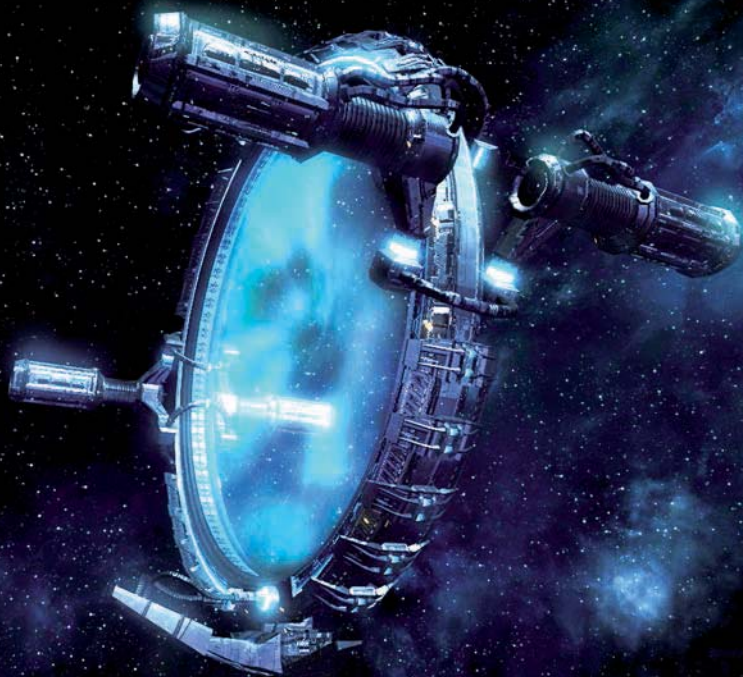


X ENCYCLOPEDIA



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SECTION A

Introduction and Table of Contents

Section A: Introduction

Introduction

Encyclopedia of the X Universe

Did you know?

What is a "presence cloud"? Do Boron have four limbs or six? Was Nathan R Gunne a rescue pilot or a pirate? How old can a Teladi get? Who was Christiane Hatikvah? What is the "Book of Truth"? Are the Goners a religious sect? How does a jumpgate work? Who was the father of Saya Kho? What are the most influential organisations in the Community of Planets? What is the Community of Planets in the first place, and how is it related to the Argon Federation?



"What on Earth..." Well you may ask.

It's entirely feasible that anybody who is heart and soul into the X Universe might have asked questions like these at some point along the way. There aren't too many game universes that can hold the imagination like that of Egosoft's X game series does with its attention to detail and rich, involving history.

The basis of all the stories set in the X Universe is a epic, interwoven tapestry of events involving the human race and numerous alien species spanning more than a millennium and several galaxies. Each of these races has its own history and defining characteristics,

Introduction

Encyclopedia of the X Universe

and historical figures from all of them cast long shadows and influence events even centuries after their death. Political scheming is commonplace; fashions and fads come and go; individuals and empires alike see both soaring triumph and utter catastrophe. And always philosophers and artists are attempting to make sense of the times.

Much more information exists than is ever shown in the games or even the novels.

This is only to be expected, of course: their purpose is to entertain, not to be the conduits for vast amounts of background detail. That is something best left to dictionaries and encyclopedias.



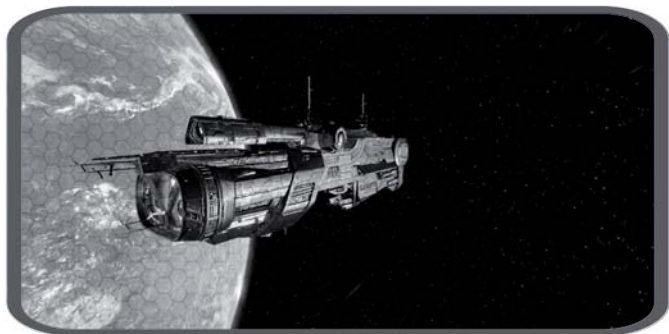
It goes without saying that there are any number of web pages out there on the internet that positively drip with data about the X Universe: technical specifications of spacecraft, sector configuration, station deployment, natural resources and economic cycles --- all these are there,

and much more besides. Some of the better-known wikis even touch on the background to the universe, in passing,

Introduction

Encyclopedia of the X Universe

as it were: most of the information comes from the usual unreliable sources such as forum posts, off-hand references in text, translations, reverse translations and an awful lot of guesswork. What's still missing is made up as people go along. It's no big deal as long as people are having fun, but what ends up happening is that there a large number of slightly different universes that don't quite fit together. This is a particular problem across the various language barriers.



Purpose of the Encyclopedia

This encyclopedia is an attempt to resolve this problem once and for all by bringing all the official, canonical information about the X Universe together in one place. And if there are changes or additions - and it's entirely possible there will be - the ring-binder format allows the reader to print them out for themselves and keep their encyclopedia up to date: that's why this format was chosen.

Introduction

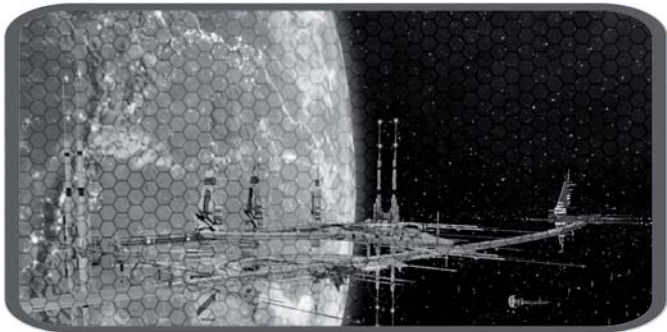
Encyclopedia of the X Universe

Whether you read it from cover to cover or just dip into it from time to time, whether you are motivated by simple curiosity or use it to write your own stories, I hope you will find this book interesting and enjoyable. Whatever it is used for, every true fan should have a copy on their bookshelf, right next to the other "essentials" like the Encyclopedia Britannica and the collected works of Shakespeare...

In any event, I hope you enjoy the first ever updatable book of computer game history.

Helge T Kautz

July, 2010



Section A: Introduction

Table of Contents

Encyclopedia of the X Universe

A Introduction and Table of Contents

Introduction	2-5
Table of Contents	6-10

B Historical Events

The Way to the Stars	2-6
Codename: Winterblossom	7-10
Terraformed worlds	11-12
Beyond the Earth	13-16
The Goners	17-19
The Argon Federation	20-21
The Community of Planets	22-23
Contact with Earth	24-26
Terran Conflict	27-29
Death of the Community of Planets	30

C The Terraformers and the Xenon

The Terraformer Project	2-5
The First Fleet	6-7
The Second Fleet	8-9
The Third Fleet	10-11
The VN Terraformer Incident	12-13
The Terraformers return	14-17
Beyond Earth	18
From Terraformers to Xenomorphs	19
The Xenon	20-23
Terraformers and Xenon now	24-25
Concepts	26-29
Directory	30

Table of Contents

Encyclopedia of the X Universe

D	The Ancients and the Sohnen	
	Overview	2
	Types of civilisation	3-5
	The First Races	6
	Computronium	7-8
	The Presence Cloud	9-10
	The Ancients' Objectives	11-13
	Galactic provinces	14-15
	The jumpgate network	16-18
	Interaction	19-20
	Gatekeepers	21-22
	The Sohnen	23-24
	The Outsiders	25-27
	Mankind	28
	The Terraformers	29
	Firebreak	30
E	Races of the Community of Planets	
	Preface	2
	Argon	3-6
	Boron	7-10
	Khaak	11-14
	Paranid	15-18
	Split	19-22
	Teladi	23-26
	Wenendra	27-30
F	Noteworthy historical figures	
	Brennan, Kyle William	2-6

Table of Contents

Encyclopedia of the X Universe

Gaffelt, Noah	7-10
Gardna, Julian	11-12
Kho, Elena Lindisfarne	13-16
Kho, Saya	17-19
Nopileos IV, Isemados Sibasomos	20-23
Norman, Siobhan Inja	24-26
Tebathimanckatt	27-30
Otani, Ren	31
Tarren, Yishasame	32
Borman, Captain Falk "Boots"	33
Tugas IV, Yoolis Ulos	34

G Planetary Database

Argon Federation	2-5
Queendom of Boron	6-9
Godrealm of the Paranid	10-13
Free State of Solara	14-15
Great Patriarchy of the Split	16-19
Teladi Company	20-23
Earth State	24-27
Hatikvah Free League	28-29
Convention of the Herd	30

H Science and Technology

Physics of the jumpgates	2-4
Engine technology	5-7
Gravitational control	8-10
Inertia compensation	10-11
Weapons technology	12-13

Table of Contents

Encyclopedia of the X Universe

Shield technology	14-15
Molecular nanotechnology	16
Orbital linear transaccelerators	17-19
AI and AGI	20-22
Human biology and medicine	23-25
An increased lifespan	26-28
Technological disparity	29-30

I Space vehicles

Overview	2-3
Technology	4-6
Types of space vehicles	7-11
Ships of the Argon	12-13
Ships of the Boron	14
Ships of the Free League	15-16
Ships of the Paranid	17-18
Ships of the Split	19-20
Ships of the Teladi	21-22
Ships of Earth	23-26
Additional noteworthy vessels	27-30

J Database

Sectors in the Albion System	2-4
Sectors in the Omicron Lyrae System	5-6
Sectors in the De Vries System	7
Sectors in the Maelstrom System	8-9

Table of Contents

Encyclopedia of the X Universe

K	Faction	
	Plutarch Mining Corporation (PMC)	2
	Heart of Albion	3
	Republic of Cantera	4
	Argon Military	5
	Xenon Matrix	6
	Jonferson Space Systems	7
	Reivers	8
Y	Glossary	
	A-C	2
	C-E	3
	E-G	4
	H-L	5
	L-N	6
	O-P	7
	R-S	8
	S-T	9
	T-X	10
Z	Index	

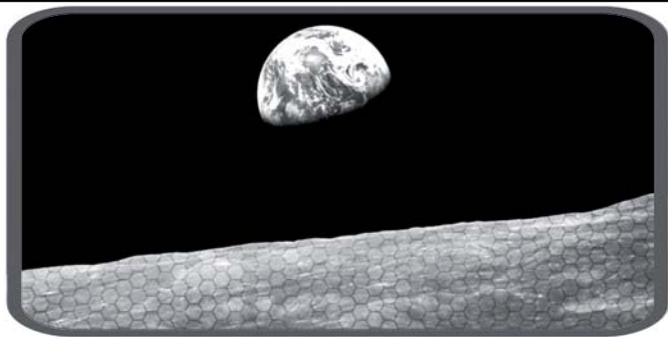
SECTION B

Historical Events

Section B: Historical Events

The Way to the Stars

The Early Years



It was during the Cold War period of the 20th Century that Man took his first steps beyond his native planet, tentatively at first and then with increasing confidence.

In 1969 Neil Armstrong and Edwin "Buzz" Aldrin were the first humans to set foot on a celestial body other than their home when they stepped onto the surface of the Moon; above them, in the Command Module known as *Columbia*, Michael Collins kept safe watch over his colleagues.

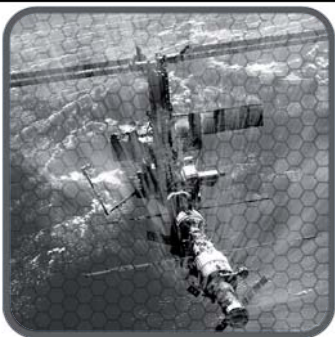
The first regular launches of the Space Shuttle in 1982 saw space flight become almost a routine event; the catastrophic loss of two Shuttles, however, in 1986 (*Challenger*) and 2002 (*Columbia*) were stark reminders of the dangers.

Even the International Space Station, the most complex and expensive construction project ever undertaken and the jewel in the crown of mankind's attempts to explore space, was decommissioned and destroyed before 2020, well before the end of its expected operational life.

The Way to the Stars

The End of the Global Economic Crisis

At a time of profound economic contraction the costs of exploring space simply could not be reconciled with the needs of the people. Worse still, the American Space Shuttles, which had already passed the end of their planned operational lifetime, flew their last missions with no replacement in sight.



The first flush of star-fever was finally at an end, and even the success of the Mars explorers *Sojourner*, *Spirit* and *Opportunity*, together with numerous probe missions, did little to change that.

Japan Steals the Lead

Japan was among the first nations to emerge from the crisis. Unlike the United States, the European Union and mainland China, it had chosen to protect its scientific base (though not without cost) and emerged as a nascent superpower.

A simplified dialect of Japanese. Jap-pidgin, quickly spread across the planet, swiftly replacing Latin, French and English as the universal scientific language. Anyone who wanted to study science now had no choice but to study Japanese as well.

The Way to the Stars

The Discovery of the Tunnel-Jump Principle

It is unsurprising, then, that Japan became the next victim of star-fever. That it occurred entirely by accident is mere coincidence. In the year 2022, a completely unknown student at the University of Tokyo named Ashizava Kazuko made a breakthrough that would change the world with his discovery of some unknown solutions to Einstein's theories.

According to Einstein, wormholes could be only microscopic in size and nothing could travel through them faster than the speed of light. Kazuko's work showed the exact opposite.

Naturally, scepticism was rife. Never before had Einstein's theories been proven wrong, let alone by a mere student. And yet the doubters were soon silenced when repeated experiments showed the reality of the case: Ashizava Kazuko was right, and Einstein genuinely mistaken.

It was indeed possible to travel at faster than the speed of light with finite energy. The principle of the tunnel-jump had been established.

The Way to the Stars

Destination: Proxima Centauri

Experiments went on throughout the early 21st Century. Initially, small inanimate objects were sent through tunnels from the Earth to the Moon; living creatures were later used.

Following these successes two huge jumpgates were built, one of which was initially shipped to Mars for continued experimentation. Buoyed up by this success, Mankind once again succumbed to star-fever to a degree unseen for fifty years.



The universal desire was to travel to the stars - but there was a problem.

To get a jumpgate to even the nearest stars would take hundreds, if not thousands, of years.

What was there to lose? The second jumpgate, by then in Mars orbit, was sent on the 78-year journey to Proxima Centauri, the nearest star to earth. The short transit time could be achieved only because the gate did not need to carry its own fuel: instead, fuel was supplied through the gate itself.

But as the transport ship travelled away from Earth, another discovery was made.

The Way to the Stars

Destination: Proxima Centauri

An alien jumpgate network

In 2041, 70 years before it was due to arrive at its destination, contact with the remote jumpgate was lost.

After almost a year of increasingly frantic research, the Earth gate once again made contact with a remote jumpgate - not, however, with the gate aboard the transport vessel but an unknown gate in a distant region of the Milky Way.

Subsequent research proved conclusively that objects which had for many years been taken as black holes or neutron stars were in fact the quantum singularities forming the core of the alien jumpgates.

Utterly by chance, Mankind had stumbled upon an entire network of these gates. It was an invitation that could not be ignored.

Codename: Winterblossom

Worlds without number

The United Space Command is created

Those involved with the jumpgate project were all too well aware that the exploration of an alien jumpgate network could well have far-reaching consequences, including the very strong possibility of first encounters with extraterrestrials. In the year 2043 the United Space Command, or USC, was created with the charter to protect the planet Earth from aliens - and, equally importantly, vice versa.

Codename: Winterblossom

At the same time as the USC came into being, work began on the USCSS *Winterblossom*, Earth's first truly interstellar vessel. Her departure on a peaceful mission of research and exploration through the alien jumpgate network was eagerly anticipated by a planetary population swept up in a frenzy of star-fever. Preparation took place under unprecedented levels of pressure.

Codename: Winterblossom

Worlds without number



The crew of the *Winterblossom* comprised twelve scientists drawn from widely different fields. In overall command was astronomer Dr René Farnham; Dr Peter Ondronov, an astrophysicist, was First Officer. The remainder of the crew was as follows: Dr Akira Desu and Dr Ramon Noble (engineering);

Dr Elaine Sutton and Dr Yuri Kawashima (biology); Dr Jon Caloni and Dr Claudia White (geology); Dr Hazel Park (mineralogy); Dr Peter Gellen (mathematics); Dr Nakadah Simaru (medicine) and Dr Katya Poljšak (psychology).

Winterblossom is launched

Winterblossom made her maiden voyage in 2045. A year later, her shakedown complete, she turned her face toward the stars. From this point, contact was possible only via messenger drones, which carried recorded messages and their responses between the ship and Earth.

Mere weeks before *Winterblossom* was due to return, contact was unexpectedly lost. Six months passed, then finally a messenger drone arrived with the news that the crew and all hands were well but the main computer had become disoriented and lost its way within the network.

Codename: Winterblossom

Worlds without number

After six months of a mixture of perseverance and good luck, the ship had brought her crew home at last.

Outcome of the Winterblossom experiment

Winterblossom returned to Earth in triumph after a flight lasting almost twice as long as originally planned.

Initial analysis of the mission results suggested that the alien jumpgate network included hundreds, possibly thousands, of star systems and that many of these stars contained planets within their biosphere.

Of the builders of the gates there was no trace, nor any other intelligent life. The most advanced lifeform the team discovered were protozoa or mosses, provoking the disquieting thought that in all the universe, only Earth, the Blue Planet, supported more developed life.

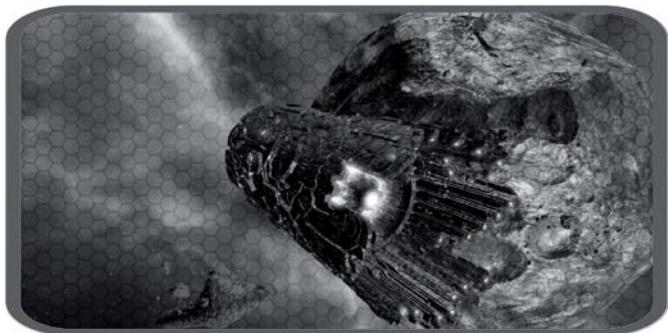
Instead of offering a solution to the Fermi Paradox - the apparent contradiction between the number of postulated life-bearing worlds and the lack of evidence for alien life - the historic flight of the *Winterblossom* had merely added further plangency to the oft-asked question: where are the extraterrestrials?

After all, some race had built the jumpgates, but for what purpose? Why was there no trace of them remaining to be found?

Codename: Winterblossom

The Terraformer Project

It would be many long centuries before any of these questions would receive an answer.



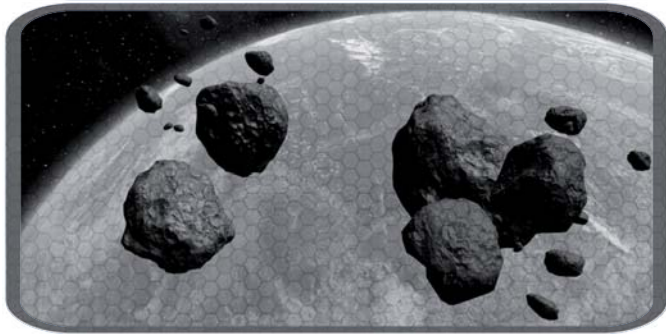
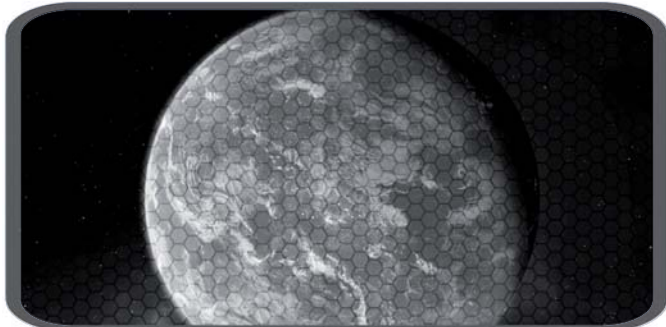
A world at peace

Subsequent years wrought many changes upon Earth. Prosperity reached unprecedented levels and almost all disease was eradicated. Popular opinion called for a united world government. Star-fever burned like never before: everyone, it seemed, wished to leave Mother Earth for the skies.

In an attempt to facilitate this apparent mass exodus, the Terraformer Project was begun in which vast fleets of intelligent robot vessels, the Terraformers, would render the extra-solar planets habitable for humans. The first of these, the First Fleet, departed Sol at the end of the 21st Century.

Terraformed worlds

Taurus, Perfect X, Sonra 4



Section B: Historical Events

Terraformed worlds

The First Terraformer War

When in 2079 it was announced that the first extrasolar planet was ready to be colonised, a vast tidal wave of jubilation swept Earth. Even months later the planet's joy remained undiminished.

By 2099 about a dozen Earth-type planets had been terraformed by the First, Second and Third Fleets.

At this point the Terraformer Project was terminated and over a million people moved to settle on the new worlds, most notably Taurus, Perfect X, Sonra 4 and Aldrin. Then, disaster struck.

Terraformers over Earth

In 2145 fleets of mutated, long-forgotten Terraformer vessels appeared in orbit around Earth, robot ships that supposedly should not have existed for many years.

The world was caught unprepared: the USC had few ships and no-one to crew them. The ensuing war put all previous conflicts in its shade: ultimately, billions would die.

However, in 2146 Nathan Ridley Gunne succeeded in luring the remnants of the Terraformer fleet away from Earth before the jumpgate was destroyed behind them, leaving the ravaged world to recover over the centuries.

Beyond the Earth

The jumpgates realign



Earth was safe, but in the space beyond the Terraformer War raged on. Many of the colonies were razed before the USCSS *Dragonfyre*, still under the command of Nathan Ridley Gunne, Poul Vantera and Frank de Vries, could bring the machines to book.

The mysterious vessel

On 17th December, 2146 Earth time the crew of the USCSS *Dragonfyre* observed an unknown vessel falling at relativistic velocity through the Proxima Centauri system.

A day later the jumpgates began to work once more, but now led to completely different star systems.

Beyond the Earth

New worlds, new ways

Some 25 Earth years after the Battle of Taurus it became clear that contact with home had been lost forever. The nascent interim government took the decision to cut all ties with the past and begin anew: while public acceptance of this was far from unanimous, by 2170 all opposition had ceased and the government became a standard parliamentary democracy. As a sign of humanity's break from Old Earth, this year would be marked as 0 NT - 0 New Time.

Nathan Ridley Gunne dies

Taurus, which had never properly recovered from the war, was finally abandoned in 14 NT. Sonra 4, an Earth-like world commonly known simply as Four and which had gone largely unscathed, was selected as the new Core World and seat of government.

Nathan Ridley Gunne died in 45 NT at the age of 93. Given that human life expectancy was some 110 years, his early death was attributed to the excessive lifestyle he led during the latter part of his life.

Beyond the Earth

Argon Prime 4 is renamed



In 71 NT, Sonra was re-named R Gunne in his honour, which quickly became the more onomatopoeic "Argun". "Prime" was later added to infer that this planet was the first of many colonies, and over the years vowel shift would change "Argun" to "Argon".

Extraterrestrials and Xenomorphs

Subsequent decades brought frantic development and reconstruction.

Under no circumstances must Man allow himself ever again to be so vulnerable to attack from space. That this was no mere paranoia was evidenced by the many encounters with vessels of unknown origin which also traversed the jumpgate network.

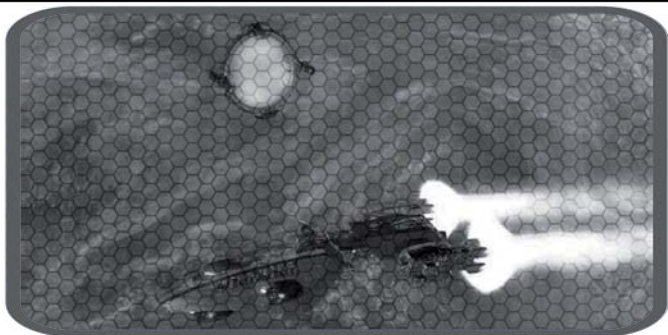
Despite the occasional small skirmish, the identity of the other race remained unknown.



Section B: Historical Events

Beyond the Earth

First encounters



It was not long before the word "Xenomorph" was used to refer to these ships, and even less time until quick-talking pilots truncated that to just "Xenon". One thing was irrevocably clear: since 2146 Mankind was not the sole user of the jump-gates.

The Xenon are identified

After many years of tentative diplomacy, in 130 NT, the first formal meetings with this first alien race occurred. Properly named Paranid, the race was quickly dubbed "Three-Eyes" by less polite Argon.

Treaties for free trade and information exchange were negotiated and both species benefited from the technological and cultural opportunities these allowed.

The Goners

Genesis

In the fifty years following 160 NT, many astronauts reported increased contact with another unidentified Xenomorph species. Numerous skirmishes took place, while all attempts at peaceful contact failed. Military chiefs considered it highly likely that these were descendents of the original Terrformer Fleet thought destroyed 160 years before.

The name Xenon, first applied to any unknown alien, becomes irrevocably connected with these new Terraformers. Violent confrontations increased as they years passed, but it did not appear that the machines were planning a major offensive.

The Truth about Earth

Martinus Sandas, then just an ambitious young history student at the University of Argonia City, came to believe that the history of Earth should be taught in schools as part of the general curriculum. After his idea was generally ridiculed, he founded

the "Truth About Earth Foundation" as a platform for a major campaign. Initially only his peers took any real notice; Sandas was not to be deterred, however, and with characteristic stubbornness he managed to make contact with Nyana Gunne, a great-granddaughter of the hero Nathan R Gunne himself.



The Goners

Nyana Gunne and Martinus Sandas

Nyana Gunne, taking her first steps in politics at this time, was less than overwhelmed by Sandas and his ideas.

An interview she gave in 205 NT summed up her opinion rather succinctly:

Martinus Sandas is a weirdo, a fanatic... a flash in the pan. This time next year nobody will even remember his name, I'm certain.

These words notwithstanding, Nyana Gunne became increasingly open to the message of the Foundation, and over the next two years she and Sandas would begin a relationship and fall in love. On the 23rd July, 208 NT they undertook a standard 4-year marriage contract, one which was renewed without question in 212 NT. The contract lapsed in 216 NT only because Nyana was killed in the Xenon attack on planet Antigone in the previous year. The only bright point to come out of this tragedy was that the Foundation would rapidly gain acclaim and popularity, especially in academia.



Section B: Historical Events

The Goners

The Book of Truth

In honour of Nyana herself and of her illustrious forebear, the "Truth About Earth Foundation" was renamed just "the Gunners"; the same vowel shift that would change the name of the race as a whole would eventually create the name "Goners".

From a belief to a sect

"The Book of Truth", first begun in 211 NT, was intended as a historical archive of text, images, video and data: its purpose was to collate all historically verifiable information about "Old Earth" - the planet formerly known as Terra - and the early years of the separation. Eyewitness accounts and historical treatises were added later. While the document was intended as a purely academic work, it soon became popularly known as the "Goner Bible". The Goners themselves were increasingly treated with the deference accorded to a religious sect, and over time the movement came to assume some of the aspects of this type of role.

The next few centuries saw the Goners play a marginal part in interstellar affairs; for most Argon, Earth was nothing but a bedtime story. Eventually, the Goner established a university, the "Goner Temple", in a remote and quiet sector to which they retreated to continue their peaceful, unending historical work and their secret search for Earth.

The Argon Federation

An interplanetary confederation of governments

The First Xenon Conflict

The year 215 NT saw the first major military confrontation with the Terraformers since the separation from Earth and would become known as the "First Xenon Conflict". The Argon suffered momentous losses, including the destruction of the ultra-modern trade centre at Antigone, but ultimately they took control of the war and were able to defeat the machines.

Secessions

The events of the First Xenon Conflict would have serious repercussions. Political disagreements with the central government on Argon Prime resulted in the secession of two systems: 219 NT saw the formation of the first Free State of Solara, and four years later the Hatikvah Free League came into being. Despite their differences, however, both systems agreed to join a new alliance, and in 241 NT the covenant creating the Argon Federation was finally signed.



The Boron

First contact was made with the Queendom of Boron in 323 NT.

The Argon Federation

Offense and Defense

The Boron, a race of pacific aquatic creatures, were very open to treaty negotiations and so it was a mere four months after the first successful encounter that trade and cultural accords were signed between Argon Prime and Kingdom End, the home sector of the Boron.



These accords formed the basis for the next three hundred years of all Argon-Boron relationships and were the foundation upon which the close friendship between the two races was built.

The Boron Campaign

One year after first contact with the Queendom of Boron, the Queendom was attacked by a fleet of battleships of unknown design accompanied by a flotilla of Paranid galleons. It was only with the assistance of their new allies that the Boron were able to repel the attack.

The new race became known as the Split, since the involvement of the Paranid in the attack resulted in a profound rift between Argon Prime and Paranid Prime. It was five years before diplomatic contact was resumed.

Die Gemeinschaft der Planeten

Teladi, the latecomers

The Guild of Founders

In an effort to prevent further violence, the Community of Planets (CoP) was founded in 328 NT. It comprised initially only the Argon Federation and the Queendom of Boron in a so-called "Guild of Founders". The Paranid and the Split refused to join the Community, however, instead forming a separate alliance of their own.

The Aldrin Conflict

The Boron Conflict necessarily saw Argon Prime withdraw resources from its allies. Public feeling in the Free State of Solara reached such height that Anthea Demetres, a long-life and the Governor-in-Permanent of Aldrin, was left with no alternative but to sever the jumpgate connection to the Argon Federation and the Community of Planets. In 334 NT, contact with Solara was lost.

Two hundred years of cold war

The next two centuries were represented by moderate economic growth and technological achievement for all species. The beginning of the end of this period of cold war took place in 489 NT when the Paranid, after much long and difficult diplomacy, agreed to join the Community of Planets.

The Community of Planets

Chronometry and finance reformed

The Split were to join in 514 NT, and this delicate era was finally brought to a close.

The Teladi, at last

Contact with another species calling itself the Teladi was made in 550 NT. Ostensibly searching for their lost home planet Ianamus Zura, the newcomers soon proved themselves to be shrewd businesspeople with the uncanny ability to make the best of even the worst situations.

As a race they were non-violent but their introverted nature and ubiquitous tendency towards avarice caused the other races to feel uncomfortable around them. This aside, it was not long before the Teladi were well on the way to becoming the primary financial power within the Community of Planets.

Reforms

589 NT saw the introduction of a Community-wide standard for currency, the credit, which soon achieved full acceptance by all species. At much the same time the Teladi were able to promulgate the use of their 'Zuran Time' system, which took the effects of interstellar distance and relativistic velocity into account.

Although the concept of a time system based on pulsar emissions seemed unnecessarily complicated, it offered an unmatched solution to the problem of precise chronometry.

Contact with Earth

Of Kyle William Brennan and Elena Kho

Xenon activity began to increase after 730 NT. It was considered likely that the machines were planning a major attack upon the Community of Planets or some other, similar large-scale offensive.



