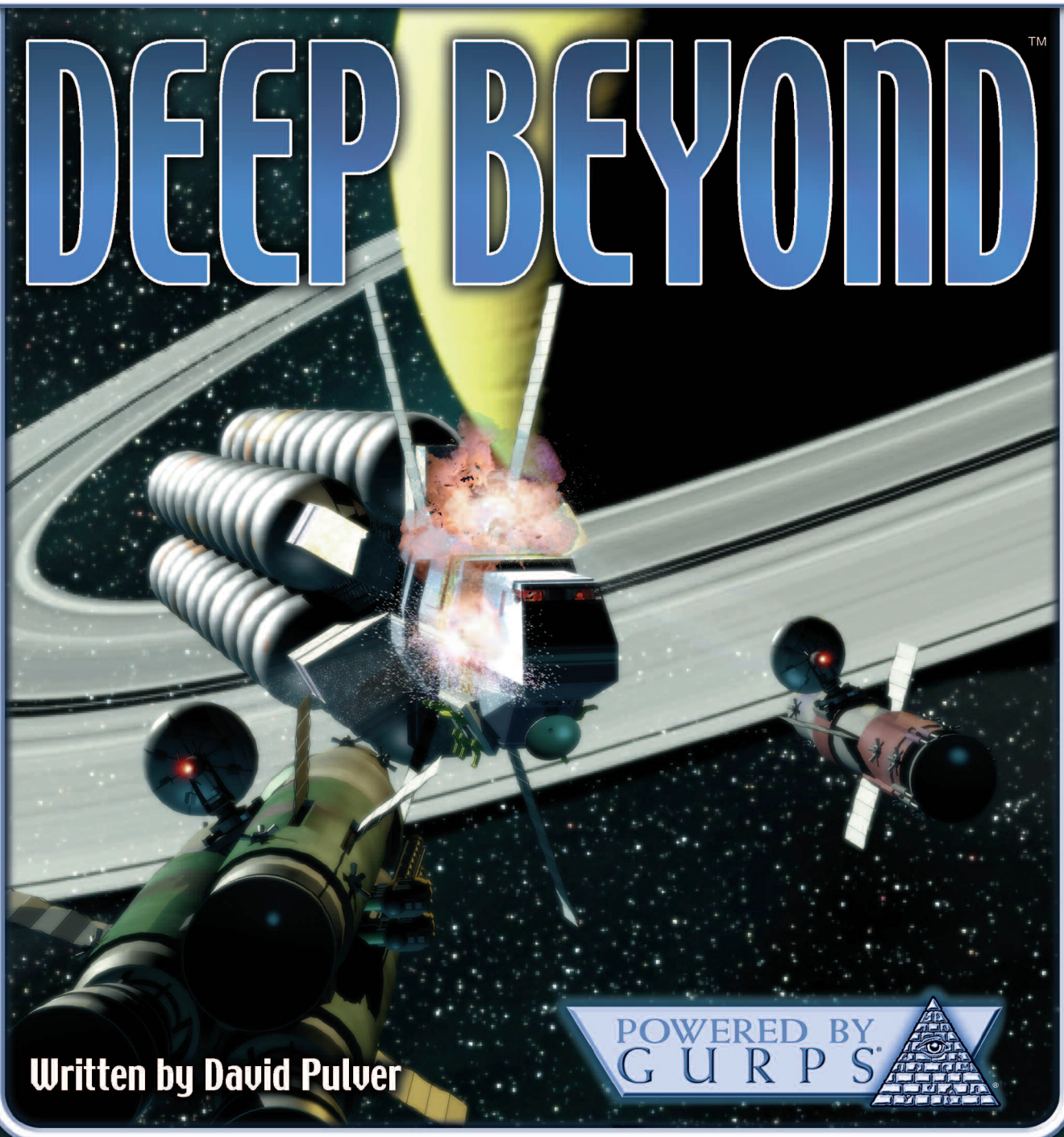
TransHuman Space

Deep Beyond



Written by David Pulver

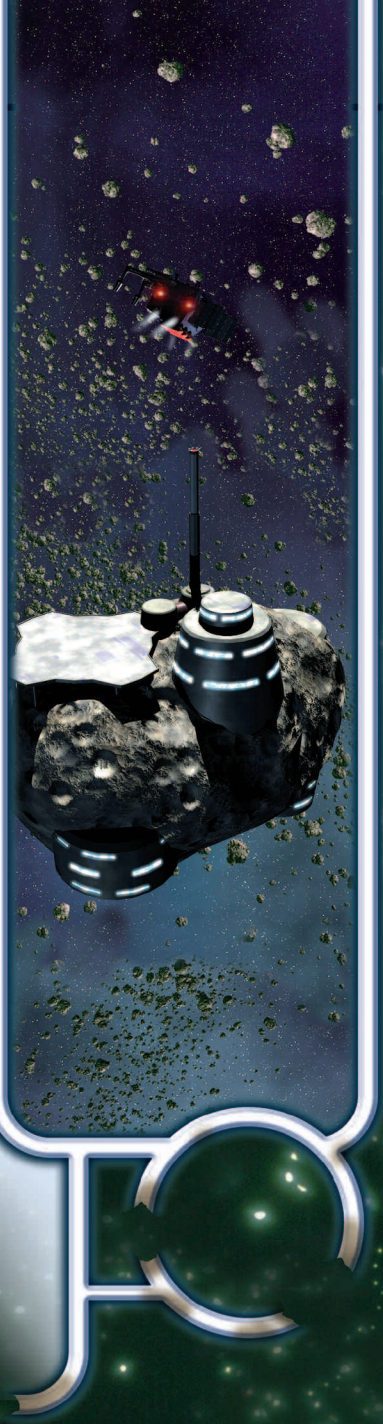
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Transhuman Space is required to use this supplement. ***GURPS Basic Set***, *Third Edition Revised*, ***Compendium I***, and ***Transhuman Space: In The Well*** are also recommended.

Written by David Pulver
Edited by Steve Jackson and Scott Haring
Cover by Jesse DeGraff
Transhuman Space **designed by David Pulver**

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By David Pulver • Cover by Jesse DeGraff

Edited by Steve Jackson • Illustrated by Attila Adorjany, Andy Clarkson, Jesse DeGraff, Dennis Detwiller, Thomas Floyd, Steve Hartley, Jeremy McHugh, Torstein Nordstrand, Klaus Scherwinski
Map design contributions: Nelson Cunnington • Additional editing by Scott Haring

***GURPS* System Design ■ Steve Jackson**
Managing Editor ■ Andrew Hackard
***GURPS* Line Editor ■ Sean Punch**
***Transhuman Space* Line Editor ■ David Pulver**
Project Administrator ■ Monique Chapman
Art Director ■ Philip Reed
Production Artist ■ Justin De Witt
Print Buyer ■ Monica Stephens
Errata Coordinator ■ Andy Vetromile
Sales Manager ■ Ross Jepson

Lead Playtester: Kenneth Peters
Playtesters: John Buston, Frederick Brackin, John Freiler, Juergen Hubert, Anthony Jackson, MA Lloyd, Phil Masters, David Morgan-Mar, Nana Yaw Ofori, Robert Prior, Jeff Raglin, Dalton Spence, Constantine Thomas



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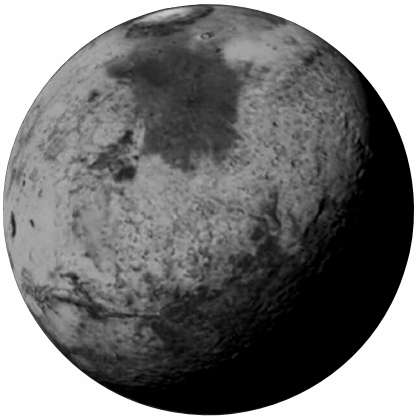
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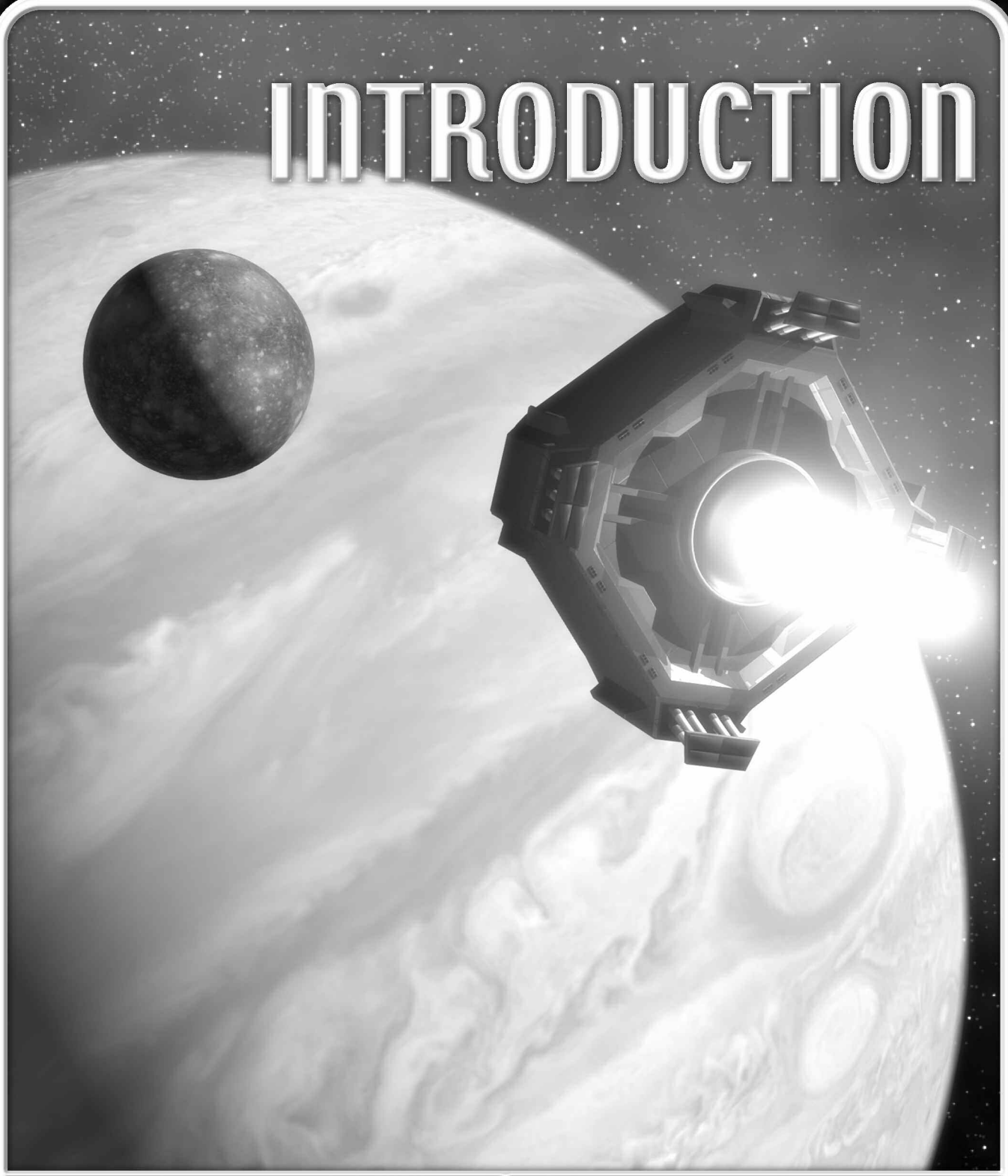
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INTRODUCTION



The Deep Beyond is the solar system's last frontier. It is the region of space outside the orbit of Mars, encompassing the countless asteroids of the Main Belt; the four giant planets Jupiter, Saturn, Uranus, and Neptune, and their many moons; the two clusters of Trojan asteroids; and the icy realm of the Centaurs and Kuiper Belt. Its nebulous boundary is the vast Oort Cloud, where Sol system merges with interstellar space.

The isolation of the Deep Beyond is a fertile womb for outlaw subcultures, nonhuman life, and exotic technologies, but it's also a source of valuable resources and scientific innovation vital to the interests of powerful nations and transnationals. This clash of ways and memes breeds conflict, from crime and terrorism to the threat of interplanetary war.

About Transhuman Space

The ***Transhuman Space*** series presents a unique hard-science and high-biotech universe for roleplaying. Set in the Solar System in the year 2100, it is a setting rich in adventure, mystery, and ideological conflict. The core book is ***Transhuman Space,*** which presents an overview of the setting. Other books available include ***Fifth Wave*** (focusing on Earth), ***In the Well*** (Mars and the inner system) ***Orbital Decay*** (terror in Earth orbit), ***Spacecraft of the Solar System*** (a compendium of spacecraft), and ***Personnel Files*** (a collection of detailed, ready-made characters), with more to follow.