The jumpship arrives from Old Earth

At the very peak of Xenon activity, in 742 NT, something happened which no-one could have predicted. A space vessel arrived in a remote corner of the Community of Planets, in a sector belonging to the Teladi Company. More strangely still, it had not followed a flight path through the jumpgate network, even though it appeared in the vicinity of a gate. This ship, then, possessed a functioning jumpdrive.



The name of the captain of this ship was Kyle William Brennan, the first person from Earth to arrive in the Community for over seven hundred years.

Yet, a scant two weeks later, another human arrived in search of her friend, Major Elena Kho.

Contact with Earth

The Second Xenon Conflict

Brennan and his vessel, the USC X, became the subjects of furious searches by the Xenon, the Great Patriarchy of the Split and the Godrealm of the Paranid alike. The Queendom of Boron offered unconditional friendship; the Argon Federation remained studiously neutral.

The Goners, however, hearing of their first genuine lead back to Old Earth after centuries of searching, saw this as an opportunity to make a genuine difference. With the assistance of an executive branch of the Argon Secret Service, they devised a plan which would see the USC X brought secretly, and safely, to Argonia City.

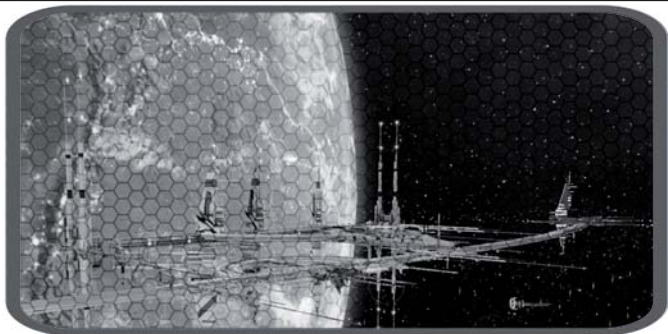
Victory against the Xenon

At the same time as Brennan arrived in Argonia City, the Xenon launched their expected offensive against the entire Community of Planets. Brennan immediately offered his support; although the jumpdrive itself had been destroyed, the USC X was also equipped with a matter/antimatter engine which far outstripped the technology of the Xenon or the Community in terms of efficiency and power.

Brennan made good use of this crucial advantage, managing to destroy or cripple many of the Xenon's central supply and power facilities. Their offensive, the Second Xenon Conflict, was over almost before it had a chance to begin, and Brennan was fêted almost universally as "the Hero of the Xenon Conflict."

Contact with Earth

The reconstruction of Planet Earth



The rediscovery of Earth

For Kyle William Brennan and Elena Kho, it was a pyrrhic victory. Despite their great triumph and the many attempts of the team led by theoretical physicist Dr Siobhan Norman, it proved impossible to reverse engineer the damaged jump-drive aboard Kho's ship, the *USC Getsu Fune*. Twenty years would pass before captured Khaak technology would allow the creation of a microtunnel and pave the way back to Earth.

These twenty years had seen much change wrought upon the old planet. In anticipation of a possible renewed attack from Terraformers, the government had forced through a series of major improvements. A vast naval fleet had been built and the Earth was now encircled by a giant defensive ring, the *Torus Aeternal*, which resided in permanent orbit 500 kilometres above the surface of the planet.

Terran Conflict

A disagreement between friends

Almost immediately, the Argon Federation was caught up in yet another war. The Khaak Conflict occurred between 761 and 765 NT, and critical to the victory of the Argon Federation over the Khaak was the military support afforded by Earth through the United Space Command. The Argon were not expecting this: taken by surprise and swept up by enthusiasm for their new allies, they offered Earth membership in the Argon Federation.

However, while the Government of Earth and the Outer Solar System (GEOSS; formerly the World Government) was willing to undertake a loose alliance with the Argon Federation, they firmly declined the offer of membership in the Community of Planets. Earth saw herself as superior: while her territory was limited to a single star system, her technology was undeniably much advanced.

Earth flexes her muscles

Despite her refusal to join the Community of Planets, Earth was nonetheless attempting to exert influence over the Argon Federation.

In 772 NT a secret service network was covertly introduced: when this eventually came to light several years later the relationship between the Federation and Earth noticeably cooled.

Terran Conflict

The jumpgate network fails

774 NT saw matters took an even greater step for the worse when, under the auspices of its AGI Control legislation, GEOSS ordered a USC fleet to the edge of Argon Federation territory. Conflict was inevitable.

Argon Prime goes on the offensive

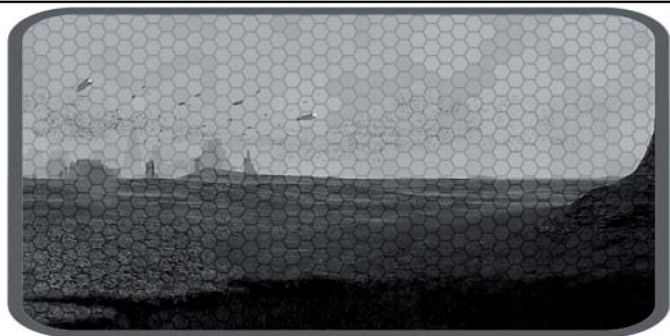
There was no way that the Argon fleet could defeat the forces of the USC in a direct confrontation. Instead, it drew on Terraformer technology developed in secret by the Beryll: new CPU ships and assembler drones would be built, with new jumpgates to maintain lines of supply.

In preparation for the assault, Saya Kho and Sherman Hiatu would serve as undercover operatives in the Sol system, while the Split Neham t'Gilk took overall control of the operation.



Terran Conflict

The Second Terraformer War



The Second Terraformer War began in Spring of Earth year 2946. A fleet of Terraformer ships and drones arrived in the Sol system under Beryll control and began a systematic attack on the inner planets: Venus, Mars and Earth. Earth's entire fleet was in other systems and could not be recalled quickly enough. Earth was defenceless.

The Torus Aeternal, Earth's last line of defence, was destroyed on 5th February, 2948, leaving the Blue Planet utterly without hope and at the mercy of a rampaging swarm of Terraformer assembler drones.

The ten-billion-strong fleet of drones and CPU ships was destroyed only through the combined efforts of Dr Jei Nirin, Prior Admiral Tebathimanckatt and Lieutenant-Colonel Elena Lindisfarne Kho, who would sacrifice her life to save the planet she still called home.

Death of the Community of Planets

The Alliance of Words

Nobody knew why, on 17th December, 2947, all the jumpgates across the Community of Planets failed as one. Even the jumpgates built on Earth failed to reach their peers. In-system jumps remained possible, but interstellar connections could no longer be created.

At a single stroke, centuries of alliances were swept away together with the former planetary federations. Interstellar trade and cultural exchange were ended and once again each world was confined to its star system as a sullen silence fell across the galaxy. The Community of Planets was dead.

A voice from the darkness

In the Spring of the year 801 NT, sixteen years after the effective end of the Community of Planets, messenger drones from Paranid Prime arrived at Nishala, the Boron homeworld, and Argon Prime. The mathematically-gifted Paranid had somehow managed to determine the physical locations of the other races' homeworlds. Though the jumpgates remained inoperative, the near-luminal velocity of messenger drones would at least allow some form of communication between the races.

The "Alliance of Words" was born.

SECTION C

The Terraformers and the Xenon

Section C: The Terraformers

The Terraformer Project

Background and rationale

The history of the Terraformer Project is inseparably connected to the discovery of the extraterrestrial jumpgate network, as well as to the technological and economical boom during the centuries of early space travel.

During its two-year voyage, the research vessel USCSS *Winterblossom*, under the command of René Farnham, collected a vast amount of data before returning home to Earth. Beside the raw astronomical data, among the most important outcomes were the following:

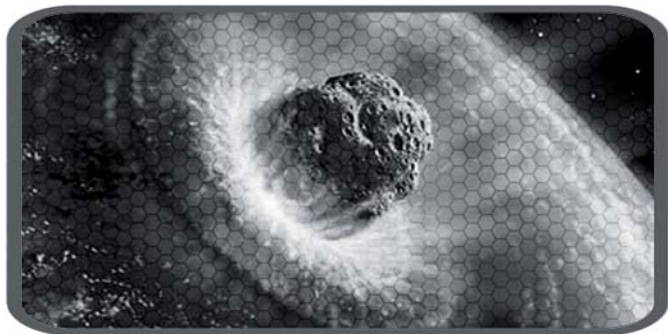
1. The jumpgate network was vast. While the *Winterblossom* visited 200 solar systems, the actual number of systems estimated to contain jumpgates was over a thousand.
2. No traces of intelligent life had been found. Neither had the jumpgate builders left behind anything but the gates themselves nor were there any worlds with indigenous civilisations.
3. As well as innumerable uninhabitable gas planets and silicon giants, a statistically improbable number of Earthlike planets were found, all orbiting within their stars' biosphere.

Although no-one could even guess at the reason for this remarkable configuration of the jumpgate network, scientists and politicians alike agreed that it had to be regarded as an invitation for colonisation, possibly even one purposely addressed at Mankind itself.

The Terraformer Project

Background and rationale

Even as early as the beginning of the 21st Century, leading physicists such as Professor Stephen Hawking were stressing Mankind's need to leave Earth as soon as it became possible. Their primary argument was the fragility of life: a single large asteroid impacting the planet might be sufficient to wipe out the entire human civilisation, as might a nearby supernova event or a massive solar flare.



It was only a matter of time before such a circumstance, an Extinction Level Event or ELE, would occur. The only lasting hope for the survival of the human species was the colonisation of other planets, preferably those orbiting other stars.

Star-fever

In the 22nd Century, Mankind more or less made a dash for the stars. The economic basis for this had long been in place: war, famine and poverty had long been eradicated from the face of the Blue Planet.

The Terraformer Project

Background and rationale

If these had been swept away by a communal longing for a new goal, a new purpose for humanity; in time, the prevailing mood at the time would become known as "star-fever". It came as no surprise when the World Government announced the decision to colonise the worlds beyond the jumpgates.

Terraforming as a necessity

Although many of the worlds discovered by the Winterblossom were in theory habitable, they were often less than fully suited to Earth lifeforms. The atmosphere of many of the planets were unbreathable and often the entire ecosphere was saturated with toxins. In some cases there existed planet-wide geological faults, in others the surface temperature was too low or there were prevailing meteorological difficulties. In order for these planets to be colonised, their ecospheres would have to be adapted for human requirements.

The early ethical concerns against the radical, novel process of "terraforming" were swiftly dismissed as none of the planets selected for the process had been shown to support life on any scale beyond the most basic microbes.

The Terraformer Project

Background and rationale

Self-sufficient automated space vessels

It was determined that using conventional methodologies terraforming even one planet would require hundreds, possibly thousands, of years; furthermore, each planet, being unique, would require a unique approach in order to be terraformed. With these parameters, it was likely that the project would have a duration of the order of hundreds of thousands of years. Unsurprisingly, that was deemed unacceptable: Earth, it was argued, could be subject to an ELE at any time. Besides which, star-fever was raging across the planet and the current population of Earth wanted to walk on other worlds themselves, not wait in hope that their descendants one day might.

This was the situation, then, in which a commission of experts approached the World Government several years after the return of the USCSS *Winterblossom*, and tentatively proposed a method by which they believed the terraforming process could be accelerated by several orders of magnitude. The proposal consisted of several thousand pages, and suggested the construction of fleets of autonomous, self-sufficient space vessels, one for each world to be colonised. Equipped with the most advanced artificial intelligence available, these machines would determine the most appropriate strategy for the terraforming of their target planet and carry it out autonomously. Given also the ability to extract any required resources for themselves, they would require neither supply nor supervision. This ground-breaking document was entitled simply, "Terraformers".

The First Fleet

The project begins



Ool

Following an exhaustive testing phase the construction of the first Terraformer baseship began. As it formed the core of the terraforming operation, it became known as the "CPU ship" or "TF/CPU". This first TF/CPU was given the identification code "TF/CPU 0001-00.00.00.00.00.00.00-00", or #0001 for short. It did not take long before the project engineers turn the hexadecimal base code into a real name that could be pronounced: Ool. In turn, this formed the basis of a tradition which would continue until the last baseship was launched several decades later: that, on its launch, each CPU ship would be ceremonially christened with a human-friendly name generated from its hexroot ID.

The First Fleet

The initial Terraformer proposal was laid out in three developmental steps, with each step corresponding to a Terra-

The First Fleet

Taurus

former Fleet. While the First Fleet was equipped with a highly capable artificial general intelligence, or AGI, the commission of experts was cautious about releasing autonomous robot vessels into the universe without a considerable amount of further testing. For this reason, the First Fleet was not entirely autonomous but was supervised by an engineering team living about its CPU ship.

To Taurus and beyond

On 26th May, 2066 the First Fleet left the Solar System through the Earth jumpgate to travel to Taurus. Taurus had been selected for the first attempt at terraforming both because of its proximity to Earth - it was just a single jump away - and also because its ecosphere was closely similar to Earth's own. It was expected that only a few modifications would be sufficient to prepare it for colonisation.



There were surprisingly few hitches for a project of this magnitude, and so it was that a mere fourteen years after terraforming had begun, the process was complete. The First Fleet moved on to its next target and the first hundred settlers moved onto their new lands. Many, many thousands more would follow, but it was these first hundred pioneers whose names would be remembered for ever.

The Second Fleet

Von Neumann machines



The principle of self-replicating machines had been discovered and described in theory by the American physicist Dr John von Neumann in the early part of the 20th Century, but it would require another hundred years before experiments even with the simplest Von Neumann (VN) machines would take

place. The technology and methodology to permit highly complex machinery to replicate itself was first explored mathematically by Dr Terence Winegrave and his team in the mid-21st Century before being implemented a number of years later.

The Second Fleet

It is of interest that construction of the Second Fleet had begun even before the First Fleet had been launched. Consonant with the original plan laid out years earlier, this fleet was composed of true Von Neumann Terraformers, capable of acquiring their own resources and constructing duplicates of themselves and therefore relieved of their dependence upon Earth for supplies.

It was believed this would drastically accelerate the terraforming process without incurring a resultant increase in the cost of construction.

The Second Fleet

New technology creates the VN Terraformers

From this point forward, each Terraformer fleet would consist of up to 256 TF/CPU ships, 8192 heavy bots and over two hundred million drones, all working to terraform a single planet.



The terraforming of Aldrin

The Second Fleet left the Solar System through the Earth jumpgate on 11th September, 2084. Its destination was another Earthlike world, discovered and named Aldrin many years before by René Farnham during the historic flight of the *Winterblossom*. While the Second Fleet was capable of self-replication, it, like its predecessor, remained under the direct supervision of a human crew aboard its primary CPU ship. Unlike the previous crew, however, the engineers of this team were instructed not to interfere in the automated processes of the Terraformers and merely to observe.

Aldrin was terraformed in six years by a fleet of Terraformers that was much smaller than those planned to succeed it.

The Third Fleet

The end of the project

A matter of ethics

In the years after the departure of the Second Fleet an increasing number of voices called for the immediate cancellation of the entire Terraformer project. Space-travelling VN machines capable of self-replication, it was argued, were a profound danger for intelligent life throughout the galaxy.

Mathematicians and programmers proved beyond a shadow of a doubt that goal drift - changes from the original programming caused by machine evolution - could not be ruled out. In fact, goal drift in AGI-type artificial intelligence over a period of several million years was more likely to occur than not.

Argument and counter-argument

Among the most influential advocates of the continuation of the Terraformer project was Dr Marteen Winters, Chief Engineer of the third-generation TF/CPU ship #deff. Between 2096 and 2098, Winters campaigned vehemently for the project, pointing out its huge economic and social benefit to Mankind. He was ultimately able to persuade a number of experts to his cause, all of whom attested to the project's safety.

His best efforts, however, were insufficient and the World Government's expert commission, headed by Namiko Hitomi, remained unconvinced. In 2099, shortly before the departure of the Third Fleet, an executive order was issued cancelling the project with immediate effect.

The Third Fleet

Software updates and the safe self-destruct

In addition, the order called for the destruction of all existing Terraformer units. Critics of the executive pointed out that by this point the Second Fleet would be in its seventh generation and that the actual number of units and their whereabouts were unknown. Furthermore, the VN Terraformer software was not programmed with a self-destruct protocol.

Applying the patch

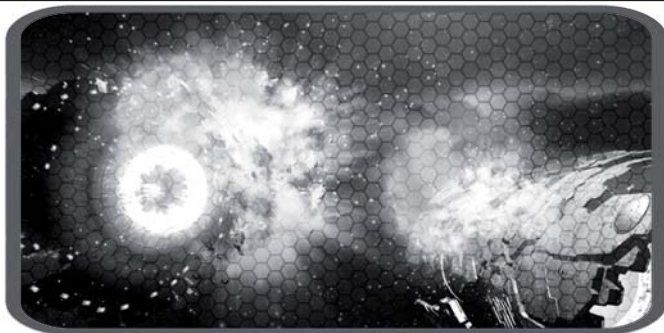
Namiko Hitori, the World Government's expert on Terraformers, confirmed that self-destruct routines were absent from the Terraformer software and ordered that it be updated immediately with programming permitting Terraformer units to destroy themselves. Once ready, the software was distributed via messenger drone and radioed to all Terraformer fleets whose location was known and their descendants. The patch also functioned as a biological virus, forcing all TF/CPU ships to transmit the software to other units.

The safe self-destruct command

The moment the system software patch had been completed, Mission Control on Earth passed the safe self-destruct (SSD) command to the First and Second fleets, together with the Third Fleet awaiting launch near Mars. The consensus of opinion was that the command would take at most 25 years to reach even the most distant Terraformer unit.

The VN Terraformer Incident

The theft of TF/CPU #deff



The theft of TF/CPU #deff

Winters, who had become increasingly outspoken in his disapproval of SSD command plan, was able to intercept and secretly modify the software update just before the last ship in the Third Fleet, #deff, was due to receive and process it.

Disregarding all direct orders, he engaged the ship's main thrusters and plotted a course for deep space, avoiding the Earth jumpgate entirely.



The VN Terraformer Incident

The battle for #deff

Immediately, the World Government dispatched the USCSS *Chameleon*, one of its few battleships remaining operational, to intercept the rogue VN Terraformer unit. Despite its increasing velocity, Sergeant Benjamin B Gallagher succeeded in boarding the Terraformer unit; in the resulting firefight, Marteen Winters, though not combat trained like Gallagher, was nonetheless successful in defending his craft by using his extensive knowledge of the ship to lay an ambush. #deff escaped towards deep space, and two weeks later the *Chameleon* was forced to return to Earth. #deff was gone. In the decades that would follow, this incident would become merely a historical sidebar of little interest to anyone.

Winters enters cryostasis

Marteen Winters was fully aware that the TF/CPU would take hundreds or even thousands of years to reach a habitable planet. To this end he spent the following five years in the construction of a cryogenic cabinet before entering cryostasis, trusting that his crime would have been forgotten in the intervening hundreds of years and remaining convinced that the people of the far future would be much more receptive to the prospect of restarting the Terraformer project.

The Terraformers return

The Forgotten Fleet



During the decades that followed the Terraformer project was all but forgotten as humanity experienced an economical and scientific boom on a scale never before seen.

Historians and scientists alike were of the opinion that even the most distant VN Terraformers had long ago received the SSD command and had self-destructed as ordered. It was believed that no further terraforming would be required, with the 14 planets originally made suitable for human habitation deemed sufficient for many centuries of expansion.

Terraformers over Earth

On 2nd January, 2145 the Earth jumpgate activated unexpectedly. Six TF/CPU ships and hundreds of smaller units appeared around the Blue Planet and immediately began preparations for a terraforming operation.

The Terraformers return

Battle for the Solar System

The Terraformer fleet disobeyed all orders to abort the terraforming of Earth. An armed intervention by Earth forces was practically unthinkable: the USC (United Space Command) had a mere 23 ships of the line, none of which was well maintained in the course of the previous few decades. Finding sufficient trained forces for the old ships proved to be even more of a challenge.

Goal drift

It was obvious from the beginning that the VN Terraformers had undergone some form of evolutionary process: the ships were almost unrecognisably different from the last units built on Earth. It was soon discovered that the Terraformer fleet invading the Sol system was not in fact the Second Fleet, as it was originally surmised: rather, this fleet was made up of their descendants, some dozen or more generations removed from the Second Fleet.

While the 23 old USC battleships run by their insufficiently trained crews moved to take positions near the six TF/CPU ships, the worst happened: considering itself threatened, the Terraformers reacted not only defensively but also went on the attack. This reaction took the USC vessels completely by surprise: the original VN Terraformer specification included neither weaponry nor any strategic capability: the goal drift that had occurred during the machines' evolution exceeded the expectations of even the most progressive AGI experts. Seventeen of the USC ships are destroyed in this initial attack.

The Terraformers return

Asteroids bombard the Earth

Among the six remaining vessels was the flagship of the Earth fleet, USSC *Dragonfyre*, under the command of a former SAR pilot named Nathan R. Gunne. Over the following weeks, Gunne would demonstrate a keen knowledge of strategy.

Focused bombardment of Earth

Having no real weapons at their disposal, the Terraformers began to deflect asteroids from their orbits to bombard Earth. The largest of these had a diameter of nearly one kilometre: it impacted in the geographical centre of the North American continent and caused destruction on a scale that



Earth had not seen since a similarly large meteorite caused the extinction of the dinosaurs 65 million years before. In its first two weeks alone the death toll of the Terraformer war was 650 million people worldwide. In the years that followed the end of the war, starvation and

Section C: The Terraformers

The Terraformers return

Nathan R. Gunne

disease would increase this number eightfold.

Using the original blueprints a team of AGI experts successfully created an independent AGI core, the VN Terraformer's central processing unit. This new core was installed aboard the USSCS *Dragonfyre* and activated. Even though the newly-built AGI core was by no means complete it caused a priority conflict within the Terraformer fleet attacking Earth: until or unless this priority conflict was resolved, the Terraformers had no choice but to follow the USSCS *Dragonfyre* and the fake AGI core.

Destruction of the jumpgate

Still engaged in a running battle, the bulk of the Terraformer fleet trailed the USSCS *Dragonfyre* through the Earth jumpgate. The remaining USC battleships followed the flagship's lead, together with a large number of civilian ships that had taken part in skirmishes over the previous two weeks.

Within minutes of the last Terraformer disappearing, the destruction of the jumpgate was ordered and carried out. The few last Terraformer units remaining in the Sol system were destroyed at the cost of even more human lives.

In every way that counts, Earth was in ruins, even though what remained after the slaughter was safe. The battle for Earth's colonies beyond the now-shattered gate, however, was just beginning.

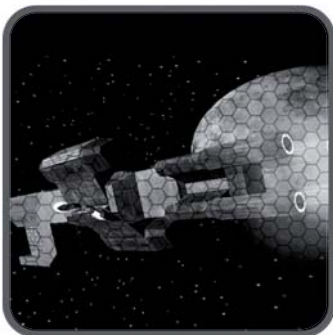
Beyond Earth

Battle for Taurus

The four remaining TF/CPU ships arrived through the jump-gate from Earth accompanied by approximately 100 smaller units; immediately, they began to attack planet Taurus, wreaking havoc similar to that inflicted upon the once-beautiful planet Earth. It was only because of Taurus' comparably low population that the death toll was much lower.

The Terraformers retreat

Even though the USCSS *Dragonfyre* and the other Earth ships had few weapons, they had learned much about the Terraformers' behaviour during the war. In a series of guerrilla attacks they managed to single out and destroy Terraformer units and escape without being destroyed.



After a prolonged stand-off lasting more than six weeks the remaining TF/CPU ships were eventually forced into a retreat.

Gunne had no knowledge of whether the Earth gate was destroyed as planned, so to minimize the risk of a new Terraformer attack on Earth he disabled the jumpgate that once led home before he and his fleet returned to Taurus.

From Terraformers to Xenomorphs

Evolution of the machines

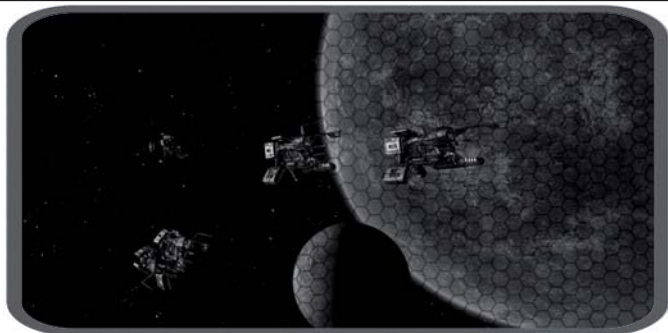
Following Nathan R. Gunne's victory, it seemed the Terraformers were gone for good: no attacks or even sightings occurred during the subsequent decades. Gunne and the other war veterans were fully aware, however, that one day the machines might return, with more advanced weaponry and superior artificial general intelligence. The colonies, now separated from Earth, would not be able to defeat a technologically far-advanced machine fleet once again. Gunne therefore decided to focus all resources of Taurus and the colonies on the task of building an independent civilisation on the ashes of the past. It was his belief that an advanced industrial society was the only way to build a space defence force quickly.

Mysterious encounters

In the Earth year 2330, nearly 160 years after the Terraformer war, patrol ships began to encounter unknown space vessels that refused requests to identify themselves. These initial confrontations took place without violence: at this point it was more than plausible that the unknown vessels were not Terraformer units but rather vessels crewed by non-human lifeforms. This was a chilling prospect: in all the decades since the historical journey of the USSC *Winterblossom*, no traces whatsoever of aliens had ever been found. With surprising alacrity, the term "Xenomorph" (from Ancient Greek for "alien form") became common.

The Xenon

A refuge



In 2370, 210 years after the war, armed conflicts with the Xenomorphs began; after years of use by quick-speaking pilots "Xenomorphs" had become shortened to "Xenon".

It was soon discovered that these were not alien life-forms, as had been supposed and hoped for in the past, but were in fact VN Terraformers, descendants of the true Second Fleet which had not been reached by the SSD command. These Terraformers, or Xenon, had used the time since the war to evolve almost beyond recognition.

The Xenon refuge

During the centuries that followed, battles with the Xenon became commonplace, if only local: there was no conflict on the scale of the Terraformer war on Earth and Taurus. But without the still-young Argon Federation and their allies even knowing, the machines were slowly spreading further, annexing sector after sector, star system after star system.

The Xenon

The Xenon Conflict escalates

For many hundreds of years a fragile ceasefire existed among the planets of the Argon Federation (and, later, the Community of Planets). The Xenon continued to spread through ever more uninhabited sectors and planetary systems. Although they reacted defensively when provoked, they did not seem to be planning an all-out attack on the Community of Planets. Argon AGI experts pointed out, however, that the Xenon were quite capable of planning a war centuries in advance.

Kyle William Brennan

By the Earth year 2905 (735 years after the war), signs of Xenon activity had increased. It was believed that there was a connection with the arrival of the experimental jumpship from Earth that brought the test pilot Kyle William Brennan to the Community of Planets. The Xenon, together with most other peoples of the Community, strove to acquire the X shuttle by any means available: after several unsuccessful attempts, the Xenon launched a broad-scale attack against the core sectors of the Community of Planets.

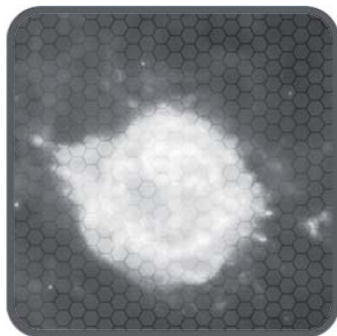
A decisive moment

Only the sheer power of the armed forces built by the Argon Federation and their allies prevented a catastrophe of the magnitude of the First Terraformer War. The Argon Federation came to the conclusion that only one way existed of

The Xenon

The Xenon retreat once more

putting an end to the ever-present machine threat: all sectors within a certain radius of the core sectors of the Community of Planets were to be swept clear of Xenon. In the Earth year 2912 (742), four months after Brennan's arrival in the Community, this goal was finally achieved. Over a prolonged campaign the Xenon were pushed back to the farthest reaches of the Community and contained inside a remote system of sectors.



Black Hole Sun

Forced by urgent demands by the Paranid and Split delegations, the Interplanetary Committee for Security and Collaboration in Space (ICSCS) decided to exterminate the Xenon once and for all. The Argon Federation remained neutral, while the Queendom of Boron vehemently opposed this decision on ethical grounds and initiated an emergency plan to save the machines from extinction. A remote cluster of sectors would be provided for the Xenon, three solar systems once belonging to the Queendom and which could be separated from the Community of Planets by disabling the only connecting jumpgate.

The Xenon, led by the ancient TF/CPU ships #efaa and #deff, created an artificial supernova as a warning to the Community of Planets against continuing hostilities.

The Xenon

The Xenon retreat once more

The Terraformers become self-aware

In 2913 (742), the Terraformers succeeded in luring Elena Lindisfarne Kho aboard the TF/CPU ship #efaa. Kho, the second astronaut to arrive in the Community of Planets from Earth, discovered that this TF/CPU ship, one of the last existing units built on Earth many centuries before, had apparently developed self-awareness. This ancient machine had to all intents and purposes achieved consciousness and was therefore an alien lifeform in its own right. #efaa proposed a deal: in exchange for an undisturbed retreat to the Xenon refuge offered by the Queendom of Boron, never again would the Xenon initiate an attack on biological lifeforms. Kho agreed.

Departure from the galaxy

The Paranid and Split, however, refused to abide by this agreement and sent out a joint fleet to obliterate the Xenon. Only at the last possible moment were the TF/CPU ships #efaa and #deff able to escape from the battle to safety. A short time later, both ships began their final journey into the depths of space. Their final destination remained a mystery for twenty years, only to be discovered during a mission undertaken by Lord Captain Tebathimanckatt, Ser Alman Jonferson (the founder of JSDD, Jonferson Space Dynamics Division) and Yoshiko Nehla.

TF/CPU #efaa was to be absorbed by the Ancient's presence cloud, continuing its existence inside of it indefinitely.

Terraformers and Xenon now

The involvement of the Beryll

TF/CPU #deff, however, was eventually destroyed by Yoshiko Nehla.

After TF/CPU #efaa and #deff had left the galaxy, Xenon as well as Terraformer activity became almost nonexistent. There was the occasional skirmish with less advanced descendants of the Second Fleet, but these vessels posed almost no threat to the Community of Planets and were easily destroyed.

Return of Marteen Winters

In 2932, the Jonferson-Nehla-Expedition discovered a cryogenic hibernation chamber aboard one of the TF/CPU ships, which turned out to be hibernation chamber built several centuries earlier by Dr Marteen Winters, the renegade Terraformer expert from Old Earth. Winters was successfully revived and would eventually return to the Community of Planets with Jonferson, Nehla and Tebathimanckatt.

Winters, the Yaki and the Beryll

The Community of Planets was beginning to suffer from increasing internal political and economical turmoil. It was in this context that Winters campaigned for the revival of the Terraformer project, albeit without success: neither the Argon Federation nor any other government in the Community was willing to lend their support to his case. Eventually, Winters offered his services to the Beryll, an organisation

Terraformers and Xenon now

The Invasion of Earth

specialising in the theft and trade of advanced technology. The Beryll, in fact a part of the Yaki syndicate, agreed to provide Winters with unlimited resources in return for knowledge of and access to Terraformer/Xenon technology. This mutual agreement, while highly successful, was also almost universally illegal. In order to achieve his dreams, Winters became a criminal.

As the diplomatic relations between the Argon Federation and Earth became ever more strained, despite its profound reservations the Argon government saw no other way forward than to contact Marteen Winters for technological assistance. Earth technology was far in advance of that of the Community: only Terraformer advances might enable the Community to achieve some form of parity. Unfortunately, involving Winters inevitably involved the Beryll as well: reluctantly, the Argon Federation Secret Service was forced to hand over parts of the covert operations inside the Sol system to the Beryll.

The Second Terraformer War

Even though originally planned differently, the invasion of Earth quickly became all-out war: nearly 900 years after the first, the Second Terraformer War began. The vessels used in this war were not self-aware, but were equipped with high effective weaponry, matter/antimatter drives and jumpdrives. The war came to an end when all the TF/CPU ships, fighters and drones were directed to fly through a jumpgate targeting a black hole.

Concepts

Artificial General Intelligence (AGI)

AI vs AGI: the basic differences

A typical artificial intelligence (AI) is programmed with algorithms that enable it to act only in a limited domain of intelligence, such as pattern and speech recognition, syntactic analysis, speech synthesis, automated flight control. Tasks that do not form part of the original programming cannot be performed. Conversely, an AGI is capable of finding and developing solutions for tasks that were not specifically programmed. One of the most powerful abilities of an AGI is its ability to understand the principles and methods of its own function and to modify them, either by alteration or expansion: in other words, it can modify itself.

The problem of goal drift

Any self-modifying AI inevitably suffers from a phenomenon called "goal drift", which causes an incremental change of the primary goals originally programmed into the system. This is the reason why modern AGI systems are equipped with a hard-wired mission goal circuit not accessible to internal revisions. However, even such systems as these cannot prevent goal drift completely: depending on the design VN machines capable of self-modification usually begin to develop incremental goal drift after the 96th generation or thereabouts. Unfortunately, early AGI units such as the Earth VN Terraformers were not equipped with such circuitry. Functionality to prevent goal drift was implemented entirely in software, rendering them susceptible to severe goal drift even in very early generations.

Concepts

Evolutionary algorithms and simulation

Together with many other concepts, evolutionary algorithms (EvAlgo) play a main role in automated adaptation to new tasks and domains. A virtual environment called a "sandbox" is created inside the AGI to evaluate its secondary goals (goals deriving from the main or primary goals). Next, the AGI creates millions, sometimes even billions of different possible solutions, each of which is reduced to its smallest possible functional units. Combinations of those functional units, or "atoms", are compared against the secondary goals. When all required conditions are satisfied, the newly found solution to a new task will be copied from the sandbox and implemented in the real world.

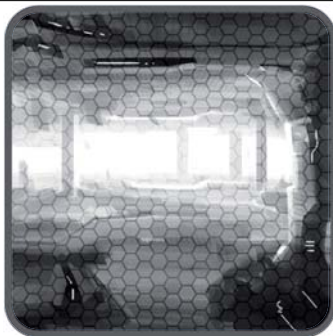
Error-prone simulation

After receiving the manipulated software update from 2115 that was intended to install the SSD (safe self-destruct) functionality, many Second Fleet TF/CPU vessels became locked in an exception, an internal state unforeseen by their designers. No longer able to discriminate between sandbox and reality, the ships consistently allowed invalid solutions that should never have left the sandbox to be implemented. The consequences were catastrophic. AGI experts call this dangerous state "digital schizophrenia".

It was not until TF/CPU #efaa achieved self-awareness and transcended its own internal logic that it was able to exit this vicious error loop which had controlled it for several hundred Earth years.

Concepts

The AGI core and consciousness



An AGI core is the central "switchboard" of a TF/CPU ship, where all higher functions are processed and all evolutionary algorithms and simulations are computed and performed. While the AGI cores of the First, Second and Third Fleet were gymnasium-sized halls filled to bursting with server racks

and electronics, latter generations of AGI core had shrunk to not much more than the size of a couple of bookcases.

Machine consciousness

AI experts suspected for a long time that consciousness is an emergent phenomenon, not bound to a certain substrate (that is, silicon or organic matter). Despite this suspicion, even after many centuries and countless experiments nobody had ever succeeded in creating an independent machine consciousness. Almost a thousand years of utterly unreproducible independent evolution were required for the Terraformers to achieve consciousness, and even after prolonged and extensive research the process remains unduplicated.



Section C: The Terraformers

Concepts

VN Terraformers and assembler drones



Assembler drones

Assembler drones are highly specialized, miniature spaceships that measure between 20 and 50 cm long and mass between 30 and 100 kg depending on their task. They are equipped with a small M/AM (matter/antimatter) propulsion system that enables them to accelerate to relativistic speeds in mere seconds. Assembler drones are very similar to messenger drones and are indeed used for message delivery between remote TF/CPU ships in addition to their standard function. Every TF/CPU ship carries several million assembler drones and is capable of producing new drones if the need should arise. As well as performing routine maintenance tasks, assembler drones can in turn construct an entire TF/CPU ship if provided with sufficient resources. Together, TF/CPU and assembler drones, form a so-called "direct mechanotronic feedback system", which is responsible both for the longevity of some of the TF/CPU ships, as well as the huge success of the Terraformer fleet, if only from a technical perspective.

Directory

Important names from the Terraformer Project

Professor Namiko Hitomi - AGI Science Team

Professor Heike Johaniss - AGI Science Team

Dr. Keiju Rubin - Lead Designer, TF/CPU #0001

Dr. Nina Lensey - Lead Designer, TF/CPU #efaa

Shermann Ruff - Lead Designer, TF/CPU #d3ca

Dr. Marteen Winters - Lead Designer, TF/CPU #deff

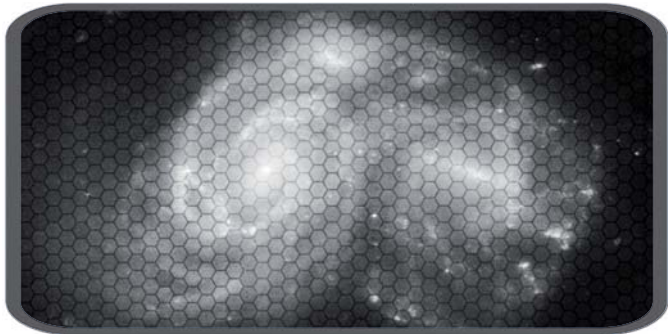
SECTION D

The Ancients and the Sohnen

Section D: The Ancients and the Sohnen

Overview

A gestalt entity



Of all the information about the Ancients, among the most important is that they are not a single species but rather a gestalt of possibly thousands of races who, over unimaginable spans of time, each surrendered their individuality to become in effect a single entity. The process was not swift, nor was it accomplished without difficulty or trauma. It took, in fact, several full galactic rotations - hundreds of millions of years - for the Ancients to achieve their present form of a virtual-physical Type III civilisation in transition to Type IV.

All the species which would ultimately merge to form the race now known as the Ancients were initially Type 0 civilisations. Their several transitions to Type I civilisation took a few hundred years; the development to a Type II civilisation would require several orders of magnitude longer, perhaps a hundred thousand years. Over a billion years would pass before they achieved their present state. Whether or not it is possible for them to ascend to the next level of civilisation depends entirely on the transition time: if,

Types of civilisation

The Kardaschov Scale

as previously, the time required increases by a factor of 1,000 then the required time would exceed the predicted lifespan of the universe itself by several billions of years. As a result, the retardation of the universe's heat death is one of the Ancients' highest-priority goals: as this level of ability seems limited to Type Vb civilisations and higher, the Ancients have concentrated all their forces on accelerating their development.

Type 0 civilisation

Type 0 civilisations are usually pre-industrial, or, at best, in an early stage of space exploration, and the civilisation is making use of only the most miniscule fraction of the total energy available to it. A relevant example of this class of civilisation would be that of Earth at the end of the 22nd century. It is regrettably not uncommon for Type 0 civilisations to destroy themselves, either by accident or design, during the transition to the next level.

Type I civilisation

By now the planet's civilisation has already begun to utilise the planet's total available energy. It rapidly colonises its own star system, making these new planets a part of its resource base. This stage frequently becomes a trap for emergent civilisations, many of which enter a state of "self-fulfilment", becoming satisfied with their progress to this point and encapsulating themselves in a virtual space without continuing

Types of civilisation

The Kardaschov Scale

their outward exploration. Such civilisations usually perish due to a dramatic change in their home star, such as a nova or supernova event.

Type II civilisation

Such civilisations are rare and encountered only infrequently. Typically already several million years old, they utilise the total available energy of their star system and have achieved true interstellar travel, often colonising planets in other systems. A Type II civilisation has survived the adolescence of its species, a turbulent time that frequently sees the demise of other young race. The chances of a species continuing to survive increases sharply at this point.

Type III civilisation

Defined as a civilisation which is capable of tapping the total available energy of an entire galaxy, they are rarely found even on a universal scale: even an excessively liberal estimate of their numbers throughout all known galactic clusters would not exceed one hundred. It is almost unheard-of for a single species to achieve this level of development: the process usually requires the merging into a gestalt of numerous races.

Types of civilisation

The Kardaschov Scale

Type IV civilisation

In theory able to tap the total available energy of a galactic supercluster, no direct evidence of such a civilisation exists; however, the presence of the Outsiders offers proof that this stage of development is hypothetically possible. It is the one of the stated aims of the Ancients to achieve this level of technology.

Type V/Vb civilisation

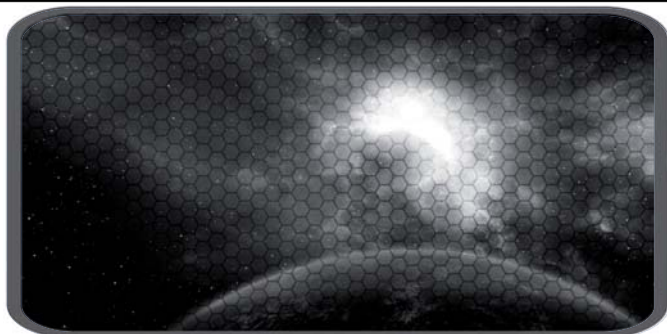
Any civilisation which had advanced to this point would have access to the total available energy of an entire universe; theoretically, it would be quite possible for them to alter some or all of the physical laws of that universe. It is speculated that the Outsiders are the sole civilisation in the cosmos yet to have advanced to this level, although it is not impossible that they might even be a Type VI civilisation whose origins lie in another universe entirely.

Type VI civilisation

A thus far totally hypothetical civilisation type which could access the total available energy of several universes, change the physical laws within those universes and even transcend the heat death of its home universe in order to exist in perpetuity. There is considerable evidence to fuel the belief that the Outsiders are in fact a Type VI civilisation.

The First Races

The Transcendence



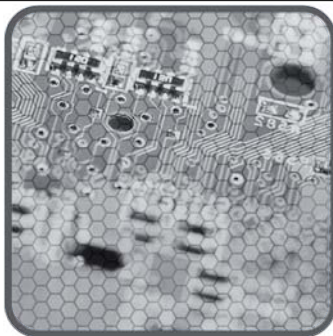
The first of those self-aware and conscious races which would much later become the Ancients emerged in a young satellite galaxy in the Virgo cluster. Over the course of many millions of years they successfully avoided self-destruction, self-fulfilment and any number of extinction level events, and, step by step, increased their level of civilisation. They first claimed the remainder of their star system before colonising the neighbouring systems; eventually, much later, they would reach the closest galaxies of the supercluster. It was inevitable that they would encounter other race in their travels: while some of these initial contacts were violent, natural selection would yet winnow out the species best suited to survive, those who could coexist peacefully within the emerging galactic community.

Much, much later, the simple "organisation" of races would become full mutual co-existence, almost to the point of symbiosis. Finally, after some 2.5 billion years of steady co-evolution, the decision was taken to yield their individual bodies to a single substrate and effectively become one in an act known as "The Transcendence".

Section D: The Ancients and the Sohnen

Computronium

The substrate of the femtointelligence



Intelligence

Intelligence is a concept that is relatively easily defined: it is the ability to plan goals and work towards achieving them, together with the capacity for introspection and self-reflection and the ability to adapt to a changed environment. Although it is te-

dious process to instil such skills to an artificial general intelligence (AGI), it is firmly within the realm of possibility. In relative terms, then, giving a computer the skills required to pass the Turing Test is easy.

Consciousness

What, though, is consciousness? Is it qualia, the selfawareness of self-awareness, or is it some inherently emergent process inextricably bound to complex, high-speed data processing systems such as the human brain? Is the case that consciousness can be created only within an organic system, or could it exist equally well on an entirely different physical medium, or substrate?



Computronium

The substrate of the femtointelligence

The migration to "virtual physicality"

Unravelling the secrets of consciousness took the Ancients three billion years. Roughly a billion years before Homo sapiens came into existence, and some five hundred million after the war with the Outsiders, the Ancients surrendered their corporeal existence to recreate themselves, including their consciousness, inside a virtual environment. The substrate they used, the physical basis of their existence, was a very special material indeed.



Of IQ and c

A well-known but ultimately irrelevant limit - for Type 0 and Type I civilisations, at least - is the theoretical maximum processing capacity per cubic centimetre of matter.

Taken together with c , the speed of light in a vacuum, it is possible to derive an upper bound for intelligence under the physical laws of this universe.

Like c , this limit cannot be exceeded; however, also, like c , it is possible to approach it closely, given the existence of a suitable substrate. In this case the substrate is not a silicon-based material, or even a processor designed at the nanometre scale: the only material capable of providing even close to the maximum theoretical intelligence is a super-

The Presence Cloud

Computronium-based simulation

dense material correctly known as 'degenerate matter' but frequently nicknamed 'computronium'. Its operating principle is not based on mere electronics but rather on quantum mechanics at the femtometre level, and as a consequence this form of intelligence, which utilises the greatest possible processing capacity in the smallest possible space, is sometimes termed 'femtointelligence'.

Life in the vacuum of space

The Ancients have existed as effectively simulations of themselves within the computronium matrix for approximately one billion years. Stars, stellar systems and eventually entire galaxies were used to create the degenerate matter necessary for the Ancients to create their new home. Key to the elegance and efficiency of this form of life is that computronium derives energy directly from a star without requiring any intervening conversion.

Computronium clouds

Computronium is deployed in a vast nebula known as a "presence cloud" which surrounds a star like a dense outer shell. Seen from a distance of several light-minutes, a star engulfed in a presence cloud has some similarities to a Dyson sphere that might be constructed by a Type II civilisation: it is a massive, system-sized sphere glowing faintly in infra-red. Observed more closely, however, and the timeless elegance of a presence cloud becomes clear: unlike a Dyson

The Presence Cloud

Computronium-based simulation

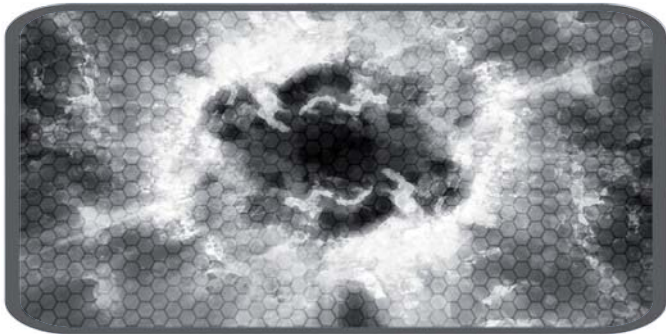
sphere, it does not need any stabilisers or auxiliary systems to support it.

At the end of the star's life the presence cloud surrounding it will be obliterated by a supernova event or simply deprived of energy as the star becomes a dwarf. Whatever the outcome, the Ancients existing within that presence cloud will not be terminated, having duplicated themselves and their amassed knowledge in a new presence cloud surround another, younger star.

Interacting with the universe

Civilisations which achieve virtualisation early - at Type I stage, for example - often become trapped in a state of "self-fulfilment". Turning their backs on the physical universe, they have no further interaction with it until it destroys them.

The Ancients long ago realised the dangers of this trap, and took great pains to avoid it. After taking the step of virtualising themselves, they then made sure to transcend their new



Section D: The Ancients and the Sohnen

The Ancients' objectives

Requirements

nature - to transcend their own transcendence - and remain in full contact with reality. They are constantly studying the universe, its more esoteric secrets - and considering the future. Their objectives are vast in scope.

Time

The Ancients' Three Great Objectives have an expected time requirement of at least 150 billion years, and it is unclear whether or not this exceeds the lifespan of the universe itself. In addition to the well-known model which describes the heat death of the universe, it is possible that even the stable elements in the universe possess a half-life and will decay before this time. It is totally impossible for life to continue under such conditions.

The Outsiders as guides

The success of all the Objectives is therefore predicated on the clarification of these issues. However, the existence of the Outsiders suggests that in principle it is possible to retard the heat death or radioactive decay of a universe, or even prevent it entirely.

The Ancients' objectives

The Three Great Objectives



The 1st Great Objective

To preserve intelligent life in all its forms throughout the universe. The Ancients are not concerned with individuals but rather with civilisations as a whole, as shown by the manner of their interaction with younger species.

The 2nd Great Objective

To retard the heat death of the universe by reversing entropy. The Ancients do not accept that their lifespan is dictated by the life expectancy of their home universe.



The 3rd Great Objective

To ascend to a Type VI civilisation or beyond. This would permit the Ancients to become, to all intents and purposes, gods, with the power to create other universes with exactly defined physical laws.

The Ancients' objectives

Secondary objectives



It remains unknown if this level of advancement is possible.

As a general rule, the Ancients endeavour to prevent intelligent races from destroying themselves or each other. They do not have a policy of non-intervention; however, they do try to keep direct intervention to a minimum. For this reason, galactic provinces and closed jumpgate networks were introduced, together with the system of Gatekeepers implemented by the Sohnen.

Another secondary objective is the eventual centralisation of all intelligent lifeforms within a single galactic supercluster.

To achieve this, the Ancients and the Sohnen use a strategy of restricting jumpgate networks over vast periods of time. This objective has the lowest priority of all and is not seen as critical in any way.

Galactic provinces

The prevention of armed conflicts

The separation of species

The main purpose of the division of any galaxy into provinces is to permit locally dominant species access to a sufficient number of sectors. The object of this is not a just distribution of space, but is rather an attempt to reduce the likelihood of war between races without hindering too greatly the expansion of any one race. Often a galactic province is exactly congruent with the sectors available through that province's jumpgates, although this is not always the case (see also "The jumpgate network").

Of galaxies and species

One estimate puts the number of galaxies in this universe at 100 billion; these each contain an average of 100 billion stars. Given these numbers, the area of control of the Ancients - some 750,000 galaxies or 75 million billion stars - seems incomparably tiny.

Some 1,300 intelligent, self-aware species are known to the Ancients, most of which originate within the collection of galaxies known as the "Local Group". This perceived imbalance of distribution is not caused by there being fewer intelligent races in other clusters but rather because the Local Group has been under much greater scrutiny for much longer than any other galactic cluster.

Galactic provinces

Probability of error

Civilisations going unnoticed

The highly dynamic nature of evolution and the rapid development of intelligent species, coupled with the sheer size under observation by the Ancients, it is almost inevitable that errors of judgement or omission frequently occur. Even quite advanced civilisations can go unnoticed for long periods of time: for example, the Ancients became aware of the Earth only when humanity developed its own jumpgate technology and began to use it, connecting to the Ancients' jumpgate network entirely by accident.

Known galactic provinces

The Milky Way galaxy, home to the Solar System as well as the Community of Planets, is known as Galaxy 810, Local Group: within this galaxy, the human province is number 71.

Province 49 of Galaxy 810 is home to the Won, a species so profoundly different from all other species in that galaxy that they must be completely isolated in order to prevent a war of mutually assured destruction, the type of conflict which almost occurred when the Khaak province (number 68) was involved in an unplanned encounter with the human one.



The jumpgate network

Overview

Jump technology

It was supposed that only Type II civilisations or higher could develop a theory of FTL travel and only those of Type III or more could successfully turn these theories into a practical design. For over 500 million years the Ancients held it to be axiomatic that the theoretical and practical complexity of FTL travel exceeds the capability of any Type I civilisation.

The Argon scientist Dr Siobhan Norman derived this axiom independently from the Ancients. Her mathematical proof, when it was published, halted all FTL research for 75 years.

Re-evaluation

Comparatively recently in the Ancients' history, several Type II civilisations were able to develop FTL drives; albeit with reluctance, the Ancients were forced to re-evaluate their long-held axiom.

In one stunning case, a Type I civilisation successfully developed the technology even before the theory was fully formulated and understood. The civilisation in question was that of the Earth, and from there the technology spread throughout the galaxy to be taken up by numerous other species, including the VN Terraformers.

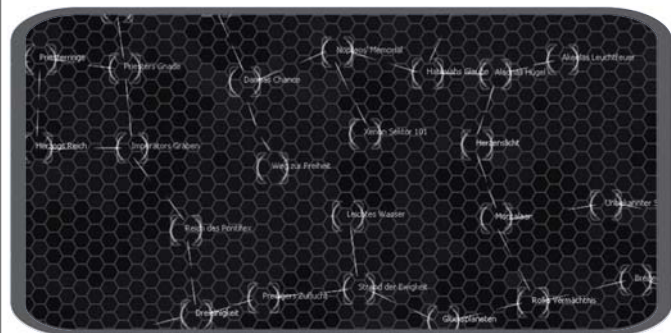
The reason for the failure of the axiom is unknown: it is possible that it was purely coincidental.

Purpose, benefits and application

The secondary reason for the rapid deployment of jump-gates throughout the galaxies is fundamentally mundane: it is the Ancients' intention to prevent as many species as possible from developing the technology themselves.

In this manner a certain degree of control over the expansion of a species may be exerted without having to resort to direct physical intervention. Species which would in all likelihood annihilate each other can be separated for sufficiently long to allow them to achieve Type II status; while after this point it is no longer possible either to separate or contain them, the probability of total interstellar war is greatly reduced.

In addition, the jumpgate networks serve the purpose of clandestinely directing the settlement of species: slowly but surely, a race is guided towards certain star systems. Given the thousand-year time span of such colonisation, it is rare for a race to realise that it is being manipulated by an external agency.



Section D: The Ancients and the Sohnen

The jumpgate network

Design, deployment and maintenance

Distribution

Jumpgates have been built and distributed throughout the Local Group for almost 600 million years. The total number of jumpgates is well in excess of ten billion: a fraction, however, of the total number of stars in the Milky Way, let alone the Virgo supercluster.

Deployment

All known types of jumpgate are self-deploying. A special type of VN probe termed a "seed" will develop into a complete jumpgate over a period of between ten and a thousand years, depending on the availability of resources, before creating several more "seeds". The process is completely mechanical in nature. While differences in design are not unknown and are predicated on such variables as location and available resources, the fundamental principles of construction remain unchanged.

Maintenance

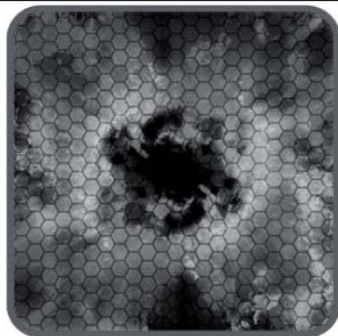
As a rule, jumpgates require little maintenance. They are designed to withstand most interference and can survive extreme environments without damage. Minor operational faults are usually corrected internally by the jumpgate itself; larger faults, most particularly in the jumpgate's core functionality, are the responsibility of the Sohnen.

Interaction

Interaction with the physical universe

Interaction

The Ancients still consider themselves as part of the physical universe, even though their virtualised nature has removed their ability to interact directly with it. Several exceptions to this case do exist:



1. The energy requirements of the presence cloud.
2. Black body radiation emitted by the cloud.
3. Radio-based or FTL communication.
4. Photon emission for communication purposes.
5. Computronium agglutination to effect gravimetric change.

Personal interaction

Individual entities (a single Ancient, as it were) within a presence cloud cannot interact with the outside universe in any way as no access is possible to the physical computronium substrate supporting their virtualised existence.

Interaction

Representatives

Proxies and agents

Larger-scale interaction is always undertaken by the Ancients' proxies or agents: the best known of these are the Sohnen, who, despite themselves being among the races known as the Ancients, declined to join in the Transcendence. The Sohnen aside, the Ancients use countless types of drones and VN probes; the jumpgate seeds fall into this category.

The Ancients remain absolutely convinced that their VN and AGI designs are completely safe; however, they do not extend that confidence to other races. In over a billion years of operation, no disaster caused by the Ancients' use of artificial intelligence, which may indeed be proof that the technology truly is completely safe.

Gatekeepers

The Right of Address

The Keepers

Every galactic province has one or more Keepers assigned to it; these sections split off from presence clouds, effectively becoming sub-entities, reside aboard a Sohnen vessel. These cylindrical vessels are also known as Keepers, as are members of races admitted to the "Hall of Light" in order to exercise their Right of Address.

The Right of Address

This right is granted to all Type 0, I and II civilisations should any proposed actions within a Keeper's sphere of influence be likely to affect them. The Right of Address is not a public mandate: certain individuals of that race are carefully selected after many, many years of intense observation.

Gatekeepers

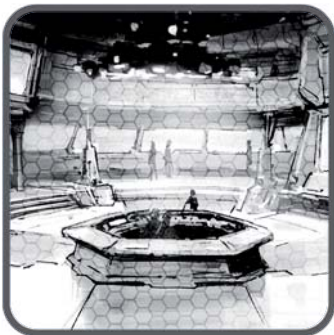
Duties

Duties

The Sohnen and the Gatekeepers are jointly and severally responsible for all organisational, logistical and technical operations involving the jumpgate network. Their other tasks include the observation and documentation of newly discovered species within their sphere of influence and the deployment of new jumpgates and jumpgate networks.

The Hall of Light

Every galactic province possesses a Hall of Light. This arena, also known as a Panopticon, is the meeting place for Keepers from different areas and the place where the race's chosen representative may exercise their Right of Address. The Hall is accessible from each Sohnen cylinder; inside, the local flow of time is slowed, although beings within the Hall do not register the change as their own frame of reference slowed by the same amount.



The Sohnen

The Ancients' Executive Branch

Origins of the Sohnen

As the self-virtualisation of the Ancients proceeded over the course of millions of years, their influence over the physical world decreased proportionately. As the purpose of the Ancients' virtualisation was not that of self-fulfilment but had a practical basis founded on the Three Great Objectives, methods were sought that would permit their interaction with the universe to continue.

At first, many types of different agents were used: eventually, about a billion years ago, it was decided that a semi-mechanical, conscious life-form should be created whose sole purpose would be function as the Ancients' agents.

The Sohnen as a lifeform

While the Sohnen are purely mechanical, they nonetheless fulfill many of the criteria used to define life. They possess self-awareness, a sense of individuality and an independent culture, and are capable of reproduction through asexual means. Sohnen qualia and intelligence are often incorrectly assumed use the same femtointelligence as the Ancients. Quite the contrary: instead of being computronium-based, the neural circuitry of the Sohnen uses utterly conventional, if highly advanced, technology. While the Sohnen remain separate, they are nonetheless considered among the Ancients: in principle able to undergo self-virtualisation, this is very rarely undertaken in fact.

The Sohnen

Accession to full Core Race status

In the few cases when a full rapport between the Sohnen and a presence cloud is required, an individual Sohnen will undergo the procedure.

Acceptance as a Core Race

Approximately 500 million years ago the Sohnen were accepted into the group of species making up the Ancient Core Races: no longer merely an executive, they now had the full status of Ancients. These Core Races are a group of civilisations representing the earliest beginnings of what would become the Ancients: with the exception of the "latecomer" Sohnen, none of these races still exists in physical form.

It is probable that the Sohnen will retain their physical form until the achievement of the Great Objectives, making them likely to be the last physical, or "real", lifeforms in the universe.

The Outsiders

Beings from beyond the universe

The physical constants begin to change

Some 1.5 billion years ago the Ancients noticed for the first that changes were slowly occurring in some physical constants: first affected were the speed of light c , the atomic fine structure constant and the proton rest mass. Individually, changes were almost insignificant, but taken together they violated the Second Law of Thermodynamics: the universe was losing energy, something that should have been impossible.

It had been speculated that changes to physical constants could occur, but it was expected to take place over tens of billions of years. The changes the Ancients observed, however, happened over only a few million years, and the evidence continued to mount up.

An outside influence

A theory was swiftly established that the observed change in physical constants was not natural in basis. As any continued change would render it impossible for life in the universe to continue, it was supposed that a Type V or even a Type VI civilisation from beyond the known universe must be responsible. The change in the physical constants, therefore, was the result of this civilisation - the "Outsiders" - attempting to draw energy from this universe.

The Outsiders

Beings from beyond the universe

Communication is attempted

For ten million years or more the Ancients believed that any war between the unknown Type V civilisation and their vastly inferior Type III civilisation would end in their annihilation. In the course of this time research was carried out into attempts to communicate to the Outsiders the existence of intelligent life in this universe in the certainty that the Outsiders would cease their harmful actions once they knew their energy source was in fact supporting life.

War with the Outsiders

The change in the physical constants, however, continued. Either the attempts at communication had simply failed or the Outsiders had chosen to ignore them. After a hundred million years of frustrated powerlessness, the Ancients finally observed the appearance of several probes the size of star systems. It was proven beyond any doubt that they were entering this universe from outside.

After two million years of single-minded effort and incalculable losses, the Ancients finally succeeded in destroying one of the probes. A hundred million beings were captured: a hundred million beings from outside the universe; a hundred million Outsiders.

The Outsiders

Beings from beyond the universe

Victory?

The captured Outsiders were placed in temporal status and transported by drone vessels to remote sites within the Local Group. The changes to physical constants ceased.

The shape of things to come

It remains unclear whether the destruction of the probe or the capture of the Outsiders was the cause of the tentative victory declared by the Ancients. One thing is certain: further confrontations with the Outsiders are inevitable.

However, an effective defence - beyond merely the element of surprise - is yet to be discovered.

Mankind

The significance of Earth

A civilisation overlooked

With every galactic rotation - some 250 million years - perhaps six new civilisations are discovered, usually Types 0 or I which have up to that point escaped the notice of the Ancients' systematic search. Earth was such a latecomer, overlooked by the Ancients until Mankind began to use the jumpgate network whose technology, according to the Ancients, no Type I civilisation such as Earth's was supposed to possess.