About the Author

David Pulver has been a science fiction fan since before he learned to read and a gamer since 1978. The creator and editor of the ***Transhuman Space*** line, he lives in Victoria, British Columbia. David has authored or co-authored over 50 roleplaying games and sourcebooks.

About GURPS

Steve Jackson Games is committed to full support of the ***GURPS*** system. Our address is SJ Games, Box 18957, Austin, TX 78760. Please include a self-addressed, stamped envelope (SASE) any time you write us! Resources include:

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New supplements and adventures. ***GURPS*** continues to grow, and we'll be happy to let you know what's new. For a current catalog, send us a legal-sized or 9"×12" SASE – please use two stamps! – or just visit **www.warehouse23.com**.

Errata. Everyone makes mistakes, including us – but we do our best to fix our errors. Up-to-date errata sheets for all ***GURPS*** releases, including this book, are available on our website – see below.

Gamer input. We value your comments, for new products as well as updated printings of existing titles!

Internet. Visit us on the World Wide Web at **www.sjgames.com** for errata, updates, Q&A, and much more. ***GURPS*** has its own Usenet group, too: rec.games.frp.gurps.

GURPSnet. This e-mail list hosts much of the online discussion of ***GURPS.*** To join, send e-mail to majordomo@io.com with "subscribe GURPSnet-L" in the body, or point your web browser to **gurpsnet.sjgames.com**.

The ***Transhuman Space: Deep Beyond*** web page is at **www.sjgames.com/transhuman/deepbeyond/**.

Page References

Rules and statistics in this book are specifically for the ***GURPS Basic Set,*** *Third Edition.* Any page reference that begins with a B refers to the ***GURPS Basic Set*** – e.g., p. B102 means p. 102 of the ***GURPS Basic Set,*** *Third Edition.* Page references that begin with CI indicate ***GURPS Compendium I.*** References to ***Transhuman Space*** books are are FW for ***Fifth Wave,*** ITW for ***In The Well,*** SSS for ***Spacecraft of the Solar System,*** and TS for ***Transhuman Space*** itself. The abbreviation for *this* book is DB. For a full list of abbreviations, see p. CI181 or the updated web list at **www.sjgames.com/gurps/abbrevs.html**.

Xiao Chu

The attentions of China's giant space development corporation are focused on Mars (see ***In The Well***), but it has not neglected the Deep Beyond. Its regional headquarters is Hesheng Station on Pallas (p. 14). Although primarily concerned with research, Xiao Chu is also involved in Chinese asteroid mining and comet herding operations that support Mars development. Two divisions handle operations in the Deep Beyond:

Xiao Chu Development Division supports other Chinese colonization operations in the Deep Beyond. Its mission is to bootstrap Chinese colonization efforts. The Chinese government (including the PLA) and other corporations hire XCDD to help them build bases in hostile environments. XCDD provides expert engineers, construction cybershells, microbots, biogenesis tanks, bioroids, fauxflesh vats, and similar technology. An XCDD specialty is the rapid expansion of a base facility from a smaller seed – the mushroom-like growth of Jisheng Station on Titan is due to their expertise. XCDD also coordinates the subcontracting of comet farming operations to freelance comet herders.

The Outer Solar Region Office of the XCDD is based at Hesheng Station, headed by its hard-nosed new director, Chen Jianxin, formerly deputy director of Mercury mining operations. Jianxin, whose father was a Hong Kong public security officer who died in the line of duty, has no sympathy for Martian Triad gangsters. He has begun a campaign to root out corruption in Hesheng Station, while also urging PLAN-SF to cooperate with (or at least not hinder) the Royal Navy's own campaign against the Triads. Last month Jianxin began receiving death threats, culminating in the murder of a deputy by a Triad assassin.

Xiao Chu Research Division is very active, with a half-dozen major laboratories in the Deep Beyond. These centers include NEMS Laboratory 28 (developing advanced military and terraforming cyberswarms with gestalt AI) at Hesheng, the Neogenesis Field Laboratory at Jisheng Station on Titan, and the secretive Biochemical Engineering Laboratory 72 at an undisclosed location (see *Tenglong Station,* p. 26).

Freehaulers

The high cost of deep space vessels (usually at least M$30 for a cheap spacecraft) means that most vessels are operated by large corporations – but there are exceptions.