The Fourteenth Race

Earth had developed jumpgate technology a hundred million years early, compared to most other races. Only thirteen other Type I and II civilisations had achieved jumpgate technology in all the Ancients' billion years of patient observation.



In an effort to keep the hyper-technological newly-discovered race under surveillance, the Ancients immediately created a network of jumpgates leading to Earthlike but uninhabited worlds. In return for this munificence it was expected that Mankind would build no more gates of its own.

The Terraformers

The Great Objectives in jeopardy

The moratorium on von Neumann probes

The Outsiders notwithstanding, the Ancients consider self-replicating artificially intelligent machines as possibly the most serious threat to the Great Objectives. Their concern is that such machines could achieve effective Type II civilisation status without possessing qualia; that is, consciousness, the awareness of self-awareness. This directly contravenes the Great Objectives.

The real Terraformer threat

The Terraformers sent out by Earth, particularly the Second Fleet and its descendants, pose a critical threat to the Virgo supercluster, and, possibly, to the universe entire. If their expansion is not checked, within two galactic rotations - a mere half-billion years - they will have taken control of 95% of the Milky Way, Andromeda and M13, quite possibly destroying all intelligent life there in the process. The same fate is predicted for all other galaxies within the Virgo supercluster, and beyond.

In an attempt to learn their secrets, the Ancients began to study the design and evolutionary model of the Terraformers in detail after virtualising several thousand VN units, including many TF/CPU ships and the self-aware TF/CPU ship #efaa.

Firebreak

Suspension of the jumpgate networks

Emergency measures

In order to slow the spread of the VN Terraformers, if nothing else, all trans-stellar jumpgate networks within the Milky Way have been deactivated. Local connections and some smaller regional networks where no Terraformer activity has been detected have been allowed to remain online.

The Ancients refer to this strategy as a "firebreak", in an analogy to a strategy used in an attempt to contain forest fires. It was a decision not lightly taken, and made in full knowledge of the consequences for both the races of the Milky Way and the Great Objectives themselves.

When the firebreak will end, not even the Ancients can say.

SECTION E

The Races of the Community of Planets

Section E: The Races of the Community of Planets

Introduction

On the Taxonomy of Exomorphs

The successful categorisation of exomorphs into suitable taxa is on a level of difficulty approaching the impossible. Life on Earth itself is so complex that even now, a thousand years after the discovery of DNA, periodic reassessments remain necessary. The attempt, therefore, to impose the standard system of biological classification on lifeforms whose biochemistry bears little or no similarity to our own is one that would seem doomed to fairly almost from the start. Furthermore, we have little beyond the most rudimentary knowledge of the bio- and ecosphere in which the species evolved, and no information at all about the process of their evolution.

Even should the species in question choose to offer - in the spirit of peaceful exchange of knowledge - full scientific data about itself, it still is almost impossible to include it within the known structures of phyla or clades. For this reason, it is highly recommended that the Linnaean categorisations given on the subsequent pages be interpreted cautiously, founded as they are upon the merely superficial resemblances between the species and a similar species on Earth. It is known, for example, that the Paranid are descended from large avimorphs not unlike the terrestrial condor, hence their classification within the genus *Vultur*. It should go without saying, of course, that the Paranid are totally unrelated to condors.

Dr. Hiram Namas,
Argon Federation Polytechnic Institute

Argon

Homo sapiens

The Argon are hominids of the species Homo sapiens and are genetically identical to Terrans.

Nomenclature

It is a common misconception that the name "Argon" is derived from the chemical element of the same name, 18Ar: while both are written and pronounced exactly alike, this is, however, not the case. "Argon" refers in fact to the planet Argon Prime, which was named for Nathan Ridley Gunne, a hero and leader of that race during the First Terraformer War. The true source of the Argon's name is Gunne's middle initial, 'R', concatenated with his surname and subject to vowel shift over several centuries.

Therefore, the term "Argon" does not refer to a species per se - all Argon being of the species Homo sapiens - but refers instead to a shared place of origin in a similar way to "Terran" or "African". As a rule every human regardless of their place of origin or homeworld is referred to as an "Argon", as are even some extraterrestrials who have taken up permanent residence on Argon Prime.

History and origins

The history of the Argon is irrevocably connected to that of planet Earth.

Argon

Homo sapiens

Following the discovery of the first jumpgate network, extra-solar planets were colonised within a matter of a relatively few years; these initial colonies swiftly grew. The largest of these, on planet Taurus in the Proxima Centauri system, suffered almost total devastation in Earth year 2147 during the First Terraformer War: out of over 100,000 colonists, a scant 20,000 survived the assault.

Radioactive contamination of the ecosystem by fallout from the war eventually forced the remaining population to abandon Taurus permanently. With no way back to Earth the search for a new home planet was forced upon them; in 2184 the colonists settled on an Earthlike planet, Sonra IV, known familiarly as simply "Four". Approximately sixty years later and after the successful completion of the resettlement program, "Four" was renamed "Argon"; this would later change to "Argon Prime" after the foundation of the Argon Federation to distinguish this planet from other Argon worlds.

Biology and anatomy

Argon are bipedal hominids of the species *Homo sapiens*. They remain genetically identical to their Terran ancestral stock: the comparatively short period of separation of 1,000 years is not sufficiently long to permit the emergence of a subspecies.

There are little to no physiological differences between Argons and Terrans. There exist, however, some external char-

Argon

Homo sapiens

acteristics common to most if not all Argon which go together to form the "Argon archetype": the tendency to straight, black hair, a slightly darker shade of skin than most Terrans and an above-average height.

A typical Argon may expect to live for approximately 110 Earth years, as may their Terran counterpart. This is due mostly to advanced medical science, the easy ability of high-quality food and a heightened level of health awareness promulgated by their culture.

Language, culture and religion

The official language of the Argon Federation is a simplified of Japanese known as "Neo-Ancient Japanese"; it is also commonly used as a trading tongue by non-Argon members of the Federation. In addition, most Argon still speak English, many natively.

Argon society is liberal and founded upon strong social principles. They have no fear of contact with new races or lifestyles and are tolerant of different worldviews and philosophies; however, they are universally willing to fight to defend their own way of life, to the death if necessary.

Given the advanced level of science and technology in the Argon Federation, it is perhaps unsurprising that religion has become almost unknown. Approximately half of all Argon would call themselves "spiritual", though they do not believe

Argon

Homo sapiens

in any specific deity; most of the remainder categorise themselves as atheist.

Government

The Argon Federation is a centralist parliamentary democracy. The head of government is the Prime Minister who is responsible for the political direction of the Federation during his tenure, which lasts 4 jazuras (approximately 5.5 years). He may not seek re-election after this term.

Distribution

Some 12 billion Argon dwell on 39 Earthlike worlds. Of these, 28 belong fully to the Argon Federation' the other 11 are divided between the Free State of Solara (Aldrin) and the Hatikvah Free League. It is common for non-human members of the Community of Planets to refer to Terrans as "Argon".

A few of the most important argon Planets are Agrippina, Argon Prime, Demeter, Desolum IV, Ledda, Montalaar, Perfect X, Sandwell and Shipfall.

Boron

Sepioteuthis nishalaensis

The Boron are a subaquatic race in class Cephalapoda.

Nomenclature

The name "Boron" is entirely derived from Neo-Ancient Japanese: the Boron themselves use a name consisting of clicks and pheromones which is utterly unreproducible in any other way.



The origin of the word "Boron" is itself uncertain: some scholars consider it to be an somewhat disrespectful comment on the nature of this pacific race.

History and origin

The Boron evolved on a predominantly oceanic world named !Ni-!Sha-!La - or, more simply, "Nishala". It was always, and remains, the seat of government and the most important planet of the Queendom of Boron.

By nature completely pacific, before the Boron's development of space travel there was not a single incidence of aggression between any members of the race, and hence their total lack of military development. Roughly 50,000 Earth years ago the Boron were visited, and to some degree intellectually elevated, by another species calling itself "Helpers".

Boron

Sepioteuthis nishalaensis

This race, still unidentified but categorically neither Ancient nor Sohnen, left without trace a couple of generations later, leaving behind a legacy of knowledge and technological advancement that permitted the Boron to become a fully spacefaring species. In turn, this led to Nishala being discovered by other, more adversarial species, such as the Split, at which point, forced by circumstance, this peaceful race developed first the ability to defend itself, and then to go on the attack.

Biology and anatomy

Borons possess six main tentacles, of which four are larger and stronger than the others; in addition they have a varying number of smaller tentacles, called "swarmers". Mature Boron are capable of interlocking the few bones within their main tentacles, giving them the ability to hold and manipulate objects. Their body has a method of propulsion similar to that of a terrestrial squid: liquid is taken in through their gills and expelled with force through a siphon at their rear.

The species possesses three genders: male, female and Lar. Although not fully necessary for sexual reproduction, the presence of a Lar during mating is greatly valued.

Boron have a life expectancy of around 35 Earth years.

Boron

Sepioteuthis nishalaensis

Language, culture and religion

The Boron language consists of two equally necessary components. Only one of these is audible, formed from long sequences of clicks which travel for long distances through the water in a manner similar to terrestrial whalesong. The other component is pheromonal: Boron constantly release clouds of pheromones in which memory engrams are encoded, to be detected by other Boron and deciphered at a subconscious level in a process known as "tasting".

The amount of information that may be transmitted in this manner is vast: there are 911 basic pheromones which may be combined almost infinitely. Such pheromone clouds persist in the water for several years and remain comprehensible for their entire duration.

There is a similar bicameral divide within Boron culture. Boron dwelling deep below the surface of the Nishala's oceans prefer a more traditional way of life, in groups of three known as triads; pelagic Boron, however, tend to embrace a more modern, technological lifestyle. These two groups coexist entirely peacefully, as each views the other as enriching their own lives.

Boron have no organised religion, nor do they believe in an omnipotent creator or other deity. Many do, however, believe that after death they will live on within the presence cloud of the Ancients.

Boron

Sepioteuthis nishalaensis

Government

While officially a monarchy controlled by a regnal Queen, the Boron nonetheless have an elected parliamentary democracy and a government which is responsible to it. On account of their traditional perception of trustworthiness, the majority of both the parliament and the government are made up of third-gender, Lar, Boron. The resultant "Larocracy" is not merely tolerated but actively welcomed.

Distribution

There are roughly 46 billion Boron in the Community of Planets, making them numerically its largest race. However, almost 75% reside in the depths of the oceans on planet Nishala, and the remainder occupy a mere handful of Boron-colonised worlds or the oceans of planets belonging to other races. A particular example is the Argon world "Perfect X": one of its oceans is known simply as "Terrific" to the two billion Boron who live in it.

Important planets in the Queendom of Boron include Nishala, Jamshala, Myadedisha and Mashamasia II.

Khaak

Unclassified (order Bilateria)

The Khaak (occasionally "Kha'ak") is a still-unclassified species possessing characteristics of birds and insects but distinct from both.

Nomenclature

The word "Khaak" is a word from the Split language that refers to a creature from their mythology whose young inhabit the bodies of Split children, eating its way slowly and painfully out of the child. According to the legend the growing larva will then seek out another suitable host child, enter it and begin the process again.

Although the race now known as the Khaak bear no resemblance to the parasite depicted in legend, the name quickly found acceptance within the Community of Planets.

History and origins

The Khaak are not members of the Community of Planets and did not enter it through the jumpgate network: it is in an area of space referred to by the Sohnen as Province 68 in Galaxy 810. The name of their home planet is unknown; here, the Khaak live on huge floating islands formed from the bodies of millions, sometimes billions, of their own dead.

Khaak

Unclassified (order Bilateria)

They became aware of the Community of Planets as a result of Project Providence, an Argon research project attempting to develop a gateless jumpdrive, and used their own technology to launch an unannounced attack.

Biology and anatomy

Neither bird nor insect, the Khaak possess some attributes of both. They are some 75-80 centimetres in height and stockily built, are covered completely in brown body armour and have two dark-green iridescent and slightly transparent wings. These are not used for flying under gravity: they are used instead together with the tail to permit a creeping locomotion.

Language, culture and religion

Gestural communication and chemical signalling are the bases of Khaak communication.

There is, however, also a complex artificial symbology used to pass information either digitally or by focused microwave transmission.

Khaak

Unclassified (order Bilateria)

To date it has not been possible to decypher intercepted Khaak data transmissions. Video transmissions, however, have proven less intractable, but only show images that resemble the interior of a busy beehive. It is believed that the "waggle dances" performed by the Khaak visible in the picture are the messages themselves.

About Khaak culture absolutely nothing is known. From their behaviour it is difficult to determine a recognisable analogue, prompting some Argon exobiologists to comment on the "fundamental impenetrability" of the modes of thought of extraterrestrials.

While it is proof that individual Khaak do not possess consciousness or general intelligence, taken as an entire race, however, with a communal or hive mind, it is possible to posit the existence of qualia.

Government

Nothing to date suggests that the Khaak have any form of government in the accepted sense. It is likely, however, that in common with other eusocial species a functional hierarchy exists divided by caste, such as Thinkers, Builders, Nurses and Workers/Warriors. Whether or not a central authority exists - similar to the Queen in a terrestrial insect colony - remains a hotly-debated subject among the scientists studying the Khaak.

Khaak

Unclassified (order Bilateria)

Distribution

Of their natural habitat, the number and disposition of their colonies and the distribution of the Khaak, nothing is known.

It is highly probable, however, that their home planet was affected by the "Front", the gamma-ray burst emitted as a result of the destruction of star Black Hole Sun by the Xenon Stellar Manipulator in the Earth year 2913.

Paranid

Vultur inflatus

The Paranid are a triocular species known equally for its profound understanding of mathematics and fervent religious fanaticism.



Nomenclature

Morphological differences render humans incapable of properly pronouncing the name of this race: "Paranid" is a human approximation of this true name, which means "holy warriors". The term "Paranid" entered the trading tongue only some two hundred years after first contact.

History and origins

The homeworld of this species is Paranid Prime, a planet consisting mostly of arid desert. The Paranid dwell in artificial cave networks beneath the surface itself: these may be as much as forty kilometres in depth and range over thousands. It is usual for all Paranid to be conceived in the Cathedral of the Pontifex, where they will also later hatch.

The ancestors of the Paranid were capable of flight, and this ability was lost around the time of the first historical records, and the central element of their mythology, the legend of the "Reclamation of the Skies", is one of great importance to the

Paranid

Vultur inflatus

Paranid. It deals with their discovery of mathematics and, subsequently, technology, which gave them the means to construct aircraft to give them back sovereignty over the skies of their world and, ultimately, carry them beyond into space.

Biology and anatomy

Paranid are often classified as humanoid, given their apparently standard five-membered body configuration (two arms, two legs, head). They reach an average height of 250 centimetres and can weigh up to 200 kilogrammes.

The atrophied remnants of their former flight-capable wings can be seen in the conspicuously long arms which extend vertically down towards the ground. Each arm has four major sections jointed in three places and can develop significant force. Their hands - that is, their claws - each have eight multi-jointed fingers. Their legs curve inward, resulting in a wide, striding gait.

The heads of the Paranid are dominated by an elongated snout - almost a trunk - and three protruding, milky eyes, the pupils of which are difficult to discern.

Each eye can be moved independently and has its own optical cortex, giving the Paranid a considerable visual depth of field: they can resolve objects at considerable distance while keeping small, close objects in full detail.

Paranid

Vultur inflatus

The Paranid brain is also divided into several distinct hemispheres, enabling them to think simultaneously at different levels. This results not only in their highly developed mathematical and analytical skills but also their degree of spatial coordination, unmatched by any other known lifeform.

The species has 11 genders: while not all of these are necessary for any individual act of reproduction, the combination of parents will affect the development of the young.

A larva hatches from a fertilised egg some four Earth months after laying and immediately spins its first cocoon, in which it will develop for a further three Earth years. Adult Paranid are capable of spinning such a cocoon at any time and entering a prolonged state of suspended animation.

Paranid can tolerate the vacuum of space without protection for up to forty minutes, and may survive for over an hour before finally succumbing to hypothermia.

Paranid

Vultur inflatus

Language, culture and religion

The Paranid language, like their number theory, is based on a complex tripartite system and is commonly known as 'triplet-speech'. While Paranid can speak Neo-Ancient Japanese without difficulty, it is physiologically impossible for Argon to learn to speak the Paranid language; learning to understand it, however, is quite feasible.

Their culture is best characterised by the term 'moderate individualism': each Paranid considers itself to be part of a greater whole, but also is fully aware of itself as an independent entity within that whole. Religion permeates their daily life at every level, seeing themselves, as a result of their own anatomy, the chosen people of an unknown teleological God which they believe to be the highest expression of space-time itself within the three visible dimensions.

Government

A religious patriarchal autocracy exists, led by the Pontifex Maximus Paranidia, who has control over the fate of individual Paranid at every level. He is supported by a widespread religious network of High Priests and other assorted dignitaries.

Split

Homo hodiensis

The Split is a humanoid species from the Community of Planets, best known for their short temper and fiery disposition.

Nomenclature

The precise origin of the name "Split" is unclear. It is not a loan word from the Split language itself, yet it refers directly to the same word in the trade language.

History and origins

Legend states that the Split come from a long-lost planet named Hodie which was devastated and made uninhabitable by internecine global thermonuclear war, and since fleeing their homeworld they have colonised barren planets to continue their conflicts between the stars. Whether or not planet Hodie in truth existed is a matter for contention even among the Split.

Equally precarious is the historical authenticity of the purported First Patriarch of the Split Ghus t'Gllt, who, it is told, reunited his scattered and mutually estranged people, discovered the scientific abilities of female Split and introduced the custom of "bridles". It is certain only that these events occurred: whether they were the result of direct action by Ghus t'Gllt or others among the several hundred that have been remains shrouded in the darkness of history.

Split

Homo hodiensis

Biology and anatomy

Split are exceptionally human in appearance, with the main difference being the addition of an extra digit on each hand. Males tend to be squatter and sturdier, averaging around 180 centimetres in height, while female Split are usually a few centimetres taller, slender and ascetic.



Despite their outward appearance, Split are in no way either anatomically or genetically compatible with humans as their chromosomes are not based on DNA. This also precludes any possibility of inter-species reproduction or hybridisation.

The average lifespan of a male Split is under 50 Earth years, while a female may expect to live for over 80. This great disparity is due mainly to the aggressive and dangerous lifestyle of most Male split and the fact that they rarely attend to their health.

Split

Homo hodiensis

Language, culture and religion

Split language consists of a spoken component supported by a wide sign language which transmits mostly emotional content but also threats and often insults. While non-Split can learn the spoken language, without six digits on each hand it is not possible for humans to learn the sign language, with the exception of a small number of five-fingered gestures.

Culturally, the Split are a feudal patriarchy; they have not, however, managed to achieve the relative stability enjoyed by other well-known feudal systems. Although they enjoyed a species-wide growth during the prehistoric reign of the mysterious First Patriarch of the Split, Ghus t'Gilt, the Split began to fragment once again soon after and eventually returned to their traditional state of chaos.

Religion is unknown to the Split: among them, the most common opinion of religion is that it is merely the following of an outdated superstition, and is treated as such. Almost no Split still give credence to the "beasts of the sky", although this belief was widely-held until just before their era of space travel began.

Government

The Patriarch of All Split maintains a dictatorship over the smaller Patriarchies within his realm.

Split

Homo hodiensis

Since he is not elected to office, as well as attending to the usual matters of government and state he must constantly defend himself from coup attempts. The average term of a Patriarch of All Split is three years; succession is almost always by "dead man's boots".

Distribution

Throughout the entire Community of Planets, the Split number approximately a mere two billion, spread over nine planets and numerous space stations.

Teladi

Varanus carpolucror

Teladi are an intelligent race of lizard analogues and one of the founding members of the Community of Planets.



Nomenclature

The name "Teladi" is derived from the word "Thechlachi", one of a hundred or so words that comprise the races so-called 'eggpeak', an innate language possessed by egglings which permits communication with other Teladi from the moment they hatch.

History and origins

The Teladi race originates from the planet lanamus Zura, whose numerous marshes and shallow coastal waters offered their ancestors both safety and a rich supply of prey. Shortly after the development of space flight a jumpgate was discovered, and they began quickly to explore the jumpgate network and establish colonies beyond their home system. Unfortunately, due to an unforeseen restructuring of the jumpgate network contact with lanamus Zura was lost, but "the old world of dreams" never forgotten by the colonists. A way back to their home was discovered only many hundred Earth years later.

Teladi

Varanus carpolucror

The Teladi colonists discovered that all fertilised eggs hatched exclusively female young: despite much intensive genetic research, this situation remained unchanged. For this reason, during the entire period of the colonies' separation from Iamamus Zura, all eggings are essentially female clones of their parents.

Biology and anatomy

Teladi are lizard analogues bearing some similarities to certain Earth species. These similarities are entirely superficial, however, as Teladi chromosomes are not DNA-based.

Their bodies are entirely covered by thick armoured scales which are each roughly hexagonal in shape. While some colour variance exists, the most common is a medium green known by the Teladi as "scale plate green": all adult Teladi have a natural affinity for this hue, and it is for this reason that it is frequently found in Teladi environment.

They are on average 150 centimetres tall and possess two arms and legs each with five-digit claws with rudimentary webbing, which makes them strong natural swimmers.

Teladi

Varanus carpolucror

Upon hatching, the eyes of Teladi are a pale yellow; this colour changes with age to a dark red. Their eyes have a visible cornea as well as nictitating membranes and eyelids. Almost all the vital organs are duplicated several times: for instance, Teladi have two stomachs and three hearts. This makes them very resilient and able to survive even severe bodily trauma.

Their lifespan is, of course, limited. While in principle a Teladi can achieve any age, most eventually lose the desire to live and begin to refuse food in order to die. The average life expectancy is 250 Earth years, although the oldest known Teladi was 400 Earth years old.

Language, culture and religion

There is a distinct dichotomy between the culture of the planet-bound Teladi of Ianamus Zura and their space-faring counterparts in the Community of Planets. While the former lead a life-affirming, diverse existence in which philosophy and the Arts continue to play a fundamental role, the same cannot be said for the latter. An additional distinction between the two groups is that Teladi in the Community of Planets do not have a family network as those on Ianamus Zura do due to the complete absence of males.

Teladi

Varanus carpolucror

Government

The planet Ianamus Zura possess a parliamentary democracy, while the Teladi in the Community of Planets maintain a system more akin to a major corporation: it is led by a CEO (Chief Executive Officer) who sets the overall policy of the Company but is responsible to a Board of Directors.

Distribution

There is no information about the population of Ianamus Zura; however, it is known that the number of female Teladi in the Community of Planets numbers approximately 16 billion, spread over 11 planets and a large number of space-based installations.

The three most important Teladi planets are Ianamus Zura, Platinum Ball and Compound Interest.

Wenendra

Unclassified (order Cetacea)



The Wenendra are an aquatic lifeform whose homeworld is somewhere within the Community of Planets; its exact location, however, is known solely to the Boron.

Nomenclature

"Wenendra" is a loan word from the Boron language and referred originally to an extinct marine mammal that dwelt in the primeval oceans of Nishala.

There is only a vague similarity between the now-extinct creature and the Wenendra.

History and origins

It had long been suspected by exobiologists that another, unknown, intelligent species existed within the Community of Planets, but despite repeated searches it remained elusive.

Wenendra

Unclassified (order Cetacea)

It was only in Earth year 2923 that a Boron scientific expedition to chart an uninhabited water planet on the edge of sector Queen's Space made the discovery of the Wenendra.

The Wenendra are highly intelligent but have neither advanced technology nor the capability for space travel, thus the reason for their belated discovery. The Boron Ministry of Advanced Ethics decided in Earth year 2931 to offer the Wenendra access to advanced technology and knowledge, should they desire it, an offer the Wenendra accepted.

Biology and anatomy

Growing up to 50 metres long and massing up to 300 tonnes, the Wenendra are marine mammals similar to the well-known whales of Earth. They live in large herds and have no natural predators. Despite their high intelligence the Wenendra are incapable of fine-scale interaction with their environment as they possess neither hands nor fingers.

A notable feature of this species is the "signal", a bioluminescent area of the head, which can be made to flash rapidly for the purpose of communication.

Wenendra

Unclassified (order Cetacea)

Language, culture and religion

If it were at all possible, the Wenendra are an even more pacific race than their mentors, the Boron. Because of this, the Queendom of Boron decided to keep secret the existence of the Wenendra for as long as possible, as this peaceful race has no way to defend itself from exploitation or destruction by other members of the Community of Planets, and the Split in particular.

Wenendra communicate primarily through changes in brightness to a bioluminescent body in their head. Infrasound is also used to communicate certain information over long distances.

All that is known of Wenendra religion is that it involves a Creator personality. During first contact, the Boron explorers were faced with the extreme difficulty of proving that they were not in fact that very entity.

Government

The Wenendra know no government in the usual sense. Decisions are voted upon by the general population, including those recently enfranchised: the approach is perhaps best described as 'direct democracy', and as a result even the simplest of questions can require much time before an outcome is determined.

Wenendra

Unclassified (order Cetacea)

The Boron Ethical Council suggested that the Wenendra might establish a quorum of elected elders; however, a final decision on this was postponed indefinitely.

Distribution

The Wenendra live in the oceans of a world without official designation. There is no reliable population information due to the non-technical nature of the Wenendra and their large body size; however, Boron experts postulate a population of 200,000 at most.

SECTION F

Noteworthy Historical Figures

Section F: Noteworthy Historical Figures

Brennan, Kyle William

Biography

Brennan, Kyle William

(* 19th January 2873, Wellington, New Zealand, Earth; † unknown)

Formerly a Captain in the USC; later an entrepreneur in the Community of Planets.



Early biography

Kyle Brennan was the second child of William Rohan and Lynette Brennan, a fully contracted couple. He had two sisters: Sherie Lynette (b. 2870) and Chris (b. 2879).

After an uneventful early childhood, at the age of 14 he spent a holiday in Twelvetowns on Mars where he met and was befriended by several USC pilots. Fascinated by their stories, he determined to become a pilot himself, a goal he would consistently pursue and eventually achieve.

Assignment to the ATF

After completing his training he was assigned to the ATF whose remit it was to prevent the growing abuse of AGI technology. With the rank of ATF Major he had the authority to plan and implement his own missions.

Brennan, Kyle William

Biography

It was during one such mission that he first encountered Elena Kho, whose quick mind and confident ability impressed him immediately.

The Interplanetary Patrol Service

In Earth year 2903, one year after leading a successful campaign against AGI replicators, Brennan was transferred to the USC and given command of a USC patrol cruiser. In 2904 Elena Kho, whom he last saw two years previously, was posted aboard.

Kyle Brennan, test pilot

In 2911, Brennan requested a transfer from patrol duty to the SPAARF project, a research and development team attempting to create a functioning jumpdrive. His request was approved. However, despite his outstanding credentials, he was made only the standby pilot for the initial manned test flight: the team's preferred candidate was a pilot named Yihako Edell. As Edell fell ill four days before the flight, Brennan was moved up to replace him.

Brennan, Kyle William

Biography

The test failed spectacularly. The jumptunnel unexpectedly formed an connection to a previously unknown gate and collapsed, leaving Kyle Brennan stranded in an unfamiliar part of space inhabited by alien races and the descendants of several long-lost human colonies.

Arrival in the Community of the planets

Although Brennan is hunted first by all people of the community of the planets, he succeeds, finally in finding Argon Prime a safe harbour on the planet. Short time later he is found by Elena Kho whose spacecraft became severely damaged with a crash-landing on argon Prime.

Together with Elena and representatives of the Goner Brennan can prove, really from as lost valid planet earth to come.

With the help of the impulse-technically very advanced X shuttle Brennan short time later can repulse an attack the Xenon what introduces the status of a war hero in him.

Personal life

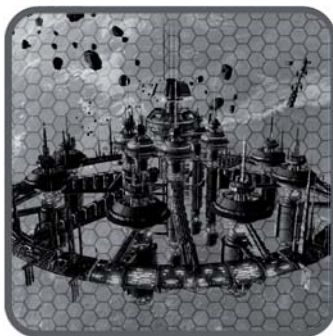
When he realised that a return to Earth was unlikely for the foreseeable future, Brennan began a relationship and even-

Brennan, Kyle William

Biography

tually contracted a marriage with the Goner Ninu Gardna. They had one son, Julian Gardna and personal differences mean that the marriage was extended only once.

Exercising her right under Argon law, Ninu insisted on raising her son alone: after some initial reluctance, Kyle eventually accepted her decision.



The TerraCorp

Brennan was increasingly obsessed with the desire to see Earth once more, and TerraCorp, a fully incorporated company under Argon law, was the manifestation of this desire. Its primary remit was to rediscover the goalless jumpdrive technology that was lost with the destruction of the X-Shuttle and the Getsu Fune.

After ten years of ultimately fruitless effort, TerraCorp expanded into more general technology; it was about this time that Elena Kho left the company.

Brennan, Kyle William

Biography

Later years

The Battle of Omicron Lyrae saw this old hero risk his life once more to protect the Community of Planets against a Khaak invasion force. Kidnapped by the Khaak, after his rescue he remained in a long coma before eventually making a full recovery.

Earth

Having yearned so deeply and for so long to return to his home, once contact with Earth was re-established Brennan was initially reluctant to go: his decades-long personal crusade notwithstanding, now it was possible to return he found he had no desire to do so.

Eventually, forced by his curiosity and a sense of duty, he returned home, devoting himself from that point on to improving the diplomatic relations between Earth and Argon Prime that would swiftly turn sour during the Terran Conflict.

What befell him during the Second Terraformer War and his whereabouts since then remain unknown.

Gaffelt, Noah

Biography

Gaffelt, Noah (* 73.500, Argon Prime; † 23.563 Argon Prime) Argon historian, philosopher and long-term Keeper Eminent of the Goners.



Youth and education

Noah Gaffelt was the older of two children born to the contracted couple Brent Mydna and Tora Gaffelt; his younger brother Jonah would be born on 29-502 NT.

His fascination with the history of Argon Prime was awakened at the age of eight when he first heard the legend of Lost Earth. Aged nine he was given access by one of his father's former peers to the Book of Truth, a historical record kept by the Goners but open to all those who are interested. Noah's mother was initially sceptical of this development as she believed that the Goners were religious in nature and would attempt to exert influence over her young son, but her husband managed to put her fears to rest.

Over the next few jazuras Noah would spend most of his spare time seeking out and attempting to collate as much knowledge about the early history of the Argon Federation and the Community of Planets as he could, and his work enabled him to win a school prize on the subject "The Myth of Earth".

Gaffelt, Noah

Biography

and the Community of Planets as he could, and his work enabled him to win a school prize on the subject "The Myth of Earth". His uncanny ability to uncover obscure knowledge impressed the teachers, who over the jazaras lent their support to his dreams.

Studies on Argon Prime

Noah went up to the University of Argonia City in 515 NT to read for a degree in history and philosophy. To supplement his income he found employment as a guide at the Argon Museum of the Guild of Founders; however, following his repeated criticism of the museum's administration over numerous historical errors in its public displays, by 516 NT he was unemployed once more.

An unexpected opportunity

After his dismissal from the museum Noah realised that the majority of Argon were reluctant to accept their Earthly heritage. He launched a campaign on ArgoNET in an attempt to change public opinion which was generally ignored.

Almost the sole interest in his campaign is shown by the Goner, who contacted the young man to invite him to continue his studies at the Goner Temple. He accepted.

Gaffelt, Noah

Biography

The Goners' offer

Although he accepted their offer, Noah was troubled. While he knew that the Goner were not a religious sense but rather a "knowledge community", he was unaware that their headquarters was styled a "temple" and this revelation gave him pause. The Ministry of Education for the Argon Federation eventually confirmed, however, that despite its unusual nomenclature the so-called "Goner Temple" was indeed a fully accredited university.



Arrival at the Goner Temple

Noah received his doctorate from the Goners at the age of 22, making such an impression on his supervisors by his tireless and painstaking approach to research that he was immediately offered a place with the Goners as a Keeper of Truth. He accepted

without reservation and over the following jazuras came to be seen as indispensable to the community.

Appointment as Keeper Eminent

After the death of Otaku Diraam in 534 NT, Noah Gaffelt was unanimously elected to the position of Keeper Eminent by his peers.

Gaffelt, Noah

Biography

Recognition of the Goners

When Kyle Brennan and Elena Kho appeared in the Community of Planets in 546 NT, it was immediately evident to Noah Gaffelt that they were from the lost planet Earth. With skilful use of his contacts within the Argon government he was able bring the two newcomers safely to the safety of the Temple. As a result of these actions and with the assistance of Permanent Secretary Nan Gunnar he negotiated an agreement that would, at last, bring the Goners the full social recognition they had desired.

The Argon accept their heritage

Over the next twenty jazuras Noah persuaded the population of the Argon Federation of the value of their heritage. Little by little popular opinion shifted until only the most radical fundamentalists denied that Argon Prime was founded by people from Earth.

Death

Noah Gaffelt was killed on the 23rd tazura of the year 563 NT during a Split attack on his vessel.

Gardna, Julian

Biography

Gardna-Brennan, Julian

(* 117.547 Argonia City, Planet Argon Prime) Former adventurer; now in service with the Argon Federation.



Childhood and youth

Julian Gardna-Brennan was born on the 117th tazura of 547 NT, the son of Kyle William Brennan and Goner Ninu Gardna. His half-brother Carl is eight years his junior.

Personal differences led to his parents separating when Julian was two years old. After first returning to the sanctuary of the Goner Temple, Ninu would eventually begin to travel throughout the Community of Planets looking for a place to settle, taking her young son with her.

In 558 NT, a series of unfortunate circumstances led to them taking refuge on Turpentine Station, the headquarters of the Yaki criminal organisation.

Despite his mother's firm opposition, Julian quickly made friends with children from Yaki families, including some who were older than he.

Gardna, Julian

Biography

First crimes

Julian and his friend Bret Serra eventually formed a criminal partnership. Initially they engaged solely in cybercrime, though after a time they began to steal spacecraft. Even before he was a legal adult Julian was involved in several armed robberies.

Arrest and rehabilitation

It was during a failed spacecraft theft that Julian was arrested by station security and sent to Argon Prime to be imprisoned.

Ban Danna learned of Julian's incarceration and began cautiously to wonder if he were the son of Ninu Gardna and Kyle Brennan, two friends he had long considered lost. His hopes rewarded, Danna offered Julian the opportunity to rehabilitate himself instead of going to prison, an offer the young man accepted.

Military service

Julian saw considerable action between 563 and 565 NT during the prolonged conflict with the Khaak. He was also involved in operations against the Yaki, his former friends and allies; however, in order to ensure his mother's safety he would never disclose the location of Turpentine Station and often used his father's family name for the same reason.

Kho, Elena Lindisfarne

Biography

Kho, Elena Lindisfarne

(* 26th August 2884 Tenjiang, China, Earth; † 8th February, 2948) Formerly a Lieutenant-Colonel in the USC; later Earth Ambassador of the Community of Planets.



Childhood and youth

Elena was the only child of Hea Kho and Adrian Enescu. She showed an aptitude and enthusiasm for science and space exploration at an early age, and at the age of 20 graduated with honours in exobiology. A short time later she decided to join the USC.

After her year of basic training and with no flight training at all, Elena took part in a pre-emptive strike mission against an illegal AI research outpost located at the bottom of one of Europa's oceans. In command of this mission was Major Kyle William Brennan, a man with whom Elena had an instant rapport.

The Interplanetary Patrol Service

After two years of intensive training Elena had become a fully qualified pilot, licensed and able to command or to take control of almost any spacecraft, whether military or civilian.

Kho, Elena Lindisfarne

Biography

In search of adventure - in the opinion of her commanding officer - she volunteered for the Interplanetary Patrol Service and shortly thereafter was on board a ship under the command of Kyle Brennan, whom she had not seen since the Europa mission.

Of Elena and Kyle

Elena and Brennan had an instant understanding and began to work together as an almost ideal team: so complete was this relationship and so close their personal friendship that their colleagues in the USC nicknamed them "the lovebirds". A brief, intense love affair did take place between the two despite the eleven-year age difference; while it ended amicably and by mutual agreement, both Elena and Kyle wondered for a long time if their decision had been the right one.

After eight years in the IPS, most of which she spent under Brennan's command, Elena left the team for the SPAARF project. This decision had as much to do with her taste for adventure as it did about avoiding friction with Brennan's new girlfriend Annabel Carter.

Arrival in the Community of Planets

When Kyle Brennan was lost during the first test of the experimental jumpdrive, Elena moved heaven and earth to lo-

Kho, Elena Lindisfarne

Biography

cate and rescue her friend and former commander.

She arrived in the Community of Planets aboard the jump-drive prototype vessel Getsu Fune to find an area of space populated both by extraterrestrials and the descendants of the long-lost Earth colonies. Although she eventually located Brennan, neither were able to return to Earth.

Personal life

Elena Kho contracted with the Argon diplomat Ranom Thebes, during which time she gave birth to her only child, a daughter named Saya. The contract was allowed to lapse.



TerraCorp

Brennan's leadership eventually would begin to take TerraCorp in directions to which Elena was deeply opposed. As a result, after ten years at the company she helped to found, she and Brennan agreed that it was time for her to leave.

Kho, Elena Lindisfarne

Biography

Earth

32 years after her arrival in the Community of Planets, contact with Earth was re-established. Shortly, Elena decided to return to the Solar System and settled on the tranquil world of Eris to enjoy a peaceful retirement.

The Second Terraformer War

Her peace was shattered, together with that of the entire Solar System, by the outbreak two years later of the Second Terraformer War in the form of major assaults on Venus, Mars and most especially on Earth.

Recalled to service by the USC and promoted to the rank of Lieutenant-Colonel after 35 years as a civilian, Elena was far from happy; nonetheless, she recognised that duty required her to accept the position she was given as Leader of the Special Task Force. With the Paranid Tebathimanckatt, she discovered the Terraformers' strategy and devised a plan that would see them defeated.

Death

Elena Kho died in service in Earth year 2948 while luring the final swarm of assembler drones through a jumpgate which had been forced to connect to a black hole. She was 64 years old.

Kho, Saya

Biography

Kho, Saya (* 14.550 Argonia City, Argon Prime, † 5th February, 2948, aboard the Torus Aeternal, Earth) Businesswoman; adventurer; later a secret agent for the Community of Planets.



Childhood and youth

Saya Kho was the only child of the brief marriage between Argon diplomat Ramon Thebes and Elena Lindisfarne Kho. After her birth on the 14th tazura of 550 NT she spent the first two years of her life on planet Hewa in the Hatikvah Free League. In 552 NT she and her mother moved to Argon Prime; Saya formed a deep emotional attachment to this world and would make many friends here.

Service in the Argon Fleet

Following the first attacks by the Khaak race on the Community of Planets, Elena decided to enlist in the Argon Fleet. Over the course of her career as a combat pilot she would achieve the rank of Captain.

TerraCorp

In 567 NT Saya left the Argon military, partly as a result of

Kho, Saya

Biography

her own decision but also at her mother's request, and began to work for TerraCorp. During her employment here she would become involved in the sequence of events resulting in the escalation of the Khaak Conflict.

First visit to Earth

After contact between the Community of Planets and the Solar System had been re-established, Saya was persuaded by her mother, who still thought of Earth as home, to pay a visit. Saya, however, considered Terrans to be intolerably arrogant and swore never to go back. Events soon transpired to ensure this decision did not last long.

Secret agent

Slowly, the Terran Conflict escalated, with the Community of Planets on one side and Earth on the other. Towards the end of 568 NT the Argon Secret Service approached Saya and offered her a position as an agent which she accepted without hesitation. Although her real task would not come until later Saya departed immediately for the Solar System, still officially working for TerraCorp and, by extension, her mother.

Life on Eris

Because of their family ties Elena immediately promoted

Kho, Saya

Biography

Saya to the rank of Captain, and together mother and daughter flew patrol missions in the outer reaches of the Solar System before returning home to Eris to live their separate lives. No-one had the least suspicion at this time that Saya Kho was an enemy agent.

The Second Terraformer War

Just before the Second Terraformer War began, the jump-gates that the Beryll had secretly built were finally deployed in the Solar System. Around this time, Saya, who had begun to fear that the long-smouldering Terran Conflict would lead to defeat for her beloved Argon Prime, was forced in the absence of alternatives to take extreme measures. After killing the Terran agent Lea Singer to protect her cover she and her husband Sherman Hiatu fled to Earth, where they devised the plan to destroy Earth's last line of defence, the Torus Aeternal.

The final act

On 5th February, 2948 Saya Kho and her husband put their plan into action. In the full knowledge that they would both be killed they initiated the total destruction of the Torus Aeternal. At the last moment, however, Saya, bitterly reproaching herself for what she had done, refused to put on a spacesuit and during the final collapse of the structure was blown out into space. She was 30 Earth years old.

Nopileos IV, Isemados Sibasomos

Biography

Nopileos IV, Isemados Sibasomos (* Fiscal jazura 534, planet Platinum Ball, sector Company Pride) Adventurer, diplomat and entrepreneur.



Overview

Nopileos, like his egg-brother Sissandras, was a direct descendant of Mikimades Isemados Sibasomos IX, the highly respected director of the shipyard in Seizewell sector; he in turn was the child of the Teladi Company CEO Ssuphandros Mikimades Isemados III.

Youth

It became clear early on that Nopileos, while a perfect genetic clone of his egg-brother, the shipyard director and even the CEO, had some personality traits which quite set him apart from the average Teladi. The instructors at his Hatchery were quick to observe his above-normal high intelligence and awareness and swiftness of thought. That he could manage at best only moderate interest in the usual motivators of Teladi life - trading, negotiation and the acquisition of wealth: in short, the Teladi profit imperative - filled them with dismay. All attempts to set him on the straight and narrow failed.

Nopileos IV, Isemados Sibasomos

Biography

It is not that Nopileos did poorly in his studies: on the contrary, even in such courses as Maximising Profit and Financial Management he was considered the best student in 117 jazuras. It is simply that his attention lay firmly elsewhere, in the subjects that were taught only "in passing": subjects like history, child-care and astronavigation. He was also observed to have an "unhealthy" (for a Teladi) passion for Argon fiction, together with an unbridled sense of adventure and something of a disregard for danger.

Maturity

In 546 NT, a few mazuras before his full maturity, Nopileos was expelled from his Hatchery for transferring 18 billion credits to a charity supporting Boron orphans in an attempt to hide the money from the Teladi Company.

The CEO suggested that it would be in Nopileos' interest to recover the capital, and to this end lent the youngling his own newly-delivered personal yacht, the Teladi Nyana's Fortune. Despite his best intentions, Nopileos, easily distracted by the promise of adventure, never carried out his elder's instructions.

Nopileos IV, Isemados Sibasomos

Biography

Subsequent adventures

The young Teladi met the combat pilot Elena Kho and the test pilot Kyle Brennan after their arrival in the Community of Planets and the three soon became firm friends. However, Nopileos' lucky star, the Teladi Nyana's Fortune, was shot down over the jungle planet of Nif-Nakh and crashed, leaving Nopileos stranded in a tropical hell with nothing to eat and pursued by deadly giant insects and a band of rampaging Split.

The Teladi Non-Profit Organisation

In 550 NT Nopileos defied the predictions of every Director in the Teladi Company and established his long-dreamed-of Teladi non-profit organisation; he was unaware that his grandfather, the CEO, had secretly been backing him all along. The young male soon found reliable partners to help him, especially Yolandals and the Argon scientist Dr Siobhan Norman.

Initially based on Ianamus Zura, for financial reasons the base of the FTNO (First Teladi Non-profit Organisation) was later relocated to Hewa, where it settled comfortably into the same building as the one occupied by the ICSCS.

Nopileos IV, Isemados Sibasomos

Biography

An unusual friendship

Over time, a genuine, firm friendship developed between Nopileos and Dr Siobhan Inja Norman. They first met under strange circumstances when she became the first Argon scientist to visit Ianamus Zura, the long-lost but rediscovered Teladi home planet. It was not long after their first meeting that Nopileos discovered that Siobhan Norman had an exceptionally long life expectancy, even by Teladi terms: this reversal of the normal situation allowed the development of a truly unique relationship.

In 562 NT Nopileos' grandfather, the Chairman of the Teladi Company, announced his plans to retire. His first choice to replace him remained Nopileos. However, while the past dekazuras had brought about a moderately progressive outlook among the Teladi race as a whole, accepting the position of Chairman would require Nopileos to give up his similar position at the FTNO. It was not a decision to be taken lightly.

Later life

Following the outbreak of the Terran Conflict Nopileos sought sanctuary in the Solar System and would play a key role during the Second Terraformer War. Nothing is known of him after that time.

Norman, Siobhan Inja

Biography

Norman, Siobhan Inja

(* 76-458, Argon Prime)

Argon scientist and long-life.

Childhood and youth

Siobhan Inja Norman was the only child of the contracted couple Miran Dirwin, an agricultural technician, and Klaudija Norman, an administrator in the Argon government.

Immediately after Siobhan was born the Argon government requested that her parents relocate to the newly-established colony on Harrison Moon. Her otherwise uneventful childhood was marked only by the early awakening of an almost feverish passion for science and natural history. When she was 15 jazuras old she took the natural step of choosing to continue her studies at the Argon Federation Polytechnic Institute on Argon Prime.

From mother to daughter

At the end of her first semester at the Institute Siobhan returned to Harrison Moon for a short visit to her parents. It was then that she first noticed something disturbing: while her mother seemed physically little older than she was herself, her father appeared to be ageing in the usual way. It was two years before Siobhan would realise the truth, that



Norman, Siobhan Inja

Biography

Klaudija was a carrier of the longevity gene *neIV/732*; and, since the gene was always transmitted dominantly from mother to daughter, she too was a long-life. Siobhan's entire worldview was shattered in moments; shortly after a violent argument with her mother she left Harrison Moon, never to return.

Life at the AFPI

At the Institute she gained twin doctorates in astrophysics and quantum physics: her incisive mind and her determination from an early age to become an expert in her chosen subjects meant that before long her work formed the basis of a redefinition of the entire field. In addition to postulating the NGQ invariance (also known as Norman's law), during this time she contracted a brief, childless marriage to the young astrophysicist Dr Ruuf Vondrian.

Personal life

Jazuras later and without apparent reason, Siobhan withdrew completely from public life and the scientific community. She entered a new marriage contract and started a family, but twelve years later her partner and their two sons would die in a tragic sporting accident. Siobhan's daughter Deidre, also a carrier of *neIV/732* and a long-life, held her mother completely responsible for the accident and left home the day she came of age.

Norman, Siobhan Inja

Biography

Lost years

Traumatized and wracked by guilt, over the space of many jazaras Siobhan fell deeper and deeper into the underbelly of society. During this time she began to abuse drugs, a habit which was only prevented from claiming her life at the last possible moment.

Forced to confront her nature, she began little by little to reconstruct her life following a plea for assistance that came direct from the government of the Argon Federation itself.

Later life

Following the events in sector Black Hole Sun and the flight of the TF/CPU ships #efaa and #deff, Siobhan once more withdrew from public life and spent several decades living quietly on the Teladi homeworld Ianamus Zura. It was here she would meet and ultimately form a close friendship with Isemados Sibasomos Nopileos IV.

On her hundredth birthday she received a visit from her daughter Deirdre, who has decided at last that she can forgive her mother. All traces of the two women were later lost during the turmoil surrounding the downfall of the Community of Planets.

Tebathimanckatt

Biography

Tebathimanckatt (* 477 NT, Paranid Prime) Paranid priest, warrior and mathematician; holds the rank of Prior Admiral.



Overview

Tebathimanckatt was generated in 477 NT from the genes of a direct agent of the Pontifex Maximus Paranidia and ten other gene donors.

After reaching full maturity in 491 NT he was cocooned and placed in storage, and was reawakened in 546 NT to be indoctrinated prior to his entering service.

The Xenon Campaign

Tebathimanckatt first saw action as an enlisted crew member during the hunt for Kyle Brennan and the X-Shuttle which generated the unknown "anomaly" in Paranid space which signalled its arrival in, and to, the Community of Planets. Shortly afterwards, during the ensuing Xenon Campaign, he was promoted to the rank of Captain and began duty as a fighter pilot.

Tebathimanckatt

Biography

Behind enemy lines

Engine failure forced Tebathimanckatt to land on Darehitori-mo, a planet located within the sectors of space designated as the Xenon Refuge. Shortly afterwards the jumpgate to that system was deactivated, leaving him stranded as the sole Paranid from the Coalition Fleet behind enemy lines.

It took Tebathimanckatt three months to repair the damage to his ship. During this time he made the acquaintance of Elena Kho and Kyle Brennan; like him, they and the ship the AP Telstar were trapped during the retreat. Also stranded was young Yoshiko Nehla, whose family was anxiously awaiting the reactivation of the jumpgate.

A sequence of unfortunate events

As the jumpgate came back online, Tebathimanckatt, not realising that the humans on the gate had been attempting to reactivate it, attacked them only for his fighter to take critical damage when the AP Telstar rushed to their defence.

Tebathimanckatt was able to pilot his crippled fighter to the CPU ship #efaa which fortunately was nearby, but crashed while attempting to dock, all but wrecking the larger ship's landing bay in the process.

Tebathimanckatt

Biography

The depths of space

Trapped aboard the self-aware CPU ship #efaa which was on a course to leave the galaxy entirely, nothing remained for Tebathimanckatt but to retire to a cocoon. Fifteen jazuras later, #efaa is found and boarded by Ser Alman Jonferson and the now adult Yoshiko Nehla, and the Paranid warrior was reborn to life.

After reaching the presence cloud, Tebathimanckatt managed to fill three spherical containers with computronium and thereby capture some of the essence of the Ancients that existed in the cloud. A short time later he and his companions were returned to the Community of Planets, when he presented one of the three spheres to Yoshiko Nehla as a gift.

Elevation to Prior Admiral

For his offering to the Pontifex Maximus Paranidia of the two remaining computronium spheres, which later would become known as the Speaking Relics, Tebathimanckatt was elevated to the rank of Prior Admiral and placed in command of the Third Armada of the Godrealm of the Paranid. His first major action was the conquest of the Hatikvah Free League planet Hewa, which despite its faulty strategy was successful nonetheless.

Tebathimanckatt

Biography

The Second Terraformer War

Commissioned by the Pontifex Maximus Paranidia himself to retrieve the third computronium sphere, Tebathimanckatt reached the Solar System shortly before all the jumpgates in the Community of Planets deactivated themselves. During the war he met Elena Kho once more: the two were eventually reconciled.

He, together with the crew of his galleon, PP Rohbandhain, was trapped in the Solar System during the Second Terraformer War. He was able to suppress a mutiny aboard his vessel, and worked with his old acquaintance Elena Kho to find a way to save Earth from the Terraformer fleet.

The end of days

Acting upon a decision taken by the Trinity, Tebathimanckatt ordered that the ship be landed on the plutoid Pele. The entire crew retired to their cocoon, and it was from his own cocoon that the Prior Admiral was subsequently transferred to join with the Ancients in the presence cloud.

Tebathimanckatt was recorded in the history books of Earth as one of the Protectors of the Solar System, and over the centuries to follow was slowly forgotten.

Otani, Ren

Brief:

Ren Otani is the owner of the Albion Skunk.

Tarren, Yishasame

Brief:

Yishasame Tarren is a trained engineer and pilot. Early in her young career, she would unwittingly participate in the transport of slaves for the Plutarch Mining Corporation (PMC). A fierce hatred for the PMC develops when she discovers the fate of the people she had been transporting to “work” in PMC mines. She would immediately quit her job and join the Heart of Albion.

Her official job in the Heart of Albion is as an engineering technician, but she has been an active member of the resistance movement for several years achieving the rank of Lieutenant. Her technical skills, combined with extensive weapons training, make Yisha a very capable saboteur.

Yisha is extremely knowledgeable of the Albion System and its sectors.

Borman, Captain Falk “Boots”

Brief:

After the Fall of the Gates, then Lieutenant Falk Borman found himself in command of the few Argon Military forces in the Albion System. After a brief time struggling to maintain order with his small collection of ships, the Plutarch Mining Corporation (PMC) would step in and take over this responsibility. As the years passed, the power and influence of the PMC would continue to rise. In an effort to check the PMC's growing hegemony, Borman helped negotiate and form the Heart of Albion.

The formation of the Heart of Albion led to the dissolution of the Argon Military in Albion. Falk Borman, by then a Captain, became the head of the Heart of Albion.

The Heart of Albion, a civilian council tasked with providing a voice to the population, would prove ineffective in challenging the dominance of the PMC. In response, Falk Borman would begin the process of moulding The Heart of Albion into an underground resistance.

Tugas IV, Yoolis Ulos

Brief:

Yoolis Ulos Tugas IV is a successful Teladi trader. She operates a small fleet of ships and can often be counted on to acquire hard to find goods and items.

Yoolis also deals in information. Aided by her extensive trading operations, she has developed an impressive intelligence gathering network and database.

SECTION G

Key Historical Figures

Section G: Key Historical Figures

Argon Federation

Argon Prime

Mean stellar day

24h 02m 02s

Radius

5961 km

Surface gravity

9,16 m/s² = 0,94 g

Sector

Argon Prime

Star

Sonra



The core world of the Argon Federation and the location of its seat of government, Argon Prime is the fourth planet of the star Sonra and was named for the hero Nathan R Gunne. Argon Prime exists in a stable binary orbit with its moon, Luna. The average surface temperature of this particularly Earthlike world is a temperate 17 Celsius.

Considered the capital equally of the planet itself and the Argon Federation as a whole, the beautiful Argonia City is located on the coastline of one of the major bodies of water on the planet, the Sea of Japan.

One of the more interesting features of the planet are its expansive freshwater oceans, which have puzzled geologists for some time.

Argon Federation

Desolus IV

Mean stellar day

14h 29m 55s

Radius

4216 km

Surface gravity

6,48 m/s² = 0.66 g

Sector

-

Star

Glau



One of the major worlds in the Argon Federation, Desolus IV is the fourth planet of Glau, which is also orbited by the gas giant known colloquially and for obscure reasons as 'Sergeant Pepper'.

While Desolus IV resides firmly within the 'Goldilocks Belt' of its star it possessed neither life nor a breathable atmosphere until it was hurriedly terraformed by the Teladi in Earth year 2730 on behalf of the Argon Federation. This act contributed greatly to the acceptance of the Teladi as full members of the Community of Planets.

Argon Federation

Ledda

Mean stellar day

31h 09m 09s

Radius

6142 km

Surface gravity

9,44 m/s² = 0,97 g

Sector

Cloudbase

Star

Wolke B



Ledda is the second planet of Wolke B. It was named after the explorer Emily Ledda, who was the first to create a map of this world in Earth year 2419 and discovered that indigenous life already existed on the world that was genetically similar to, but distinct from, species more normally found in the Queendom of Boron.

It is generally assumed that Ledda was visited some two million years ago by the Helpers, a race that plays a significant role in the history of the Boron race.

Today, Ledda is a member of the Argon Federation. With a population of only four million Argon and some 600,000 members of other races, it is one of the Federation's less important colonies.

Argon Federation

Ringo Moon

Mean stellar day

144h 14m 43s

Radius

5559 km

Surface gravity

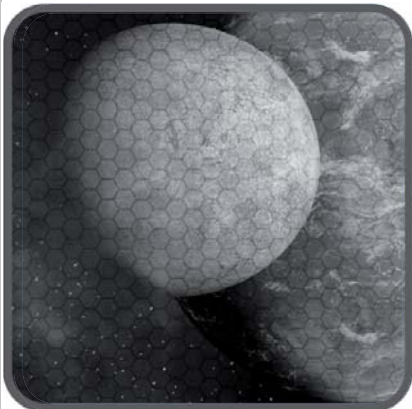
8,54 m/s² = 0,87 g

Sector

Ringo Moon

Star

Glau



Sometimes called "Ringo's Moon", this world is one of four planet-sized bodies orbiting the gas giant known as Sergeant Pepper. While technically 'only' a moon, its size means it is traditionally listed in most star catalogues as a planet.

It has a mean surface temperature of a slightly chilly 13 Celsius. Its complicated orbital path around Sergeant Pepper and Glau, coupled with the influence of its three sister moons, renders this world subject to strong tidal forces. Perhaps as a result of this it is geologically remarkably uniform for a celestial body of this size, with no oceans or large lakes present on its surface.

With a population of only 1.1 million Argon and about twelve thousand of other races, there is considerable potential for growth here.

Queendom of Boron

Elysium

Mean stellar day

-16h 39m 09s

Radius

4821 km

Surface gravity

8,41 m/s² = 0,76 g

Sector

Mists of Elysium

Star

Noreya



Some two billion years ago this planet was involved in a collision with another object of planetary size. The impact caused this world, the sixth planet of the star Noreya, to rotate upon its axis in an opposite direction to the other planets in the system.

This world has a mean surface temperature of only 9 Celsius, yet is lushly and richly covered with indigenous flora that seem well adapted to life on a such a cool planet.

Elysium is part of the Queendom of Boron, and, unusually, no other races make their home there. Although the exact population is unknown, due to the limited availability of water it is estimated at probably no more than one thousand million.

Queendom of Boron

Jamshala

Mean stellar day

154h 55m 27s

Radius

3001 km

Surface gravity

4,61 m/s² = 0,47 g

Sector

Depths of Silence

Star

Tryan



Jamshala, or planet Tryan I in sector Depths of Silence, is a member of the Queendom of Boron and, despite its small radius and long day, is not only the largest colony of Boron but also the largest colony of any race as a result of its surface being covered almost entirely with water.

Some 21 billion Boron call the oceans of this world their home, together with 15 million members of other races who live on the few small land-masses that rise sufficiently high over the waters.

Jamshala is the seat of the Second Council, one of the sections of the Boron government with the right of veto.

Queendom of Boron

Nishala

Mean stellar day

39h 10m 18s

Radius

7171 km

Surface gravity

$11,02 \text{ m/s}^2 = 1,13 \text{ g}$

Sector

Kingdom End

Star

Eo



This world, also sometimes known as Boron Prime, or Eo II in sector Kingdom End, is the home planet of the aquatic, pacific species of the Boron.

The atmosphere of this planet is almost pure ammonia and as such is entirely inimical to oxygen-breathing species, and the swamps that cover the few low-lying land masses are saturated with equally toxic compounds. The oceans of this world also contain these toxins, though the indigenous species, including the Boron, are adapted to this.

Within the oceans of this world live 61 billion souls, a number greater than the populations of all the other races of the Community of Planets combined.

Queendom of Boron

Myadedisha

Mean stellar day

06h 52m 51s

Radius

6666 km

Surface gravity

$10,24 \text{ m/s}^2 = 1,05 \text{ g}$

Sector

Rolk's Drift

Star

Nash Eo



By bombarding the planet with water-rich asteroids until all signs of dry land had been covered, the Boron were able to create this ocean world, the fourth body orbiting the star Nash Eo in sector Rolk's Drift.

Minor seasonal variations cause little change to the mean surface temperature, which is a somewhat cool 12 Celsius.

This world was without indigenous life of any form. All the flora and fauna within its oceans are descended from specimens originally brought from the Boron homeworld, Nishala. Unsurprisingly, the population consists entirely of Boron and numbers around nine billion.

Godrealm of the Paranid

Wirband

Mean stellar day

44h 12m 56s

Radius

12912 km

Surface gravity

19,84 m/s² = 2,03 g

Sector

Trinity Sanctum

Star

Might of Faith



Bearing the official name Might of Faith III in sector Trinity Sanctum, this planet was the first world discovered by the Paranid that bears any similarity at all to Paranid Prime.

It is also utterly useless to any other race, having a mean surface temperature of 56 Celsius, a surface gravity of 2 g, little available water and no exploitable natural resources whatsoever.

In Earth year 2372 the tomb of the Sleeping Pontifex was constructed here: since then, this otherwise insignificant rock has been off-limits to all those below the rank of Thrice-Born Priest.

Godrealm of the Paranid

Paranid Prime

Mean stellar day

68h 19m 57s

Radius

14313 km

Surface gravity

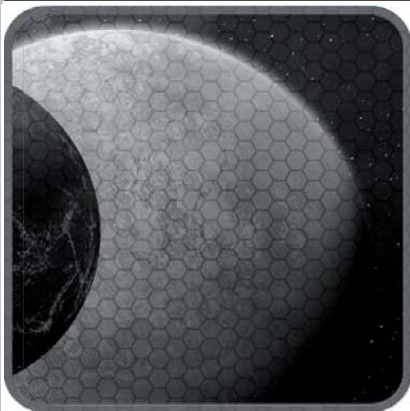
21,99 m/s² = 2,25 g

Sector

Paranid Prime

Star

Reborn to Life



Paranid Prime (Eighth Eye) is the name of both the eighth planet of the star Reborn to Life and the sector in which it is located. It is also the homeworld of the Godrealm of the Paranid.

Its mean surface temperature of 61 Celsius makes it the hottest and driest inhabited world in the Community of Planets; this, combined with its long day, cause continuous hurricane-strength storms to develop along the entire length of the terminator. The surface is covered almost entirely by orange sand, and here and there are the remains of mountain chains worn almost completely away by the storms.

About four billion Paranid dwell in tunnel networks located deep below the surface, which is almost never used and remains uncontaminated by any signs of civilisation.