Freehaulers are tramp space freighters – independently-owned transport spacecraft. Most are second hand (or older) vessels. Their owners are usually Gypsy Angel (p. 88), families, small asteroid freeholds that want to have a deep space vessel for emergencies but can't afford to keep it idle, or ex-company spacers who have pooled their funds to fulfill a dream of owning their own vessel. Some craft are run strictly as a business; others, especially Gypsy Angel craft, are also homes, sometimes with children.

Freehaulers can't usually compete on the main trade routes, such as Earth/Luna-Mars-Mercury, but can eke out a precarious existence by charter trips to smaller stations and colonies. Such runs are not viable for the larger spacecraft used by the major companies like Mars Interplanetary. Freehaulers rarely make a big profit, but most of them are in it for the lifestyle or to pay expenses on a ship they need for other reasons, and are reasonably happy to break even. Those who tire of it can usually find a market for their vessel.

Freehaulers charge higher fees to go to small stations if there's little chance of picking up a second charter for the trip back. However, a customer willing to accept a more roundabout route (as the spacecraft visits intermediate destinations) may get a discount. It's also possible to arrange transfers between different vessels through companies like Trojan Horse (p. 108) and the Farhaulers' Guild (p. TS98).

At present, one of the more profitable freehauler runs is transporting homesteaders and their equipment from Earth-Luna space to the asteroid belt. This can be interesting (and occasionally risky), as some asteroid settlers are highly eccentric. Freehaulers who want to fill their holds will usually arrange to take on multiple charters to nearby stations.

About 60% of all Freehaulers are members of the Farhaulers' Guild. For Freehaulers, the Guild also coordinates charters and help with loans and insurance.

Tenzan Heavy Industries

Tenzan Heavy Industries (THI) was forged in 2032 from a coalition of Japanese aerospace, mining, defense, and electronics firms with heavy government investment. It has since become a true multinational, but retains a strong Japanese flavor. Tenzan (the name means "heavenly mountain") made its fortune mining Luna and near-earth asteroids and using the material to manufacture orbital stations and solar power satellites.

Tenzan is a pioneer in mass driver construction, space construction techniques, and cybershell design. Its semi-autonomous asteroid prospecting swarms (p. 134) continue to catalog Main Belt resources. A subsidy, Tenzan Defense Systems, is the leading supplier of platforms and weaponry for the Japanese Self Defense Force and other PRA militaries, and is believed to conduct sensitive experiments at Yametei Station in the Main Belt.

The new chief Tenzan executive in the Main Belt is the stationmaster of Yametei Station, Ryoko Arimori. She was program manager of the initial Tenzan prospector swarm project.

Bioroids, Parahumans, and Uplifted Animals

The Main Belt and Leading Trojans are centers for parahuman design and bioroid manufacturing, both legal and illicit. Many designs far more extreme than those usually permitted on Earth are found here. Examples include:

Algonaut — *136 points*

Attribute Modifiers: ST -2 [-15]; HT +3 [30].

Advantages: Acceleration Tolerance [10]; Beautiful/Handsome [15]; Breath-Holding 4 [8]; Bioroid Body [0]; Double-Jointed [5]; Extra Encumbrance [5]; Hard to Kill 2 [10]; Immunity to Disease [10]; Less Sleep 3 [9]; Recovery [10]; Regrowth (small extremities only, -50%) [20]; Sanitized Metabolism [5]; Sensie Talent 2 [4]; Temperature Tolerance 2 [2]; Very Fit [15]; Very Rapid Healing [15].

Disadvantages: Lecherousness (if afraid or helpless, -70%) [-4]; Low Pain Threshold [-10]; Weak Will -1 [-8].

Date: 2095. ***Cost:*** $186,000.

Omokage Labs produced this design as an alternative to the Submissa series of pleasure bioroids (p. ITW87). An Algonaut can feel pain – more intensely than an average human – but it's very hard to badly injure one, allowing more extreme forms of "play."

The Algonaut's skeleton is based on combat bioroid designs, so it can spend long periods in restraint without permanent damage. A modified windpipe and enhanced lung capacity allow it to survive strangulation or immersion in water for much longer periods than a human, with reduced risk of death or brain damage. Cellular modifications inspired by salamanders enable the Algonaut to regenerate lost extremities – it can lose fingers, toes, or even its tongue and grow them back in a few weeks or months, while skin quickly recovers from dermal scarring.

Some Algonauts are bioroids; others are bioshells. An escaped Algonaut is a viable character – it may have a few psychological problems stemming from abuse, but its abilities also make it a dangerous enemy.

Elf Kitten — *-5 points*

Attribute Modifiers: ST -2 [-15]; DX +1 [10]; IQ -1 [-10]; HT +2 [20].

Advantages: Bioroid Body [0]; Longevity [5]; Radiation Tolerance 5 [10]; Sanitized Metabolism [5]; Versatile [5]; Very Handsome/Very Beautiful (Off-the-Shelf Looks, -50%) [13].

Disadvantages: Lecherousness [-15]; Mute [-25]; Reduced Hit Points -2 [-10].

Skills: Free Fall at DX [2].

Features: Can purr; pointed ears and catlike eyes.

Date: 2091. ***Cost:*** $50,000.

Another Omokage design sold to the Martian Triads, this pleasure bioroid is intended for people who want a sentient bed-warmer rather than a companion. It looks like an extremely attractive, perfectly formed human, save for green catlike eyes (easily concealed by glasses, if desired) and cute pointed ears. But while it can understand language, it is completely incapable of speech – it can make animal sounds, and even has a throaty purr, but it can't form words. It was based on Tennin genetics, and as such is adapted for microgravity, making it popular on beehive habitats and spacecraft.

Europan — *18 points*

Advantages: Bioroid Body [0]; Enhanced Move (Swimming) 1/2 [5]; Extra Fatigue 3 [9]; Faz Sense [10]; Fit [5]; Gills (cannot breathe air) [0]; Longevity [5]; Nictating Membrane 1 [10]; Night Vision [10]; Sanitized Metabolism [5]; Temperature Tolerance 4 (-5 to 55 degrees) [4].

Disadvantages: Aquatic [-40]; Reduced Move (Running) 1 [-5].

Features: Bioluminescent skin; exotic features, flippers instead of feet.

Date: 2090. ***Cost:*** $69,000.

These are humanoid beings adapted for the Europa environment by Avatar Klusterkorp genetic engineers. Europans look like a hybrid of mermen and catfish, with long whiskers that sense water vibrations, large eyes, tough skin, webbed fingers, and frog-like flippers rather than feet. Their skin is bioluminescent. Their metabolism includes the antifreeze protein (AFP) gene and adaptations for a sulfur-rich environment (near Europa's vents), and they possess gills, based on biomimetic designs inspired by walking catfish. Their gill structures are located beneath their ribs, rather than in the neck.

Proto-Tennin — *4 points*

Attribute Modifiers: ST -1 [-10]; HT -1 [-10].

Advantages: 3D Spatial Sense [10]; Disease-Resistant [5]; No Degeneration in Zero-G [3]; Radiation Tolerance 3 [7].

Disadvantages: Skinny [-5].

Skills: Free Fall at DX+1 [4].

Features: Home gravity of 0 G. Increase height by up to 8" over the norm for the lowered ST, but weight is 75% of normal.

Date: 2050. ***Cost:*** $54,000.

Chronos-Class TAV

The *Chronos* was designed by Columbia Aerospace for the Titan environment, and is the workhorse spaceplane for civilian and military space operations between Titan, Titan orbit, and Saturn's other moons. When lifting off from Titan, a *Chronos* boosts to cruising speed using its fission air-ram, then ignites its fission rocket engine to reach orbit. The rocket is fueled by indigenous methane fuel (abundant in Titan's atmosphere), drastically lowering its fuel costs, although the engine can also use hydrogen or water. The TAV can also be used as a conventional supersonic transport: using its air-ram it can cruise indefinitely in Titan's atmosphere at up to 1,100 mph, or reach 2,500 mph if using both the air-ram and fusion drive.

A prototype of the *Chronos* flew in Titan's atmosphere in 2079. Since 2086, the TAVs have been built by Columbia Aerospace on Rhea or Titan itself, although many of their components are imported. At present, 17 *Chronos*-class TAVs are in service, 11 with the Titan Consortium and six with the USAF's 30th Space Wing. The spacecraft itself is a streamlined delta 100' long. In its usual configuration it can carry 64 people and 60 tons of cargo. Typical payload is 66.4 tons. It uses 276 tons of methane as reaction mass.