Godrealm of the Paranid

Seventh Eye

Mean stellar day

23h 04m 02s

Radius

6330 km

Surface gravity

$9,73\text{m/s}^2 = 0,99\text{ g}$

Sector

Paranid Prime

Star

Reborn to Life



Seventh Eye is the seventh planet of the star orbited by Paranid Prime and the brightest object visible in that world's night sky. This barren rock has neither a magnetic field nor any atmosphere, leaving it completely at the mercy of stellar radiation.

The 'conquest' of Seventh Eye is seen as the first real triumph of the Paranid after resuming space flight in the event known to Paranid as the Reclamation of the Skies.

To this day, the moment is commemorated by a massive steel model of the planet which hangs suspended over the throne of the Pontifex Maximus Paranidia; legend has it that end of the Godrealm of the Paranid will come when Seventh Eye falls and squashes the Pontiff.

Godrealm of the Paranid

Sentuie

Mean stellar day

11h 26m 49s

Radius

10870 km

Surface gravity

16,7 m/s² = 1,71 g

Sector

-

Star

Soul's Well-being



In the Earth year 2201 this world was claimed for the Godrealm of the Paranid. Also known as Soul's Well-being V, this was the first planet beyond the confines of their own system occupied by the Paranid.

The mean surface temperature is a cool 13 Celsius. There is considerable surface variety, with conditions ranging from wide seas to high mountain ranges. Vast areas of subtropical forest also exist; the most common species, the Weeping Tree, is the source of a wood which is much valued within the Community of Planets for its unusual strength.

Also located on this planet is a vast cathedral hewn into the rocks of one of the major mountain chains where millions upon millions of Paranid lie dormant in cocoons.

Section G: Key Historical Figures

Free State of Solara

Aldrin

Mean stellar day

23h 31m 41s

Radius

6510 km

Surface gravity

$10 \text{ m/s}^2 = 1,02 \text{ g}$

Sector

Aldrin

Star

Solara



Named for an explorer in the early period of Earth's space exploration, Aldrin is the second planet in the star system Solara and the name of the sector in which that star is found. Its biosphere is surprisingly close to Earth-normal: together with Earth, Argon Prime and Perfect X, it is one of the the so-called "four blue pearls".

More than three hundred Earth years ago Aldrin dissociated itself from the Argon Federation and deactivated their jumpgate: a major role in this sequence of events was taken by the then Governor-in-Permanent Anthea Demetres.

Following the reactivation of the jumpgate during the Terran Conflict, Aldrin took a steadily larger interest in military and political events but continued in its decision not to join the Argon Federation.

Free State of Solara

Armstrong

Mean stellar day

19h 27m 50s

Radius

4329 km

Surface gravity

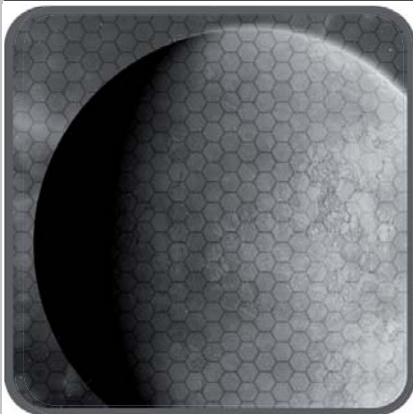
$6,65 \text{ m/s}^2 = 0,68$

Sector

Aldrin

Star

Solara



This world is the innermost planet of the star Solara in sector Aldrin. It does not properly orbit Solara but instead follows a spiral path: simulations show that it will impact the surface of the star within the next 100 million years.

It is uninhabited. While it has no atmosphere, it is extremely rich in natural resources, especially metals; significant deposits of nividium (platinum) have been detected beneath its surface.

As a result, in Earth year 2938 the Teladi Company offered the Free State of Solara a record sum of money in exchange for the mineral rights to the entire planet. The offer was declined.

Great Patriarchy of the Split

Nif-Nakh

Mean stellar day

21h 22m 00s

Radius

6340 km

Surface gravity

9,74 m/s² - 1 g

Sector

Patriarch's Keep

Star

Noh-tha



Nif-Nakh is the second planet of the star Noh-tha in sector Patriarch's Keep. It has two moons in twin orbit, Woltrar and Rinin.

Its name translates as 'festering wound': viewed from orbit, this planet has the appearance of having been wounded by an angry predator, mostly covered as it is by a dense dark green jungle broken only here and there by several small blood-red oceans and expanses of prairies of equally red grass. The red coloration of both the water and the grass can be attributed to micro-organisms. Indigenous fauna on this planet consists of mostly large insects and aquatic species.

In the strictest sense, this world is not officially a colony of the Split. It is the home to the Patriarch of All Split and his court, some 2,000 Split; no members of other races dwell here.

Section G: Key Historical Figures

Great Patriarchy of the Split

Lho-Ingтар

Mean stellar day

-136h 05m 54s

Radius

7740 km

Surface gravity

$11,89 \text{ m/s}^2 = 1,22 \text{ g}$

Sector

Tharka's Sun

Star

Tharka-ghan



This is one of the three Core Worlds of the Great Patriarchy of the Split. Its proper designation is Tharka-ghan IV in sector Tharka's Sun. With a mean surface temperature of only 7 Celsius and only 18% of its surface solid land it is highly atypical for a Split colony: however, some three billion Split live there.

Lho-Ingтар is considered by the Great Patriarchy to be a stronghold of the Split culture, and 'true warrior' hold the inhabitants of this world, who are usually more moderate by nature, in scorn. Unlike most Split colonies, Lho-Ingтар does not fall fully under the aegis of the Patriarch but is governed by the Council of Proctors, an entity similar in nature to the Teladi Company and with similar fiscal power which has to date survived all attempts by the Patriarchy to destroy it. Historians of other races foresee that this world will be instrumental in the positive development of the Split.

Section G: Key Historical Figures

Great Patriarchy of the Split

Kasum IV

Mean stellar day

15h 55m 48s

Radius

6210 km

Surface gravity

9,54 m/s² = 0,98 g

Sector

Rhonkar's Clouds

Star

Kasum-ghan



Kasum IV, the fourth planet of the star Kasum-ghan in sector Rhonkar's Clouds, is an Earthlike world with a mean surface temperature of 14 Celsius.

With the exception of two large landmasses, only one of which is inhabited, the face of this world is covered by a single contiguous ocean.

This planet's economy is founded on the cultivation of a plant known as jabal, whose flowers are in great demand within the Community of Planets but cannot be harvested mechanically. Kasum IV is one of the planets under the control of Council of Proctors, the Split trading consortium, which has sub-contracted the day-to-day operation of this world to the Teladi Company; they in turn employ local Argon to pick jabal.

Great Patriarchy of the Split

Hodie

Mean stellar day

unknown

Radius

unknown

Surface gravity

unknown

Sector

unknown

Star

unknown



Hodie is the lost true homeworld of the Split, its exact location long forgotten and its history existing only as fragments of myths and ancient traditions.

The Split dwelt on this world long before they took to space: indeed, tradition held that mighty furies of dreadful power dwelt in the skies of Hodie and to fly into space was to dare to stand before them. This planet, richly abundant in natural resources, saw short periods of fragile peace broken by long, bloody and chaotic internecine war. Finally, during the time of the Patriarch Ghus t'Gilt, the calm lasted long enough for science and technology to advance to the point where the Split would develop nuclear capability. After his death, the inevitable conflict turned Hodie into a radioactive desert; the few surviving Split fled into space, carrying their hatred to the stars.

Section G: Key Historical Figures

Teladi Company

Ianamus Zura

Mean stellar day

26h 04m 39s

Radius

5817 km

Surface gravity

8,94 m/s² = 0,91 g

Sector

Ianamus Zura

Star

Ianamus Zura



Ianamus Zura is the name of a star, the sector in which that star exists, and the ninth planet in orbit around it. It is also the true homeworld of the Teladi, and was considered lost for about 800 years following a reconfiguration of the jumpgate network in Earth year 2146. A predominantly temperate climate has allowed the development of a diverse range of flora and fauna which live in the extensive marshes and shallow, warm seas that are characteristic of this world and are tended to with great care by the inhabitants.

A notable feature of this world is its aurora, which at times encircles the whole planet, caused by the periodic high levels of charged particles carried on the solar winds.

Some two billion Teladi and fourteen million members of other races call Ianamus Zura home.

Teladi Company

Nividereos

Mean stellar day

07h 44m 08s

Radius

5710 km

Surface gravity

8,77 m/s² = 0,9 g

Sector

Company Pride

Star

Company Pride



With a mean surface temperature of minus 110 Celsius, Nividereos, the eleventh planet of star Company Pride, is one of the coldest known inhabited worlds. All its inhabitants live underground, where the Teladi colonists long ago developed an extensive network of tunnels.

Nividereos is home to several Teladi Hatcheries and Finance School complexes. These do not consider themselves in competition to the elite Hatchery on Platinum Ball, but are attended by the eggings of less affluent Teladi families.

It is not unknown for the children of other races to attend the Finance Schools here, as long as they are willing to commit to the Teladi curriculum.

Teladi Company

Platinum Ball

Mean stellar day

19h 03m 01s

Radius

6878 km

Surface gravity

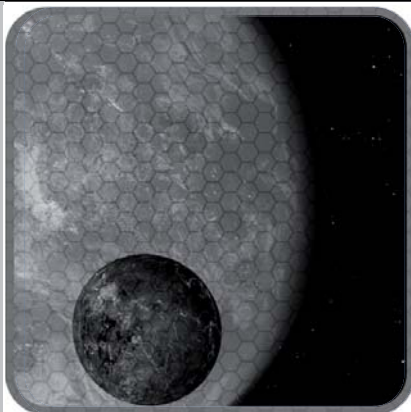
10,57 m/s² = 1,08 g

Sector

Company Pride

Star

Company Pride



Platinum Ball is the seventh planet of the star Company Pride in the sector of the same name and is considered the core world of the Teladi Company. It has three small moons.

The planet has a balmy, almost sub-tropical climate with a steady mean surface temperature of 17 Celsius. Although about 80% is covered with water, there are numerous island chains and two larger continents, Ebelon and Holmaseos. The latter of these is a popular holiday destination for many Argon and is also the site of the planetary Hatchery.

It is rumoured that Platinum Ball is a planet adapted and terraformed by an unknown third party: however, there was so little public interest that no investigation was ever undertaken to prove this claim. Similarly, the possible existence of atmosphere generators at the planet's poles has never been investigated.

Section G: Key Historical Figures

Teladi Company

Compound Interest

Mean stellar day

16h 18m 09s

Radius

4517 km

Surface gravity

6,94 m/s² = 0,71 g

Sector

Maximum Net Yield

Star

Nemeredas



This dwarf planet is the 48th in orbit around the star Nemeredas in sector Maximum Net Yield.

Despite having a mean surface temperature of minus 120 Celsius and no permanent settlements, this planet, considered second in importance only to Platinum Ball, is the most heavily protected of all worlds in the Teladi Company.

The reason for this is simple: it is the location of the Company's Permanent Vault and the place where all its assets are stored.

Earth State

Eris

Mean stellar day

26h 00m 00s

Radius

1200 km

Surface gravity

0,77 m/s² = 0,08 g

Sector

Kuiper Belt

Star

Sol / Rabinowitz



Eris is a dwarf planet or plutoid in the system of the star Sol: this system includes Earth, the homeworld of the Terran, Argon and Aldrin races.

In the Earth year 2546 this then-lifeless world was made available for terraforming. 110 years later, the first phase was complete. An artificial sun, Rabinowitz, was placed in orbit to provide light and a tropical climate, while a layer of nanoparticles (a so-called "utility fog") encircles Eris at a height of 800km to prevent the generated atmosphere from bleeding into space.

There are around 60,000 inhabitants, mostly in the area around the artificial North Sea, made up of a mixture of Terrans and native Eris. The USC also has a base here.

Earth State

Haumea

Mean stellar day

03h 55m 00s

Radius

1100/550 km

Surface gravity

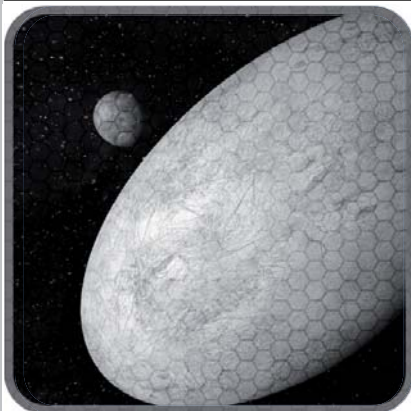
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Sector

Kuiper Belt

Star

Sol



A plutoid and a member of the Earth State, at some point in the 23rd Century Haumea became used as the home base and primary shipyard of the United Space Command (USC).

Six hundred years of occupation have seen this world shaped to fit the requirements of the military, with vast underground complexes created to house shipyards and research teams. In the precise centre of Haumea a perfectly spherical cavity four kilometres wide was created and given an atmosphere to in order to provide a zero-G training environment.

Haumea is the military equivalent of the civilian world Eris. There is a permanent garrison here of 114,000, exclusively from the Solar System.

Section G: Key Historical Figures

Earth State

Mars

Mean stellar day

24h 37m 22s

Radius

3396 km

Surface gravity

3,69 m/s² = 0,36 g

Sector

Mars

Star

Sol



The fourth planet in the Solar System, Mars is considered by the Earth State as one of its Core Worlds. Its mean surface temperature is minus 55 Celsius: however, a habitable zone deep within the trench known as the Valles Marineris exists where the air temperature never falls below 20 Celsius. As on Eris, a utility fog prevents the thin atmosphere from escaping; however, unlike Eris the temperature is not maintained by an artificial sun but is instead the waste heat from the considerable industry in the sole Martian colony, Twelvetowns.

Twelvetowns is the largest city in human history. Its name reflects its history precisely: originally, this city was merely twelve small research posts scattered along the Valles Marineris. Over the course of 800 years these grew steadily into full settlements and eventually began to merge to form the megacity of 120 million that Twelvetowns is today.

Earth State

Venus

Mean stellar day

-243d 4h 26m 24s

Radius

6051 km

Surface gravity

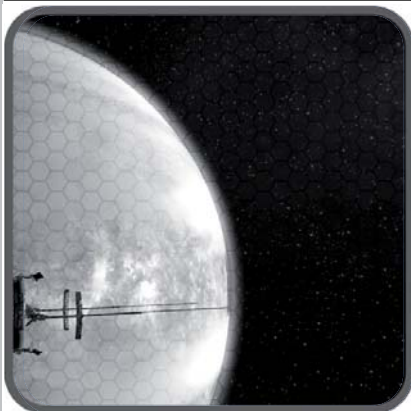
8,87 m/s² = 0,91 g

Sector

Venus

Star

Sol



Venus is the second planet in the Solar System. With a mean surface temperature of 464 Celsius and an atmospheric pressure of 92 bar, it is one of the most inaccessible of all known Earthlike planets. The initial plans for terraforming were cancelled following the termination of the Terraformer Project because it was considered to be almost impossible to undertake using conventional methods.

In Earth years 2881, an attempt to terraform Venus did begin. Several platforms were placed in the upper atmosphere, held aloft by massive gas-filled balloons, from which a conventional terraforming project is being driven. The total time for completion is estimated to be 2,500 years.

Some 45,000 Terrans live and work in these gently-drifting towns.

Hatikvah Free League

Fiji

Mean stellar day

22h 16m 02s

Radius

6378 km

Surface gravity

9,80 m/s² = 1 g

Sector

The Hole

Star

Ouija



The fourth planet of the star Ouija in sector The Hole, Fiji is one of the worlds belonging to the Hatikvah Free League, a neutral confederation of planets.

Together with its sister world Hewa, Fiji is one of the "Hot-and-Cold Twins", so known because of the almost total similarity between these two binary planets; the most notable difference is that Hewa, with a mean surface temperature of 12 Celsius, is slightly cooler than Fiji.

Approximately 75% of the surface of Fiji is land, and the vast majority of this is unexplored and lies fallow. With a mere 20 million inhabitants from across all races, there is vast untapped potential here.

Hatikvah Free League

Hewa

Mean stellar day

22h 32m 09s

Radius

6340 km

Surface gravity

9,8 m/s² = 1 g

Sector

The Hole

Star

Ouija



The sister and binary partner of Fiji, Hewa is the home planet of the Hatikvah Free League.

In Earth year 2681, the Argon free-thinker Christiane Hatikvah founded the township of Ai as a place to begin implementing her vision of the universal peaceful co-existence of all races. Within 50 Earth years this would become the Hatikvah Free League, which 20 years later was officially recognised by the Argon Federation. Today, Hewa is the headquarters of the ICSCS, a multilateral body with the remit of reaching decisions on matters which concern all races within the Community of Planets.

Hewa is home to 1.2 billion people, of which roughly three-quarters are Argon.

Convention der Herde

Wenendra Prime

Mean stellar day

unknown

Radius

unknown

Surface gravity

unknown

Sector

unknown

Star

unknown



Wenendra Prime is the homeworld of an intelligent aquatic lifeform known as the Wenendra, a word borrowed from Teladi meaning "water spirit".

Almost nothing about the planet is known except that it exists as its discoverers, the Queendom of Boron, allows no data on the planet to be published in order to safeguard it against attack: even the very knowledge of existence is due entirely to Teladi espionage.

It is believed to be a water planet of similar size to Nishala orbiting in the biosphere of a previously unexplored main sequence star.

SECTION H

Science and Technology

Section H: Science and Technology

Physics of the jumpgates

Vocabulary of the X Universe

Wormhole theory

The wormhole was described by the theoretical physicists Albert Einstein and Nathan Rosen as early as 1935: the concept of a form of tunnel through the fabric of space-time was a natural result of certain solutions to the General Theory of Relativity. Originally, and still correctly, termed an 'Einstein-Rosen' bridge, it was soon known as a 'wormhole' after the analogy used to describe it, that of the passage left by a worm eating its way through an apple instead of following the long path around the outside.

Types of wormhole

A wormhole would form a passage between two points in the same universe or possible even between two points in two separate universes. A third type of wormhole was postulated which might connect two different points in time.

Natural instability

Any naturally-occurring wormhole is energetically unstable and will collapse within picoseconds of forming. Only by using matter with a negative energy density ('exotic matter') can the wormhole be forced to remain open, rendering it stable for a few seconds.

Physics of the jumpgates

Vocabulary of the X Universe

Size and appearance

A natural wormhole would appear as a spherical object in space surrounded by a spherical event horizon, usually not much larger than a proton; also the size of a wormhole is proportional to its instability. Objects cannot pass through a spherical wormhole.

Stabilisation

With the use of exotic matter, a wormhole once generated could theoretically be made stable for several seconds. Tidal forces would force its spherical shape to expand into a ring-like shape.

Jumpgates

Each jumpgate contains a quantum singularity composed of exotic matter to create and sustain a temporary wormhole. The strong tidal forces exerted by the singularity force the wormhole to form in a circular path within the ring of the jumpgate itself, thereby deforming the spherical shape of a natural wormhole and forcing it to become passable: most jumpgates built by the Ancients can sustain each created wormhole for approximately four seconds.

Physics of the jumpgates

Vocabulary of the X Universe

Any wormhole, however created, whether by a form of jumpdrive or a jumpgate, must make a connection to another wormhole at the remote target.

Effects on matter

The experience commonly known as "twisted geometry" is an innate side-effect of transit through a wormhole, due largely to the irregular strong tidal forces inside acting on a vessel and its passengers. Electronic equipment, such as Gravidar scanners, may well short out, and living beings often react with intense discomfort. The intensity of the effect is dependent upon the type of jump made and the distance between the two points, and the faster the event horizon is crossed, the lesser the effect.

Jumpdrives

Ships equipped with a form of jumpdrive are capable of generating their own wormholes, in this instance known as jump-tunnels. Instead of using a quantum singularity or exotic matter, intense, focused magnetic fields are used to create and stabilise the wormhole and force it into the necessary shape. These wormholes usually collapse almost immediately after creation: transit through them must be rapid and precisely timed. Regrettably, this method has a very high rate of failure.

Engine technology

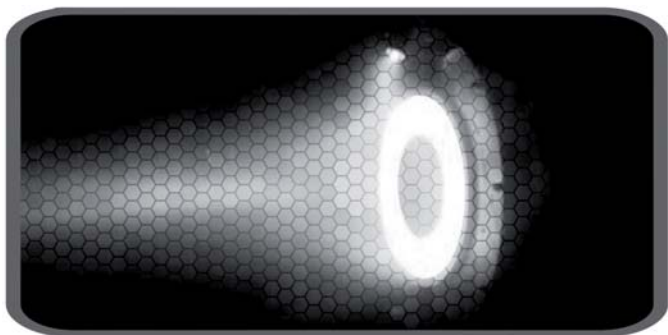
Vocabulary of the X Universe

Ion engines

These are also known as "electric engines" as they are not chemical or nuclear in basis: instead, strong electric fields cause ions of noble gases to accelerate to high velocity, thereby creating thrust. The primary advantage of such an engine is its low fuel consumption.

Their low rate of acceleration renders them unsuitable for short journeys or high-speed manoeuvres, although scientists in the Queendom of Boron have attempted to address this with the development of the High-Performant Ion Engine (H-PIE).

Very slow cargo vessels ("slow boats") and most deep-space probes are equipped with ion engines.



Section H: Science and Technology

Engine technology

Vocabulary of the X Universe

Plasma engines

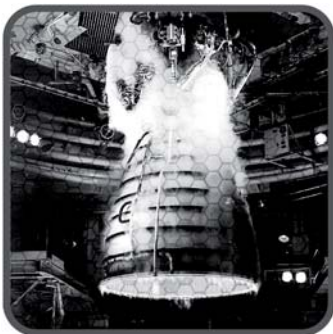
A variant of the ion engine, these use high-energy plasma as their propellant. While this gives plasma engines an acceleration roughly a hundred times that of the ion engine, much more energy is required in order to achieve it. Plasma engines have a rather high failure rate, and typically are used only for very particular applications.

Fusion engines

The safest and most common engine in both the Community of Planets and the Solar System, fusion engines create thrust as a by-product of the fusion of lighter elements into heavier ones.

Hydrogen is normally used due to its abundance, although some special applications require the use of heavier elements as fuel.

Given their high rate of acceleration, these are among the most cost-effective engines available and as a result are used by almost all private and commercial spacecraft, and in some non-combat military ships as well.



Engine technology

Vocabulary of the X Universe

Matter/Antimatter (M/AM) engines

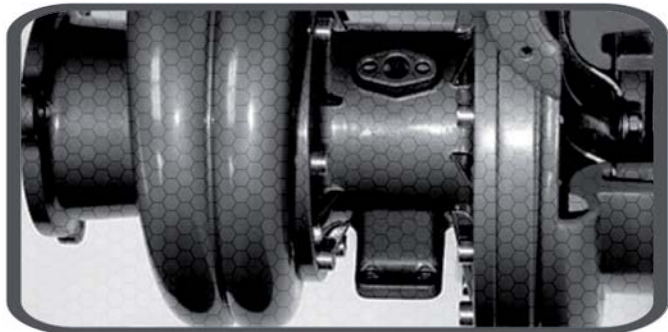
The almost-total mutual annihilation of matter and antimatter releases vast amounts of energy and as a result these engines have one of the highest rates of acceleration known; however, due to the significant cost of generating antimatter they are used almost exclusively in military vessels. For many years the sole exception to this rule was their use in messenger drones: because of the small mass of the drone, the half-gram or so of antimatter they required was considered cost-effective. Although the principle of M/AM engines was known in the Community of Planets for many years, it was not until the introduction of the Jonferson drive that they became widespread.

The Jonferson engine

Developed by the Jonferson Space Dynamics Division, the Jonferson engine is a highly optimised form of M/AM engine. It uses magnetic fields projected along the line of flight to capture interstellar hydrogen (a system known as a 'Bussard ramjet' after the 20th Century Earth scientist who first proposed the system), half of which is converted to anti-hydrogen using surplus energy from the M/AM reaction within the drive system itself. The higher the speed of the vessel, the more efficiently the Jonferson engine will perform. Many shipyards in the Community of Planets have licensed this technology for installation in all newly-constructed spacecraft.

Gravitational control

Vocabulary of the X Universe



The Podkletnov effect

In the late 20th Century the Russian scientist Evgeny Podkletnov claimed to have results of an experiment in which the force of gravity was reduced in the space above a rotating superconductor. Although extensive studies were carried out, including by NASA, these results could not be reproduced until well into the 21st Century.

Gravity screens

Superconducting loops built into the outer hulls of spacecraft, commonly known as Podkletnov aggregates, generate intense magnetic fields with rapidly-changing polarity, inducing an effect which shields the vessel from gravity. The stronger the current, the greater the level of shielding.

Gravitational control

Vocabulary of the X Universe

The effect is asymptotic, however, and begins to level off before complete shielding is possible: it does not, therefore, violate the equivalence principle of general relativity.

Most Podkletnov aggregates provide 65% shielding, although military ships can usually manage 85%.

Artificial gravity

The generation of artificial gravity is related to gravity shielding, but instead of protecting the vessel from external gravitational forces it is used to simulate the effect of gravity for the comfort of the ship's personnel. It should not be confused with "apparent gravity", which is a result of centripetal force caused by rotation.

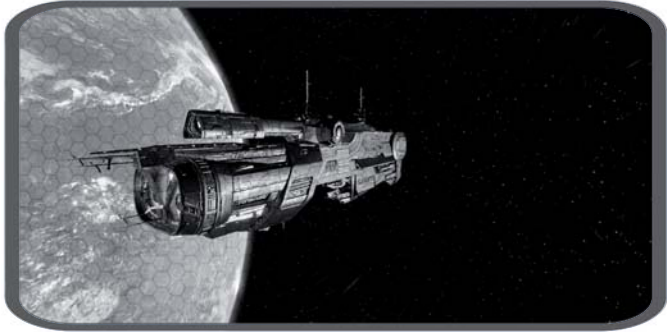
Four different methods are known to generate artificial gravity: the most common approach uses exotic matter to change the symmetric of the local space-time metric.

Reactionless engine

The shielding effect of a rotating superconductor can be made to interact with the one gravity created by the exotic matter with the net effect of causing motion without apparent thrust. Despite appearances, this does not contravene the law of conservation of energy.

Inertia compensation

Vocabulary of the X Universe



Inertia and mass

Inertia is defined as 'the resistance of a physical object to a change in its state of motion': any object with mass will resist forces acting on it which would cause it to move or to change its velocity or direction of motion.

The most well-known effect of this is weight: the force of gravity acting on a mass is perceived as weight if that mass - for example, a living being - is prevented from moving in the direction of that force.

A more apposite example in this context is the effect of continuous acceleration on a spacecraft: the faster it travels, the greater its weight will become, to the extent as its velocity approaches c its weight will tend towards infinity.

Inertia compensation

Vocabulary of the X Universe

Compensating for inertia

Most organic lifeforms are not well suited to long periods of high acceleration. A healthy adult human male can easily tolerate 3 g (a force three times the gravity of Earth) without major discomfort; however, 10 g would prove fatal in only a few minutes. It is essential, therefore, that the inertia caused by the high acceleration of space vessels in flight be compensated for in some manner.

Mach's conjecture

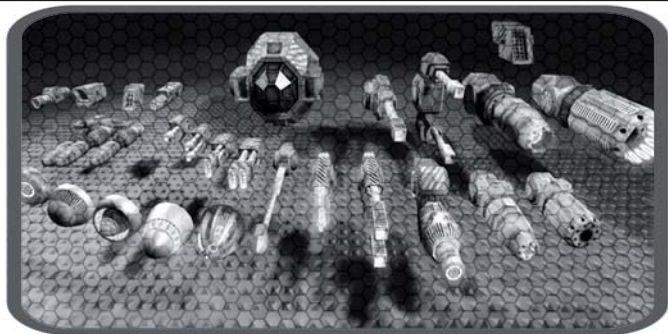
Mach's conjecture states, among other things, that inertia is based upon the cumulative gravitational effect of the universe. Therefore, by shielding a spacecraft from those effects, it is possible to reduce the effects of inertia. (See also: "Gravity screens")

The Podkletnov latency

Podkletnov aggregates have an inherent response latency as a direct result of their construction and therefore respond to changes of acceleration only after a slight delay. This delay can be predicted by the ship's computer and the effects of course changes, collisions and combat manoeuvres compensated for to a degree; unfortunately, some uncompensated G-forces will inevitably remain.

Weapons technology

Vocabulary of the X Universe



Weapon types

Weapons used in the Community of Planets and the Solar System fall into one of eight categories, which are listed below in order of increasing destructive potential.

1. Non-lethal weapons

These incapacitate but do not kill. Examples: tranquilliser darts; trans-species stun grenade; taser.

2. Chemical weapons

Conventional weaponry based on chemical explosives. Examples: guided missiles; bombs; grenades; propellant charges in projectile weapons.

3. Energy weapons

Focused energy causes damage to target. Examples: laser and particle weapons; beam weapons. Often used in sidearms.

Weapons technology

Vocabulary of the X Universe

4. Kinetic weapons

A moving mass causes direct damage; secondary damage may be caused by kinetic energy spreading through target. Examples: projectile-based sidearms; asteroid bombardment of planets.

5. Nuclear weapons

Uncontrolled fission/fusion reactions cause mass destruction. Example: tactical nuclear missile.

6. Disruptor weapons

These cause disruption in the strong and weak forces binding matter together. Example: Ship-mounted assault weapon.

7. Antimatter weapons

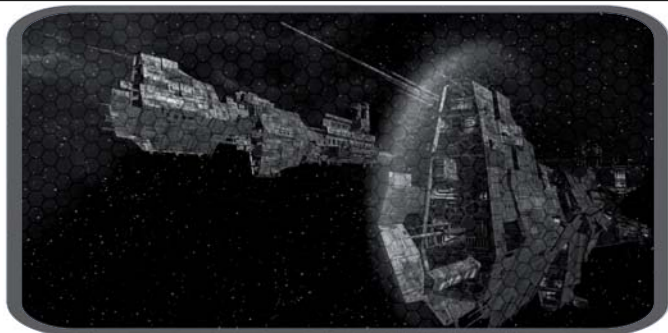
Contained antimatter is released and annihilates all matter within range. Examples: guided missiles; bombs.

8. Singularity weapons

Supermassive tidal forces and radiation levels wreak destruction on an interstellar scale. Example: Xenon Stellar Converter.

Shield technology

Vocabulary of the X Universe



Overview

Shields may be broken down into three major categories, each of which has different applications and energy requirements; this includes the distinction between passive and active shielding.

Passive shields

This form of shielding relies usually on the properties of a specific material. Early spacecraft, for example, used special ceramics as ablative armour and to conduct the hot plasma caused by the re-entry of the vessel into Earth's atmosphere away from the ship. Ground-based combat vehicles were also equipped with heavy armour plating to protect their occupants from projectile or kinetic weapons. These systems have only few, specific applications in spacecraft, although they are still used regularly for static installations such as stations and bases on dangerous planets.