Chronos-class vessels are named after the titans of Greek myth.

Crew*:* Pilot and Co-Pilot, each with Astrogation, Piloting (High-Performance Spacecraft, Piloting (Aerospace), Electronics Operation (Sensors), Electronics Operation (Communications). Co-Pilot is normally an infomorph residing in the vessel's computer.

Design: Streamlined Delta (64 spaces, nanocomposite, light frame, lifting body, smart, responsive hull); cDR/cPF 1.4/1 [F], 1/1 [S, B] (nanocomposite armor).

Modules*:* New cockpit; small fixed PESA [F]; small fixed radar [F]; 0.5 compact fission drive (methane); 0.5 fission air-ram; 46 tanks (ultralight, methane); 4 passenger seats (64 passengers); small entry module; 12 cargo (60 tons).

Statistics: EMass 53; CMass 257; LMass 395. Cost M$54.26. cHP 60. Size Modifier +8. HT 12. Maintenance Interval: 5.43 hours (17.7 hours/day). RRA 0.

Performance*:* sAccel: 0.22 G. Burn Endurance: 0.5 hours. Burn Points: 396. Delta-V: 1.21 mps. Air speed 0.7 mps (0.32 mps with air-ram only). Stall speed 0.025 mps. On Titan, air speed is 0.32 mps (0.15 mps with air-ram only), but stall speed is 0.017 mps.

Thule-Class DSOV

This Deep Space Operations Vessel is a typical Gypsy Angel design, using components mostly purchased from Rust China's MAST or salvaged from other vessels. It's a roughly spherical chunk of ice carved out of a Kuiper Belt Object, into which chambers and corridors have been melted.

Most of its interior space goes to the vessel's fusion drive and water tanks, but it has room for cargo holds, quarters, labs and minifacs. Sensors, a trio of laser towers, and two large external cradles (landing pads) are mounted on the vessel's surface. Performance does not change appreciably with the cradles loaded.

A Gypsy Angel craft this size will support up to 40 people in comfort, although it can carry up to 80. About one-third the volume of the *Thule* is waste space – ice – which provides moderate armor protection and good radiation shielding

The delta-V of the *Thule* is deceptive. It can be dramatically increased by cannibalizing the hull's waste space to feed the vessel's fuel tanks. This will reduce hull thickness and hence its cDR and cPF, but may be desirable on long voyages.

A dozen of these vessels are in service. Most were given names suggestive of legendary, mythical, or distant lands, e.g., *Asgard, Lemuria, Ultima Thule.*

The spacecraft itself is a sphere 150' in diameter. Typical payload is 1,258.6 tons. It uses 27,000 tons of water as reaction mass. It has 12.28 spaces of empty space.

Crew*:* Pilot/Navigator (Astrogation, Piloting (Low-Performance Spacecraft)), Communications/Sensor Operator (Electronics Operation (Communications), Electronics Operation (Sensors)), Weapons Officer (Gunner (Beams), 8 Engineers (Armoury (Spacecraft Weapons), Mechanic (Fusion Drive), Mechanic (Robotics), Engineer (Mining), other Mechanic skills as appropriate). Also carries other specialists such as medics, planetologists, educators, biotechnicians, depending on the owning family.

Design: Asteroid Hull (3,375 spaces, ice, light frame); cDR/cPF 1/10 (ice armor); hull radiators (15 ksf).

Module*s:* 2 Old basic bridge; 30 high-impulse fusion torch (water); 1,800 tanks (water); 1 medium PESA; 1 small PESA; 1 medium radar [F]; 1 small ladar; 3 2.5-MJ laser towers [S]; 2 hall; 40 luxury cabins; 3 small entry modules; 1 large entry module; 2 lab; 4 minifac workshops; 10 refinery; 5 rock crushers; 100 ksf folding solar panels; 1 spacedock (32 spaces, 40' × 20' × 20'); 2 external cradles (10 spaces, 1,250 tons each); 250 cargo (1,250 tons).

Statistics: EMass 17,494.2; CMass 32,252; LMass 45,752. Cost M$186.92. cHP 527. Size Modifier +9. HT 12. Maintenance Interval: 1.46 hours (65 hours/day). RRA 15.

Performance*:* sAccel: 0.001 G. Burn Endurance: 2,500 hours. Burn Points: 9,000. Delta-V: 27.5 mps. Air speed 0.

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