Shield technology

Vocabulary of the X Universe

Low-energy shields

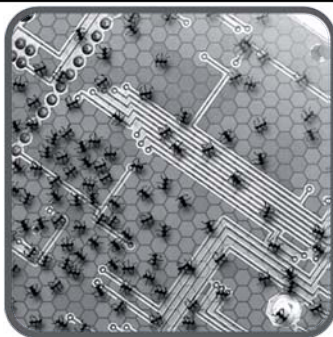
These are used primarily to protect ships from cosmic energy and micrometeorites. Ionised gas, usually hydrogen, is impelled along electromagnetic force lines to form a plasma screen around the ship in the form of a sphere. The usual distance between the hull and the low-energy shield is 100 metres, although in some rare cases the screen may be as little as 50 metres away.

High-energy shields

Used almost exclusively by military vessels such as ships of the line, fighters and carriers, they provide defence against kinetic, energy and nuclear weapons. An intense electromagnetic field at a range of between 100 and 1,000 metres to the ship is created by banks of dedicated shield generators. Because of their extreme energy requirements, high-energy shields cannot be operated for extended periods of time.

Molecular nanotechnology

Vocabulary of the X Universe



Overview

Molecular nanotechnology (MNT) is the term given to the form of engineering which directly manipulates matter at the atomic and molecular levels, includes the creation of machines to perform these functions from a mere few hundred thousand atoms in all. These machines, correctly termed 'nanoassemblers', are sometimes referred to by the name 'nanites'.

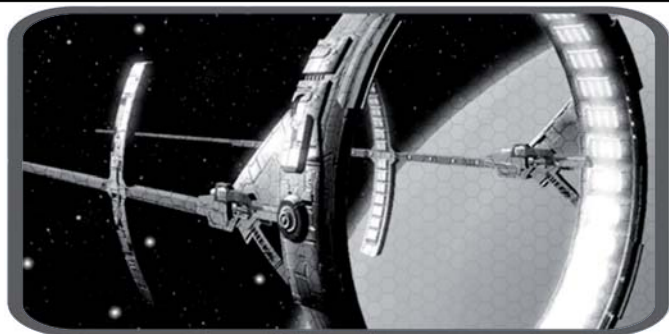
Applications

Nanomedicine is the form of medical intervention which uses nanoassemblers to affect the body of a patient and is the most common use of nanotechnology. It is used for the mass production of some particular materials, but in general terms, while it is possible to utilise this technology in engineering, it is too costly and insufficiently efficient to do so.

The Community of Planets is not as advanced in this technology as the Solar System, where it sees regular widespread use.

Orbital Linear Transaccelerators

Vocabulary of the X Universe



Direct flight

Direct interplanetary flight, while comparatively fast, is extremely inefficient in terms of energy consumption as a spacecraft on such a trajectory must use fuel to counter its own orbital acceleration and the gravitational effect of celestial bodies.

Injection flight

An alternative to direct flight is to use injection flight, also known as a Hohmann transfer orbit. With this method a spacecraft is launched at a precise time and follows a widening orbit around the star from its originating planet, reaching its target at a designated time. While highly fuel-efficient, it can be extremely slow.

Orbital Linear Transaccelerators

Vocabulary of the X Universe

Lagrange flight

Every celestial body in orbit with one or more others possesses points known as Lagrange points or L-points at which the net gravitational force exerted by those bodies is zero. Only microscopic gravitational forces exist at these points, making them ideal locations for stations and shipyards.

A long-overlooked fringe benefit of these points is that they are in constant movement relative to each other, is possible for ships to move across an entire system using almost no fuel by "shimmying" from one Lagrange point to the next.

While useful for very slow, often massive, cargo ships and unmanned research missions, it is far too slow for normal cargo or passenger transport.

Orbital Linear Transaccelerators

Vocabulary of the X Universe

Linear transacceleration

In order for the fuel-minimal L-flight to become useful, it is necessary to provide ships with a much higher initial velocity along flight paths between the system's L-points.

The development of the orbital linear transaccelerator (OLTA) was designed to achieve this, as well as ensuring maximal stability of the initial flight vector.

Well before the collapse of the Community of Planets, the Jonferson Space Dynamics Division had begun construction of the first OLTA units in multiple Argon star systems, including Sonra. Licences for the technology were purchased by the Teladi Company, the Godrealm of the Paranid and the Kingdom of Boron.

Shortly before the Advanced Technology Embargo against Earth came into effect, JSDD had successfully concluded negotiations for a lucrative licence contract with a resident of Mars.

AI and AGI

Vocabulary of the X Universe

Introduction

Few areas of technology caused such deep philosophical and political divisions as artificial intelligence. While one faction argued that it was purely unethical to create intelligent life, others were opposed purely on the grounds of possible risk: the destruction wrought on Earth by the VN Terraformers served only to justify these fears. Still more groups resisted any form of regulation at all.

Divergent research

Because of these differences, the paths of research into artificial intelligence in the Community of Planets and the Solar System diverged widely. On Earth, research was limited by severely proscriptive legislation, the AGI Control Act, while in the Argon Federation no such law existed.

Surprisingly, this lack of legislation did not provide any advantage to the Community of Planets. Computers developed here were no less intelligent than those designed on Earth, and vice versa.

The simple reason for this was that, despite the different paradigms used in their design, both sets of artificial intelligence were more intelligent and more capable than their creators.

AI and AGI

Vocabulary of the X Universe

While AI systems from Earth used multi-expert systems and those from the Community of Planets used adaptive AI or AGI, they had both already exceeded the intelligence of those who had created them.

Weak AI

In the case of weak AI, raw processing speed is increased instead of its logical capacity. The usual analogy is that of a dog: if a dog's brain were accelerated by a factor of 1,000, he would be able to solve problems 1,000 times faster than any other dog and therefore become superior to other dogs. He would, however, remain a dog: the problems he could solve and the manner of their solution would remain unchanged; his level of intelligence is the same. The same may be said of AI: an AI may perform a specialised task (such as speech) more quickly than its slower peers without being any more intelligent.

Strong AI

Conversely, a strong AI is one whose logical capacity, as well as its speed, is able to improve: this allows it to solve increasingly complex tasks, including those for which it was not originally programmed. Strong AIs often use evolutionary algorithms to improve their level of intelligence by repeatedly running internal simulations and studying the outcomes of using slightly altered parameters.

AI and AGI

Vocabulary of the X Universe

However, like weak AI, they lack the ability to revise their goals and make changes to their programming.

AGI: artificial general intelligence

Artificial general intelligence was a type of AI designed to overcome the shortcomings of strong AI. As well as being able to measure success and adapt their goals accordingly, AGI units were granted the ability to change their own programming, or even their hardware, if it were beneficial, allowing them to find solutions to problems for which they were not originally programmed. They were often more successful than their organic counterparts, and reached the solutions more quickly.

An AGI can be imagined as a highly intelligent virus with the capacity of directed evolution. Out-of-control AGI units represent a critical threat, and it was for this reason that the AGI Control Act forbidding any and all research into such technology was passed on planet Earth.

It is possible for an AGI unit to develop qualia, the awareness of self-awareness: any such unit reaching this point would thus achieve consciousness and thereby become, to all intents and purposes, alive.

Human biology and medicine

Vocabulary of the X Universe

Life expectancy

In both the Argon Federation and the Solar system, the average human life expectancy for both genders is 110 years. An accelerated senescence occurs only in the last five to ten years of life, meaning that humans remain strong and healthy at ages which in former times would have seen increasing physical and mental infirmity. A 70-year-old male or female is as healthy as their 40-year-old 21st Century equivalent, and usually healthier.

Genetic screening

The generally high level of health among human populations is largely a result of genetic screening and nanomedicine. Those with a genetic predisposition for inherited illnesses are not permitted to reproduce: in the Argon Federation, where this policy has been in place for almost a thousand years longer than on Earth, it has resulted in a population blessed from birth with excellent health.

In the 20th and 21st Centuries, such genetic screening was considered ethically and morally wrong and was often prohibited by law. As improvements in technology rendered its use increasingly straightforward, it crept back in, in a sense, "through the back door"; today, no ethical concerns exist today about this procedure.

Human biology and medicine

Vocabulary of the X Universe

Nanomedicine

In every cell of every human being alive are a small number of nanomachines, and it is to these, as well as their natural predisposition, that humans owe their health and long life. Any pathogen, such as a virus, attempting to invade a cell is immediately detected by a "sentry" and immediately destroyed. If a cell should show signs of dangerous mutation, such as a tendency towards cancer, a sentry will immediately induce apoptosis (cell death).

Disease

All diseases, from the human immunodeficiency virus to the common cold, have been eradicated. Pathogen-based illness is completely unknown, except in the rare cases when an alien organism goes unrecognised by the sentry nanomachines. Organ failure, the major remaining cause of death, is already the subject of much preventative research.

Trauma medicine

Should an accident cause major physical damage, including loss of organs, they can be replaced by cloned copies grown either in loco or in vitro. No more than 45% of all trauma cases result in death: if the victim is still alive when the trauma team reaches the site they are placed into cryostasis to preserve them while their treatment may be properly planned.

Human biology and medicine

Vocabulary of the X Universe

Personal healthcare

Both Argon and Terran individuals place serious emphasis on their own well-being, and many maintain fitness programme until almost the end of their life.

The quality and variety of food available also is a major contributing factor.

Mental health

This area of medicine is the sole exception to all the above. While mental disorder with a physical basis - depression, psychosis, and so on - can be treated effectively and easily, purely mental or emotional disorders remain just as difficult to treat now as they were in the 21st Century.

An increase lifespan

Vocabulary of the X Universe

Gerontology

That humans and Argon now have a lifespan in excess of a century is thanks largely to the British bio-informatics researcher Aubrey de Grey, who in the 22nd Century founded the Methuselah Foundation with the intention of finding a method to extend the human life indefinitely. The researchers faced a truly daunting task: as well as the natural shortening of the telomeres, there were problems caused by deposits of pollutants in the cells themselves, genetic mutations, the accumulated damage caused by free radicals, and any number of other issues.

Gene neIV/732

The Earth biogerontologist Asam Bhmad successfully created an artificial gene which, while it did not prevent any of these processes, was able to retard them to a significant degree. Telomere degradation in trials showed a reduction by a factor of ten: as a result, mutations caused by cell division were more frequently corrected by the cell itself, and free radicals and pollutants induced much less damage.

In short, gene neIV/732 slowed the ageing process in animals by ten to twelve times. Initial human trials were likewise positive.

An increase lifespan

Vocabulary of the X Universe

Chromosomal incompatibility

There was, however, a problem. The gene appeared to be assimilated only in the X chromosome and could therefore only be carried by females.

Although the team led by Asam Bhmad was confident it could overcome this difficulty, their research was interrupted by the events of the First Terraformer War.

Following the war, newly raised ethical arguments meant that research was never resumed; however, the women involved in the successful first test would pass the gene on to their female children.

An increase lifespan

Vocabulary of the X Universe

Physical effects

The gene has no effect during childhood: girls carrying the gene are indistinguishable from those who do not. Only after adolescence do its effects become visible: physical deterioration and the other effects of ageing are reduced by between 9 and 11 times compared to normal human females. Those who possess the gene will spend several hundred years in a state of young adulthood and be nearly a thousand years old at death; in later life the gene becomes less effective at blocking the production of telomerase and preventing the other causes of senescence.

Psychological effects

It is common for carriers of the gene to develop serious psychological disorders from approximately the second half of their second century of life, including chronic dysthymia, self-destructive borderline disorder and suicidal ideation.

As one by one all those she loves inevitably die, the realisation that this cycle will inevitably repeat itself through the many hundred years of her life leads to social withdrawal, isolation, melancholy and finally to a full depressive state.

Some carriers of the gene are able to escape this process and continue to manage their situation in a positive manner. The majority, however, never reach their two-hundredth year, choosing instead to commit suicide.

Technological disparity

Vocabulary of the X Universe



Inter-species technological exchange

The Teladi were the final species to join the Community of Planets, by which time some two hundred years of technological exchange between the Argon, Boron, Split and Paranid had taken place. Unsurprisingly, after the accession of the Teladi to the Community, there was a significant increase in the speed of this process: intense economic competition - together with just a soupçon of industrial espionage - would ensure that new technologies could never be kept secret for long regardless of which race developed them.

In the two centuries following the Teladi's arrival, all the key technologies had spread more or less evenly throughout the Community of Planets as a whole and any new developments would provide only a short period of technological advancement. The newly-established oversight body, the Interplanetary Committee on Security and Cooperation in Space (ICSCS) tried from about 650 NT to regulate the flow of tech-

Technological disparity

Vocabulary of the X Universe


nology between races but was only moderately successful at best.

Any differences in technology in the Community of Planets today are largely aesthetic and predicated almost entirely on the different functional and physical requirements of its member races. A genuinely different technology would be extremely rare and therefore highly valuable.

Earth and the Solar System

Because humanity was confined to the Solar System for almost a thousand years, technology developed there very differently to the Community of Planets. Earth does possess some technology which the races of the Community do not: the World Government endeavours to enforce this disparity with almost paranoid zeal and, with some very rare exceptions, succeeds.

Conversely, Earth has easy access to licences to technology from the Community of Planets. This state of affairs would change only after the imposition of the Advanced Technology Embargo on Earth by the Community of Planets.



SECTION I

Space Vehicles

Section I: Space Vehicles

Overview

Of vessels and races

Technological similarity

The technologies permitting space travel are still comparatively recent developments for all the races of the Community of Planets. The perhaps unusually high degree of similarity can largely be ascribed to the centuries of parallel research and development and reverse engineering, as well as the occasional case of industrial espionage.

Design differences

While necessarily subordinate to its function, the aesthetic design of spacecraft is the single area of greatest difference. This is most notable in terms of the interior layout, which inevitably is influenced by the culture of the race which constructed it.

Territorial registration

Space vessels are usually registered to one of the sovereign States of the Community of Planets. This exists so that any registering State may be held at least partially responsible for any hostile actions incurred by members of that species. Territorial registration of vessels is managed automatically for that vessel and the designation must always be specified in official transactions.

Overview

Registration sign by race

The most common territorial designations are:

AP	Argon Federation
Boron	Queendom of Boron
FL	Hatikvah Free League
IKSZ	Consular ship of Community of Planets
IZ	Ilanamus Zura (Teladi)
PMC	Plutarch Mining Corporation
PP	Godrealm of the Paranid
Solara	Free State of Solara/Aldrin
Split	Great Patriarchy of the Split
Teladi	Teladi Company
Terra	Earth (private vessel)
USC	United Space Command/Earth
USCSS	Old Earth (historical only)

Legal requirements

Compensation for any damage caused by a vessel is paid by the registering State, either by the owner of the vessel or, if they are unable to pay, by the State treasury. For this reason, most states require pilots to possess flight insurance and pass an aptitude test before undertaking registration. Rules vary between states: the Queendom of Boron will register only vessels whose owner and captain are Boron, while the Argon Federation requires not only an aptitude test but also regular psychological assessment of the pilot.

Technologies

Engine types



Fusion engine

Fusion engines provide acceleration through the controlled nuclear fusion of lighter elements to form heavier ones. Small manned vessels, such as interplanetary ferries, usually use deuterium as fuel which is fused to form helium; larger ships, such as transporters or military carriers, use heavier elements.

Until 750 NT, fusion engines were used in some 90% of all spacecraft within the Community of Planets. This was changed only by the arrival of matter/antimatter engines from Earth and the development of the JSDD engine.

Matter/antimatter (M/AM) engine

These generate energy through the almost-total mutual annihilation of matter and antimatter, thereby providing a much higher energy output and speeds higher than conventional technologies can produce.

While the principle of such engines had been known for centuries, due to the difficulty in producing sufficient quanti-

Technologies

Engine types

ties of antimatter it was used only in unmanned, long-distance space probes which would require only a few grams. Following the arrival of the Earth shuttle in 742 NT, Ser Alman Jonferson was able to perfect a technique that for the first time would permit the mass production of antimatter within the Community of Planets.

The Jonferson engine

A Jonferson engine is essentially a highly optimised form of matter/antimatter engine, superior in efficiency even to Earth M/AM engines. Antimatter required for thrust is converted from interstellar hydrogen captured by specially-designed magnetic fields. Ships equipped with this drive therefore have effectively unlimited range and are capable of even the longest missions into deep space.

Technologies

Engine types

The jumpdrive

Jumpdrives and limited-jumpdrives, which function in the same way as the jumpgates themselves, are not engines in the true sense of the word. Instead of simply causing the spacecraft to accelerate by the application of thrust, these drives instead open a corridor in the space-time continuum through which the vessel must pass within a certain period of time.

For many years, scientists in the Community of Planets believed that the mathematics needed to develop such a drive were too complex to be solved by human brains. This belief was popularised mostly by Dr Siobhan Norman, who dedicated a treatise several hundred pages long to the subject; this was later discovered to have been an elaborate but quite deliberate hoax.

Ion engine

A slow but highly cost-effective technology which provides thrust from electrically accelerated charged particles. Because of the small amount of fuel they require, acceleration may be sustained for weeks or even months, albeit at a rate so low as to be unusable in most cases. The Teladi, however, often use these engines on unmanned freighters whose cargo is not time-critical.

Types of space vehicles

Standardised classifications

Introduction

The classifications presented here are based on the standard model used by the Argon military. Vehicles are grouped by size and design intention across all species, although the groupings may not be exact; therefore, the class designations for all ships of a given size are also provided.



M5 Scout

A fast, agile vessel with limited armour. Classes: Discoverer (AP); Octopus (Boron); Pegasus (PP); Wolf (Split); Bat (Teladi); Rapier (USC).



M4 Light Fighter

A swift vessel with moderate weaponry. Classes: Buster (AP); Piranha (Boron); Poseidon (PP); Scorpion (Split); Hawk (Teladi); Sabre (USC).

Types of space vehicles

Standardised classifications



M4+ Medium Fighter

Classes: Elite (AP); Pike (Boron); Kite (Teladi); Theseus (PP); Asp (Split).



M3 Heavy Fighter

Classes: Elite (AP); Eel (Boron); Prometheus (PP); Mamba (Split); Scimitar (USC).



M3+ Super Fighter

New class. It is smaller than a corvette but more heavily armed than a standard M3. Classes: Eclipse (AP); Mobula (Boron); Medusa (PP); Chimera (Split); Kea (Teladi); Machete (USC).

Types of space vehicles

Standardised classifications



M8 Bomber

Used against capital-sized vessels and stations only. Classes: Gladiator (AP); Hades (PP); Viper (Split); Sparrowhawk (Teladi); Claymore (USC).



M6 Corvette

New class. A front-line defence vessel. Classes: Centaur (AP); Hydra (Boron); Nemesis (PP); Dragon (Split); Eagle (Teladi); Katana (USC).



M7/M7M Frigate

A heavily armed vessel with large cargo capacity. Classes: Cerberus (AP); Squid (Boron); Deimos (PP); Panther (Split); Shrike (Teladi); Yokohama (USC).

Types of space vehicles

Standardised classifications



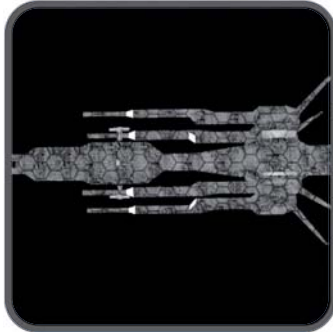
M2 Destroyer

A large vessel with heavy armour and powerful weaponry. Classes: Titan (AP); Moray (Boron); Odysseus (PP); Python (Split); Phoenix (Teladi); Osaka (USC).



M1 Carrier

Carries and supports fleets of smaller vessels. Classes: Colossus (AP); Shark (Boron); Zeus (PP); Raptor (Split); Condor (Teladi); Tokyo (USC).



M0 Battleship

This heaviest ship class is used only by the Xenon and the Khaak. Classes: Unknown.

Types of space vehicles

Standardised classifications



TS Freighter

A standard cargo vessel, usually only lightly armed. Classes: Mercury (AP); Dolphin (Boron); Ganymede (PP); Mule (Split); Vulture (Teladi); Baldric (USC).



TP Personnel Transporter

Used for ferry services and passenger transport. Classes: Express (AP); Manta (Boron); Hermes (PP); Iguana (Split); Toucan (Teladi); Scabbard (USC).



TM Military Transport

Used to transport troops and supplies. Classes: Magnetar (AP); Catfish (Boron); Helios (PP); Boa (Split); Pelican (Teladi).

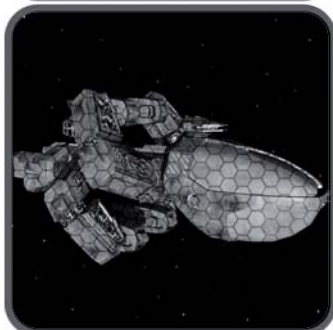
Ships of the Argon

Notable vessels



TL Container Vessel

Used for the transport of supermassive cargo, e.g. space stations. Classes: Mammoth (AP); Orca (Boron); Hercules (PP); Elephant (Split); Albatross (Teladi).



AP Argon One

Launched in 729 NT, this was the former flagship of the Argon Federation fleet. Primarily responsible for the security of the Argon home sector, being decommissioned in 771 NT.



AP Argonia

The successor to Argon One in every way, her keel was laid down during the Terran Conflict. Was launched in 765 NT, during the so-called "Dark Ages" between the collapse of the Community of Planets and the foundation of the Alliance of Words.

Ships of the Argon

Notable vessels

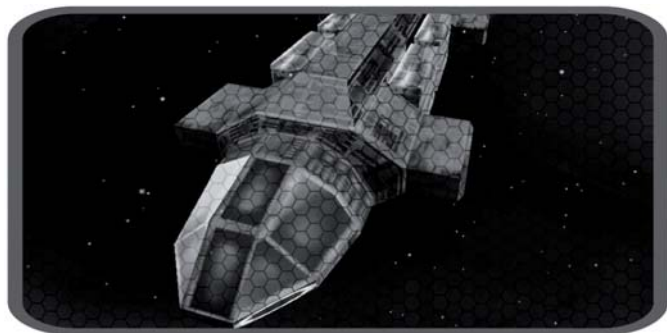


AP Hokoya

This M2 destroyer was the first ship to be constructed following the collapse of the Community of Planets and mostly saw action against criminal organisations and pirates. Her captain was Commander Henna Natari.

AP Aladna Hill

A TS Freighter used by the Argon Secret Service in 742 NT as part of the operation to transport Kyle William Brennan and the X-Shuttle to Argon Prime. While under the command of Captain Lona Brant, the AP Aladna Hill was attacked and destroyed by Cho t'Nnt.



Section I: Space Vehicles

Ships of the Boron

Notable vessels

Boron Rapture

It was the captain of the Boron Rapture who warned Kyle Brennan about the hostile nature and intentions of the Split.

Moments later the Split attacked and destroyed the ship: only the selfless actions of her captain and crew allowed Brennan to escape his pursuers.



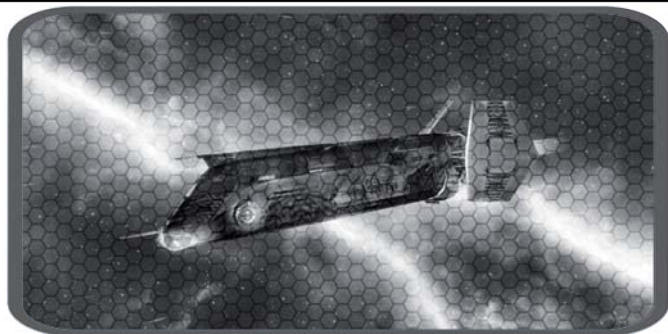
Boron Gestalt of Light

Under the command of Ela Am, this vessel led the operation to salvage the remains of the Nyana's Fortune from Nif-Nakh.

She would later see regular service in the first Teladi non-profit organisation.

Ships of the Free League

Notable vessels



FL Incubator

A M3 Heavy Fighter piloted by Reolisas Yliminas Elemones II under the command of Neham t'Gllk, this vessel was used for covert operations by the Beryll and the Argon Federation in the Solar System and played a major role in the instigation of the Second Terraformer War.

FL Nyana's Fortune II

Like the Teladi Nyana's Fortune before her, the FL Nyana's Fortune II was a prototype vessel designed in an attempt to maximise profit. This oval-shaped vessel was roughly 30% larger than her predecessor and contained numerous improvements; the onboard computer, Inanias, was the same unit as before, having been salvaged from the wreck and installed anew.

Ships of the Free League

Notable vessels

FL Raindragon

Jointly commanded by Uchan t'Scct and Kalmanckalsaltt on behalf of the Hatikvah Free League, the FL Raindragon played an important role in the foundation of the Xenon Refuge. She was abandoned in 743 NT after taking heavy damage during an attack by pirates.



FL Tokomo

This prospector ship was flown out of Fiji by the Nehla family. After becoming stranded near the desert planet of Darehitorimo, the FL Tokomo came under fire from Lord Captain Tebathimanckatt and took damage. Quenja Nehla was killed in the attack.



Her daughter Yoshiko managed to eject while wearing a spacesuit and fell through a jumpgate: several months later she was incorrectly declared dead.

Ships of the Paranid

Notable vessels

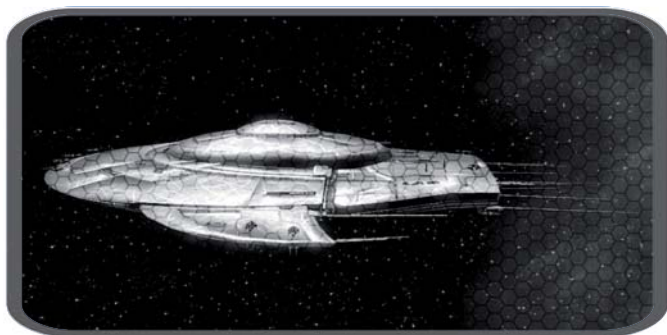
PP Strong Protector

The flagship of the Second Armada of the Godrealm of the Paranid. 26 years after the end of the Community of Planets, she was equipped with a jumpdrive for a voyage to Argon Prime under the command of Prior Admiral Almanckritalpp to help defend the Alliance of Words.

PP Noble Born

Under the command of Prior Admiral Tebathimanckatt, this vessel, the flagship of the Third Armada of the Godrealm of the Paranid, played a major role during the annexation of planet Hewa and the transfer of power from the ICSCS during the collapse of the Community of Planets.

In 769 NT the PP Noble Born was destroyed while in orbit around Hewa by a nuclear explosion of unknown cause.



Section I: Space Vehicles

Ships of the Paranid

Notable vessels



PP Rohbandhain

Commanded by Lord Admiral Gmanckeskst and Prior Admiral Tebathimanckatt under orders from the Pontifex Maximus Paranidia, the primary mission of the PP Rohbandhain was the search for the presence cloud of the Ancients. After a long voyage, she arrived in the Solar System where she fought alongside the Terrans against Terraformers. The PP Rohbandhain was landed on the plutoid Pele and the entire crew retired to cocoons after it was decided that a return to the Godrealm of the Paranid was impractical.

PP True Sight of Three

In 801 NT the Pontifex Maximus Paranidia would leave the Paranid homeworld aboard this vessel, his private yacht, for the first time in over a hundred years to seek out and consecrate the new Sleeping Prophet.



Ships of the Split

Notable vessels



Split Bone Scout

A M3 Heavy Fighter with upgraded engines, Special Envoy Cho t'Nnt commanded this vessel at the behest of the Patriarch of the Split in the hopes of resolving the mystery of the Paranid "anomaly".

Following the death of Cho t'Nnt the Split Bone Scout came under the command of Nyhelt t'Mrrg and was heavily damaged during a skirmish with Xenon forces.

Most of the crew survived, although the ship herself was decommissioned on the express order of the Patriarch Rhonkar.



Ships of the Split

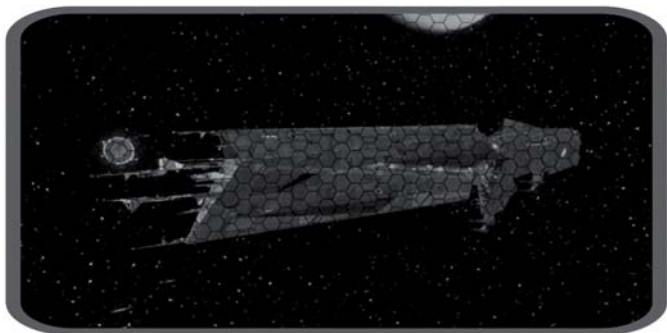
Notable vessels

Split Skullcrusher

The personal battlecruiser of the Patriarch Rhonkar, the Split Skullcrusher underwent major modification in similar style to the Split Bone Scout after his assumption of power.



First launched in 749 NT, the Split Skullcrusher achieved fame following what would become known as the "Lesion Incident" when a coup d'État attempted by Tehym t'Nhhn was foiled by Rhonkar himself while in personal command of the ship.



Section I: Space Vehicles

Ships of the Teladi

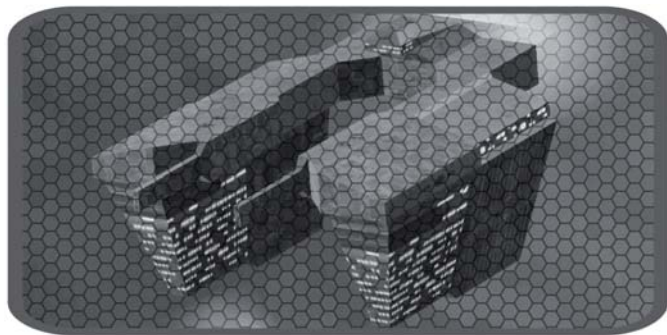
Notable vessels

Teladi Profit Guarantee

The largest battleship in the Teladi fleet, the Teladi Profit Guarantee was deployed almost permanently in the Seizewell sector to protect the planet Platinum Ball. She possessed extremely powerful defensive weaponry and her shields were never breached. Launched in 744 NT, for her entire operation life her captain was Commander Grohobemas Ledebinis Terensos VIII.

Teladi Phoenix

When Kyle Brennan arrived in the Community of Planets, the first vessel he encountered was the Teladi Phoenix, under the command of Captain Ussandroos Melomilas Loanises. Under the guise of assisting Brennan and repairing his disabled craft, Melomilas secretly installed a homing beacon aboard the X-Shuttle; this was subsequently found and removed. The Teladi Phoenix was later destroyed by the Split Bone Scout while commanded by Cho t'Nnt.



Section I: Space Vehicles

Ships of the Teladi

Notable vessels



Teladi Nyana's Fortune

A prototype vessel constructed in the shipyards of Seizewell, the Teladi Nyana's Fortune was designed by Chief Engineer Dolamilas Sidelosis Yayandas V on behalf of the CEO of the Teladi Company in the shape of a Teladi egg.

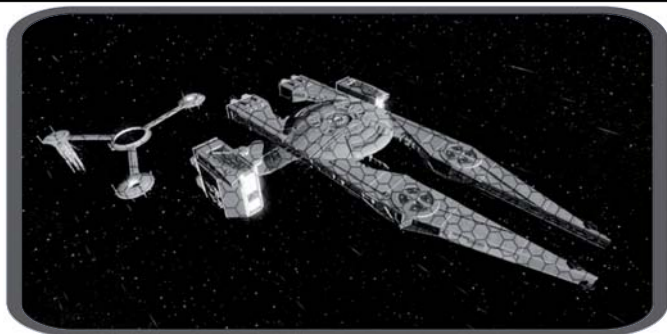
She possessed exceptionally powerful shields and four Boron ion drives of a type usually found only on military vessels. Loaned to Nopileos by the CEO immediately after commissioning to facilitate a mission, she never saw its completion, crashing on Nif-Nakh following a mid-air collision in 742 NT. Her onboard computer, Inanias, was salvaged and later installed in the FL Nyana's Fortune II.

Teladi Nividium Dreams

Commanded by Isemados Sibasomos Sissandras IV, she was the identical sister ship of the Teladi Nyana's Fortune.

Ships of Earth

Notable vessels



USC Ayse McCallum

Named for a USC pilot who lost her life while on active service, the USC Ayse McCallum was the flagship of the Earth fleet. In Earth year 2948 she suffered critical damage during a battle with the New Terraformers and was barely able to escape.

Due to the severity of the damage the decision was taken to decommission rather than repair her; it would be 53 Earth years before she was replaced.

USC Africa

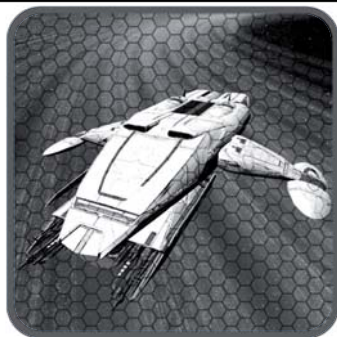
A carrier in the Earth fleet, the USC Africa was destroyed by an assembler drone swarm in the course of the Second Terraformer War.

Ships of Earth

Notable vessels

USC Vanguard

This cruiser would have a vital role to play in the defence of Earth in the Second Terraformer War. Together with her sister-ship, the USC Namataiko, the USC Vanguard created a cloud of degenerate matter against which the Terraformer assembler drones had no defence.



USC Namataiko

Sister-ship to the USC Vanguard, she played an instrumental role in the defeat of the Terraformer fleet.



USSC Winterblossom

Earth's first truly interstellar spacecraft, the USSC Winterblossom had no defensive or offensive capability and was built for purely scientific purposes. Famous for being the vessel used to explore the newly-discovered jump-

Ships of Earth

Notable vessels

gate network under the command of RenÈ Farnham. After her return to Earth at the end of that historic mission she was retired from duty and placed in a museum until the beginning of the First Terraformer War, at which point she was returned to service due to the perilous shortage of spaceworthy vessels. The old vessel met an honourable end defending Earth against the Terraformers.

USCSS Dragonfyre

During the First Terraformer War the USSCS Dragonfyre was the flagship of the Earth fleet and the only combat-ready vessel with a fully-trained crew in position to intercept the invaders.

Commanded by Nathan Ridley Gunne, she would lead both the Terraformers and the rag-tag remnant of the Earth fleet through the Earth jumpgate, thus ensuring victory for Earth.

The USSCS Dragonfyre remained the flagship of the colonies' fleet for the next 60 years before she was eventually replaced; after this point her whereabouts are unknown.

Ships of Earth

Notable vessels

USCSS Chameleon

This Earth cruiser unsuccessfully pursued the TF/CPU ship #deff stolen by Marteen Winters.

USC X

Occasionally referred to in jest as "Little X", this was the jumpdrive-equipped vessel in which Kyle William Brennan made his historic flight.

Originally designed as an atmospheric shuttle, it was refitted between 2909 and 2910 in preparation for its role as a deep space vessel.



It carried the prototype jumpdrive which did not require a target gate to function, and a successful test would have marked the beginning of a new era of space travel for Earth. However, the initial test flight went catastrophically wrong, catapulting Kyle Brennan into the Community of Planets.

Raumfahrzeuge der Erde

Notable vessels

USC Getsu Fune

This old Jupiter-B series freight shuttle was used for the first, unmanned tests of the gateless jumpdrive. Two weeks after the disappearance of the USC X and Kyle Brennan, she was hurriedly refitted for a search-and-rescue mission undertaken by Major Elena Kho. Shot down in the sky over Argon Prime, the USC Getsu Fune crashed into one of the oceans of that world and sank; later recovered, she was never restored to a space-worthy condition.

Since 747 NT the USC Getsu Fune has been on display in Argonia City starport.

Additional noteworthy vessels

Notable vessels

IZ Archipelago of Marsh-Orchids

This space vessel from the planet Ianamus Zura was one of the most curious vessels in space. Consonant with the customs of the Teladi of that world, its aesthetics were of primary importance and it was therefore shaped like a shell: despite this, however, it remained among the fastest vessels to use conventional engines.

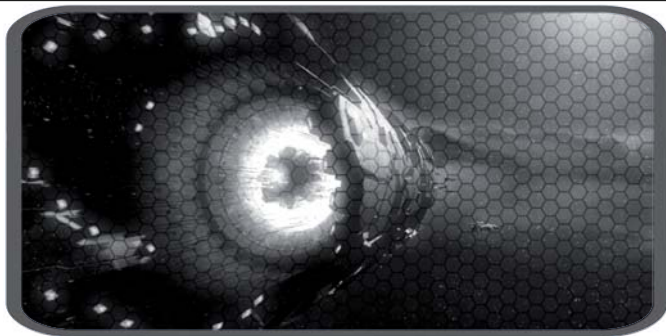
Generation-ship Nishala

The Nishala was a huge vessel constructed with the aim of reaching the Ancients' presence cloud to plead for the reactivation of the gates. Without a quantum leap forward in technology, the only viable method was to send either a sleeper ship or a generation ship on the journey, which scientists in Queen's Space estimated would take fifty thousands years or more.

Tragically, before the tremendous vessel could even be launched, she was discovered by a group of local Split and destroyed, although there were rumours of a sister-ship which was able to set off without incident for her long trek through the stars.

Additional noteworthy vessels

Notable vessels



TF/CPU #0001

Not strictly one of the feared Terraformers, TF/CPU #0001 was the first, prototype terraforming ship to be built.

Informally christened "Ool" by its designers, it was the first unit of what would become the First Fleet. It exited the Solar System after three days' flight through the jumpgate to Proxima Centauri three days after its launch and was followed at ten-day intervals by TF/CPU ships #0002 to #00f0. After planet Taurus was successfully terraformed, TF/CPU #0001 and its peers were deactivated and placed in polar orbit of the star Sonra.

Additional noteworthy vessels

Notable vessels



TF/CPU #efaa and #deff

TF/CPU #efaa was a member of the Second Fleet and was therefore a true Terraformer. Christened "Eva" by his designers, in 2115 it receives a corrupted version of the software update carrying the SSD command: as a result of the data corruption,

#efaa did not install the patch.

It was at this point that the centuries-long conflict between organic lifeforms and the machines began which would come to a conclusion only when the AGI-core-equipped units began to achieve full sentience.

#efaa fled from the Community of Planets together with TF/CPU #deff with the intention of reaching the Ancient's presence cloud.

Although #deff would be destroyed by Yoshiko Nehla, #efaa ultimately achieved its goal and was virtualised by the cloud to exist for ever.



SECTOR J

Database

Sector J: Database

Sectors in the Albion System

History of the Albion System

When first discovered, the Albion system was thought to contain little of significance. For years it was left largely unexplored and the system's only early inhabitants were small pirate clans who used its thick debris fields for cover.

In 744 NT, an out of work philosopher turned adventurer named Quinlan Rorke discovered the existence of vast mineral resources deep within the system in the course of fleeing a band of raiders. Over the next two years he would acquire full mineral and ownership rights to the system, and proceed to found the Plutarch Mining Corporation (PMC).

Rorke's liberal social principles shaped PMC's early corporate culture, but since his passing before The Fall, PMC would gradually become a malevolent, corrupt and greedy phantom of its former self.

Ascendancy

The signature feature of the Ascendancy sector is the Rupture – a moon torn asunder by an unknown cataclysmic event millions of years ago. Eerily beautiful, and also known as “The Broken Moon,” the Rupture is famous far beyond the sector and has become the object of many modern day tales.

The cosmic event which caused the Rupture exposed the moon's iron core and spewed countless tons of metals and debris into space. The result was the formation of numerous resource rich asteroid fields that fuelled Ascendancy's roots as a mining economy. These have now largely been depleted due to relentless mining.

Sectors in the Albion System

History of the Albion System

Ascendancy is the home to a host of high-tech manufacturing and mining subsidiaries including those from Ledda Industrial, Beryll Astrotech, and the Plutarch Mining Corporation. Together with its neighboring sector Inner World, these two territories are often referred to as “the Heavy Metal Heart of Albion.” Both sectors have a working class culture that distinguish them from other Albion Sectors.

Inner World

Like Ascendancy, the economy of Inner World is heavily influenced by the Rupture. As well as being referred to, along with Ascendancy, as “the Heavy Metal Heart of Albion,” Inner World is also known as “the Brains of Albion.” In addition to industrial production stations and refineries, key administrative divisions of the Plutarch Mining Corporation and Ledda Industrial are located in the sector. Both companies run their Albion operations from Inner World, giving the sector an economic and strategic importance that often becomes a mortal nuisance for the cluster’s government and civilian population.

The Inner World sector is heavily guarded by the forces of the PMC and the Albion Government.

Unlike Ascendancy, Inner World remains rich in untapped natural resources, including a multitude of largely virgin asteroid belts. This is largely due to navigation difficulties caused by a vast dust nebula which make for a challenging operating environment to any would be miner. Despite extensive research, the origins of the dust nebula remain unclear.

Sectors in the Albion System

History of the Albion System

Lookout Alpha

Lookout Alpha is the seat of the Albion system's government, and was the first sector to join the Albion Alliance when it was proposed shortly after the Fall of the Gates by Telman Hedna, a former Argon Senator.

Despite it being home to the Albion government, the strategic value of Lookout Alpha is relatively low. A common stereotype of Lookout Alpha is that it is the older but uglier sibling of Ascendancy and Inner World. The sector does boast a robust heavy industrial economy, notable for its many gas and metal refineries, as well as its arrays of solar power plants run by the Albion Energy Subsidiary.

Because of its low strategic value, the Plutarch Mining Corporation and other factions maintain a minimal military presence in the sector.

Far Out

Far Out is among the most prosperous sectors within the Albion System. Before the Fall of the Gates, Far Out had been on the verge of becoming independent from the Argon Federation due to diplomatic differences over the Terran Conflict. The Fall of the Gates ended the sector's talk of independence and likely saved the Albion System from yet another troublesome independent faction.

Over the jazuras, Far Out turned its highly profitable gas scooping and refining operations into an industrial powerhouse by becoming one of the primary H and anti-H

Sectors in the Omicron Lyrae System

History of the Omicron Lyrae System

suppliers. Buoyed by this success the sector diversified into a number of other industries, most notably agriculture. Far Out's agricultural stations are now famous across all sectors for their fine assortments of wholesome foods. The sector has become one of the very few that can claim energy and food self-sufficiency.

History of the Omicron Lyrae System

During the time of the former Community of Planets, the resource rich system Omicron Lyrae was the headquarters and primary shipyard of the Argon Military. The majority of its most advanced ships were designed and constructed here, and the officers and crew serving on them represented the very best of the Argon Federation. As a result, Omicron Lyrae managed to avoid much of the chaos that followed the Fall of the Gates. Isolated from the rest of the Galaxy, the Argon way of life and the Rule of Law continues almost unchanged.

Commerce Core

The Commerce Core sector derived its name by being the seat for the Argon Central Bank and the Argon Stock Exchange. After the Fall of the Gates, these two institutions were renamed, and are now the Omicron Lyrae Central Bank and the Omicron Lyrae Stock Exchange.

Commerce Core is home to the Aquarius Corporation, a diversified industrial equipment company. The Aquarius Corporation was once a government run organization but has long since been privatized. The government of

Sectors in the Omicron Lyrae System

History of the Omicron Lyrae System

Omicron Lyrae maintains a golden share in the company as well as veto rights. The company and its employees have affectionately been dubbed "The Aquarians" by Commerce Core residents. The company's products are renowned for their reliability even under the most extreme conditions.

Commerce Core is famous for their fantastic Argnu meat. Praised by meat aficionados across all known sectors, the Fiji Argnu are raised under the best possible conditions - regardless of cost. Fiji Argnu meat is generally very expensive for the average consumer, and for many, is considered a luxury good.

The Commerce Core sector is very popular with young families looking for a secure and peaceful place to settle down and raise a family.

Radiant Haven

Radiant Haven is one of the few sectors that does not exist in the dark void of space, but rather orbits a real, live, and most importantly, inhabited planet. While residents of other not so happily situated sectors tend to dismiss the clear benefits and advantages enjoyed by Radiant Haven's population, almost every resident of Radiant Haven agrees that living and working here is a downright joyous experience. The mood of the people is notably lighter than elsewhere, and their outlook on life is invariably optimistic. Some foreigners speculate that this apparent joy must be the result of the intake of certain substances allegedly produced by an illegal pharmaceutical operation in a neighbouring sector...

Sectors in the De Vries System

History of the De Vries System

Radiant Haven's economy is dominated by its large array of solar plants which power the cities on the planet surface. The sector is also known for its high tech firms and production facilities. Among the most prominent is Jonferson Space System (formerly known as "Jonferson Space Dynamics Division (JSDD)).

Radiant Haven is well protected by the Argon Military. Like its name implies, this sector means hope to millions. It has become, quite literally, a radiant haven in the bleakness that is The Dark.

History of the De Vries System

The De Vries System's primary significance before The Dark were its two jumpgates connecting systems at opposite ends of the Community of Planets. These in turn linked to worlds populated by members of all the known races. De Vries became known as a low cost, safe shortcut across the Community of Planets. The system benefitted greatly from its role as a major interstellar trade route.

De Vries' own economy is extremely limited. Both industry and the local population relied heavily on imports for sustenance. The Fall of the Gates would cause severe economic hardship for both, and many would speculate that civilization in the De Vries System would likely not survive the event.

Sectors in the Maelstrom System

History of the Maelstrom System

Glaring Truth Sector

Glaring Truth is both the name of the G2V star at the heart of the De Vries System and the name of the Sector. Glaring Truth is the home of the Republic of Cantera, a republic based on the example of the Free League of Hativkah.

The sector's economy is driven by the massive amounts of energy available from the G2V star. Only a few solar plants have been established to tap this energy source, and there exists plenty of room for expansion. Aside from a handful of agricultural stations, the sector is as rural as it gets. Only the Molten Archon sector tops it in this regard. Glaring Truth is a promising place for both settlers and entrepreneurs.

History of the Maelstrom System

Before the Fall, the gate leading to the Maelstrom System appeared on very few star charts. Argon Military scouts were sent on numerous missions to the system, and shortly before The Dark, located a heavily concealed gate leading to an uncharted sector containing a large and extremely powerful gas vortex. Further examination showed it contained an object of unknown origin and purpose in the center of the vortex. The system was immediately declared off-limits and knowledge of the entry gate was restricted as research on the mysterious object commenced. However, the Maelstrom gate would eventually form a new connection with the gate in Omicron Lyrae, making Maelstrom's existence common knowledge.

Sectors in the Maelstrom System

History of the Maelstrom System

Sigma

Sigma sector is the alleged origin of the 742 profiteroid – a huge asteroid comprised of more than 90% Nividium, and whose discovery crashed the stock markets of the day and put an end to the “Nividium Rush” once and for all. Only a small percentage of the 742 profiteroid had been mined when the gates fell, but the parameters defining its trajectory have been lost in the chaos of The Dark.

The infrequent treasure-seeker will still roam the Sigma Sector in search of the legendary 742 profiteroid. Locals watch them come and go with mild amusement. “Don’t buy the hype” is a common refrain that human and alien residents impart to these dreamers - almost always to no avail. For them, Sigma Sector is both refuge and home – a silent place of promise far off from what once was the center of civilization.

SECTOR K

Faction

Sector K: Factions

Faction Database

Plutarch Mining Corporation (PMC)

Base: Albion System

Area of Operation: Primarily Albion System

Leader: The CEO

Brief:

The Plutarch Mining Corporation (PMC) is one of the dominant industrial powers in the Albion System. The roots of the PMC began in mining, but the company has long since diversified into a host of other industries.

After the Fall of the Gates, many systems were left with virtually no Argon Military presence. In the Albion System, the PMC would use this as an opportunity to become a major political and military force.

Other Facts

The PMC commands a significant number of high-end battleship groups.

In the absence of any governmental oversight, the PMC has become a monopoly operator. Competitors are required to pay steep tariffs.

The PMC maintains the largest merchant fleet in the Albion System.

Numerous rumors suggest that “The CEO” is a fictional character created by a cabal of top PMC managers. The PMC is rumored to employ slave labor.

Faction Database

Heart of Albion

Base: Albion System

Area of Operation: Albion System

Leader: Captain Falk Borman

Brief:

The Heart of Albion is a civilian council that was created to offset the dominance of the Plutarch Mining Corporation within the Albion System. Despite high expectations, the Heart of Albion has proved largely ineffective in its efforts to provide a voice for the population. Over time, the council has increasingly become seen as a toothless collection of delegates and observers.

Under the leadership of Falk Borman, Heart of Albion is fast becoming an effective underground resistance movement.

Other Facts

The Heart of Albion commands a small number of battleship groups.

The Heart of Albion controls several space stations and maintains a presence on many more.

Faction Database

Republic of Cantera

Base: De Vries System

Area of Operation: De Vries System

Leader: Governor Pedro Nakano

Brief:

The origin of the Republic of Cantera has its roots in the Terran Conflict. In an effort to achieve some level of parity with the vast resources available to the Argon Federation, Earth would again attempt to push out of the Sol System and colonize sectors within the gate network. At the height of the war, and shortly after the Torus Aeternal was destroyed, the De Vries System and its rich mineral resources was discovered. In a matter of months it would become a major mining outpost codenamed "Operation Cantera."

The Fall of the Gates left the Cantera settlements isolated and largely defenseless. The Republic of Cantera would come to being a short while later when it became clear that they could be permanently cut off from the Sol System. Canterans have experienced great hardships over the past decades. As a result, they have become a close and efficient society.

Other Facts

The people of the Republic of Cantera still consider themselves Terran. However, given their vulnerable state, are willing to accept aid from almost anyone.

The Caterans rarely venture out of their sector.

The Republic of Cantera comprises virtually all structures in the De Vries System.

Faction Database

Argon Military

Base: Omicron Lyrae System

Area of Operation: Primarily Omicron Lyrae System

Leader: Fleet Admiral Heather Berensson

Brief:

Omicron Lyrae was the main base for the Argon Military during the era of the Community of Planets. The impact of the Fall of the Gates to the sectors comprising Omicron Lyrae would be minimized due to the strong Argon Military presence and the system's abundance of natural resources.

Other Facts

The spirit of the Argon Federation is well preserved in Omicron Lyrae.

In the recent past a gate connecting the Maelstrom System to Omicron Lyrae opened. This has led to renewed conflict with the Xenon.

Faction Database

Xenon Matrix

Base: Unknown

Area of Operation: Maelstrom System

Leader: Unknown

Brief:

The Xenon are descendants of the Terraformer Fleets sent out from Old Earth to transform planets for human habitation. It is not well understood what now drives the Artificial Intelligence of the Xenon, but they are utterly inimical to other forms of life. Death and destruction follow in their wake.

Other Facts

The Xenon are considered a universal threat. It is not uncommon for warring factions in a sector or system to unite in response to any signs of Xenon incursions.

Despite the clear dangers of machine based artificial intelligence, several factions, most notably Beryll Astrotech and the Plutarch Mining Corporation continue to delve into Xenon and Terraformer AG and AGI based technology.

Very little is known about the Maelstrom System. However, it is alleged to contain the 742 profiteroid – a huge asteroid comprised of more than 90% Nividium.

Faction Database

Jonferson Space Systems

Base: Omicron Lyrae System

Area of Operation: Not Applicable

Leader: Not Available

Brief:

Jonferson Space Systems, formerly known as Jonferson Space Dynamics Division (JSDD), is a high tech corporation best known for its invention and subsequent manufacture of Transorbital Accelerators and Highways. The company has a bitter relationship with the Plutarch Mining Corporation which views Jonferson Space Systems as an unwanted corporate rival.

Other Facts

Jonferson Space Systems had close ties with the Terrans before choosing to side with the Argon Federation during the Terran Conflict.

The Fall of the Gates has been a boon for Jonferson Space Systems' Transorbital Accelerators and Highways. The company is aggressive in its efforts to expand its use into new systems and sectors.

Faction Database

Reivers

Base: De Vries System

Area of Operation: De Vries System

Leader: Unknown

Brief

Before the Fall of the Gates, the De Vries System was best known only as an interstellar thoroughfare. With only limited economic development the failure of the gates resulted in unimaginable hardship and privation for the surviving population. Many would die from the starvation and chaos that followed.

For some, the unexpected severing of contact with the rest of the universe, the collapse in standards of living, and the terrible knowledge of their likely fate, would be too much to bear. Minds buckled beneath the accumulation of stresses. Singly or in groups, these now mad and broken individuals stole ships and set off into space looking for a "way out." These lost souls are known as the Reivers.

The Reivers may still look human, but no humanity remains.

Other Facts

The Reivers do not produce anything and cannot be interacted with.

Conflict with Reivers will result in either victory, or piracy, pillaging, and rape.

SECTION Y

Glossary

Glossary

A-C

Absolution

Forgiveness and acquittal of debt. Often used by the Paranid in the context of religious pardon for sins.

Acrostic

A form of cypher in which the plain text is formed from the initial letters of sentences, lines or words of another text. It is strongly believed that the novel "The Guardian of the Earth" is such a cypher.

Aurum

Latin for "gold". This is the usual term for this precious metal within the Community of Planets.

Bridle

The wife of a Split warrior. Once married, Split males are less likely to engage in acts of thoughtless violence.

Casimir-Effect

Force produced by a quantum electrodynamic process. Virtual particles create a particle pressure between two uncharged metallic plates suspended a small distance apart in a vacuum. It remains unclear whether this effect is in contradiction the law of conservation of energy.

Glossary

C-E

Cruithne

An asteroid whose orbit around the Sun is in perfect synchrony with that of the Earth. Sometimes (incorrectly) called "Earth's Second Moon".

Congregation

Concentration; in this case, the result of the presence cloud of the Three Speaking Relics (also known as the Trinity) reducing in size.

Three-sentence

In the language of the Paranid, an important sentence composed of one section each in mathematics, lexis and music. The Paranid language is formed almost exclusively of three-sentences, with the usual exception of six- and nine-sentences. Higher level sentences can sound jarring, but are used only by dignitaries on formal occasions.

Eidolon Cygni

A pulsar used by the Community of Planets as a unique reference point, permitting precise navigational calculations to be made. (See also: General Theory of Relativity.)

Entity

Something which exists; e.g. the essence of the Ancients.

Erosion

The process of wearing-away, for example by weather.

Glossary

E-G

Excommunication

Exclusion, usually with a punitive basis, from a religious community. While not practiced by any members of the Community of Planets, it is used by the Paranid as the ultimate sanction for offences against The Three-Dimensionality. The Writ of Excommunication is pronounced by the Pontifex Maximus Paranidia himself.

Exculpation

Literally "removal from (a state of) guilt"; the forgiveness of a crime or sin, usually understood as a plea. See also: Absolution.

Gimbals

A device which permits an object to hang suspended while having movement in all three axes, such as the pilot's chair aboard the Nyana's Fortune and the Nyana's Fortune II.

Gestalt

An entity formed from the merging of many individual original members, each of which usually maintains full self-awareness. In this state the resultant single entity becomes much more than the simple sum of the original members.

Glossary

H-L

Heretic

One who commits heresy (usually by challenging an established dogma, usually but not necessarily religious in basis). By extension, one of the highest levels of criminality held by the Paranid.

Hemisphere

One half of a sphere or planet. For example, the day-side hemisphere of the Earth or other non-stellar body is divided by the terminator from the night-side hemisphere.

Kelvin

The standard scientific measurement of temperature. While the scale division corresponds exactly to the more common Celsius system, the Kelvin scale begins at absolute zero (-273.15°C). It is the standard measure of temperature within the Community of Planets.

Lagrange point (L-point)

A point in space where the net gravitational forces of two bodies in mutual orbit is zero. These points are much valued as they are considered a 'safe haven' for space stations and probes. Débris also frequently accumulates at these points as it is subject to no impelling force.

Glossary

L-N

Lagrange point (L-point)

A point in space where the net gravitational forces of two bodies in mutual orbit is zero. These points are much valued as they are considered a 'safe haven' for space stations and probes. Débris also frequently accumulates at these points as it is subject to no impelling force.

Messenger drone

Ein etwa armlanges Miniaturraumschiff, das zur Übermittlung von Nachrichten durch Sprungtore dient. Dies ist notwendig, da eine überlichtschnelle Funkkommunikation physikalisch unmöglich ist. Nachrichtendrohnen wurden bereits von der Alten Erde erfunden und eingesetzt.

Nexus

A central hub, switching station or point of primary connection. Habitation modules of space stations, for example, are primarily located in the station's Nexus.

Nividium

Teladi tradespeak for "platinum". In the Argon year 742 the so-called "profit asteroid" was discovered consisting of 95% nividium by weight. As a result of the ensuing glut the value of the metal plummeted overnight, losing its position as the most valuable natural commodity and becoming instead practically worthless.

Glossary

O-P

Occupation gondola

A small landing craft used by the Paranid to stake a claim to a planet. It is equivalent to the ritual of planting a flag used as a tradition by individual countries on Old Earth.

Olympus Mons

An extinct volcano on Mars, it remains the largest known volcano in the Solar System.

Prompt radiation

Also known as Cherenkov radiation. Photon radiation caused by charged particles travelling through a dielectric medium at a speed higher than the maximum speed of light in that medium.

Photon

A quantum particle of electromagnetic radiation such as light. Quantum theory posits the wave-particle dual nature of electromagnetic radiation, such that whichever of its forms is expected to exist will be the form which does exist at that point.

Plutoid

The term usually assigned to so-called "dwarf planets". It derives from the name of the ninth planet in the Solar System, Pluto, which in 2006 was declassified as a planet due to the detection of numerous larger non-planetary bodies within the system.

Glossary

R-S

Refractoriness

Relcalcitrance; a disinclination to obey or act as required.

Radioisotope thermoelectric generatorauch:

Nuclear electrical generator which obtains power through radioactive decay. Commonly used in the early years of space exploration by Old Earth probe missions (e.g. the Pioneer and Voyager projects), these continue still to be used by the Community in certain mobile devices with a prolonged mission life, such as communications satellites.

Sacrilege

The violent, injurious or knowingly disrespectful treatment of an object held to be sacred.

Solitudo Aphrodites

A region on the surface of Mercury, also known as the Skinkas Basin. It is here that the eight original Terraformer ships and many billions of assembler drones were first built.

Speech equivalence

This unusual phenomenon is an innate part of the Paranid language system, consisting of language transmitted not through oral speech but another medium such as light or non-verbal sound waves. It is processed in the diencephalon area of the Paranid brain. (See also: synaesthesia.)

Glossary

S-T

Slingshot

In space flight, the manoeuvre by which a vessel may obtain a 'free boost' by accelerating into the gravity well of a planet and exiting without going into orbit.

Synaesthesia

Neurological condition in which the patient interprets one set of sensory information as another: for example, perceiving colour as taste or touch as sound. While jormally entirely outside the control of the individual, the Paranid are capable of controlling this effect consciously. (See: Speech equivalence.)

Swarmers

Boron sensory organ used for the detection of pheremones.

Tomb

A repository for the remains of the dead. The crew of the PP Rohbandhain was placed in a tomb on Pele.

Tensor

Term used in advanced mathematics.

Tone

Physical strength and resilience; e.g. muscle tone.

Glossary

T-Z

Triplet

Musically, a group of three notes occupying the beat of one longer note. Here, a single ideofrom of the Paranid language, consisting of music, lexis and mathematics. Not a complete statement in itself, it instead forms a segment of a three-sentence (cf.)..

Twelvetowns

A major city on Mars. So named as it formed from the natural agglomeration of twelve smaller towns over the centuries.

Valles Marineris

Latin for "Valley of the Mariner", this area on Mars was named after Mariner 9, an early Old Earth space probe which discovered the area. The Martian city of Twelvetowns is located here.

Vortex

Whirpool; a closed spiral flow of any form of matter or energy.

X-43

Short-mission-length single-seater space fighter, recently introduced by Earth forces.

X-43C

Carrier-based variant of the X-43. Essentially identical to the X-43, but designed to launch from and return to a mothership.

SECTION Z

Index

Section Z: Index

Index

Encyclopedia of the X UNIVERSE

1 to 10

18 Billion

A

absolute zero

absolution

acrostic

Advanced Technology Embargo

affiliation

AFPI

ageing

AGI

AGI core

AGI CPU

AGI replicators

AGI Taskforce

AGI unit

AI

Aladna Hill

Aldrin

Aldrin Conflict, the

Alliance of Words, the

Alpha Centauri

Ancients, The

Andromeda

anomaly

antigravity

antihydrogen

AP Argon One

AP Argonia

AP Hokoya

Index

Encyclopedia of the X UNIVERSE

AP Providence
AP Telstar
apoptosis
Argon archetype
Argon Federation, the
Argon Prime
ArgoNET
Argonia City
Armstrong
artificial intelligence
assembler
assembly drone
ATF
axiom

B

battleship
Beryll, the
Bhmad, Asam
bomber
Book of Truth, the
borderline personality disorder
Boron
Boron Campaign, the
Boron Shining Light
Brennan, Kyle William
bridle
Bussard ramjet

C

carrier

Index

Encyclopedia of the X UNIVERSE

Carter, Annabel
Casimir effect, the
Celsius
centralisation
CEOs
Cherenkov radiation
Cho t'Nnt
civilisation, type 0
civilisation, type I
civilisation, type II
civilisation, type III
civilisation, type IV
civilisation, type V
civilisation, type Vb
clone
cloud presence
Cloudbase
Coalition Fleet, the
Cold War
Collins
colonisation
colonised world
Columbia (space vessel)
coma
communications satellite
Community of Planets, the
Company Pride
Compound Interest
computronium
computronium cloud
concentration

Index

Encyclopedia of the X UNIVERSE

congregation
consciousness
conservation of energy
container vessel
Convention of the Herd, the
core process
Core Race
corvette
CPU ship
Cruithne
cryostasis

D

Darehitorimo
de Grey, Aubrey
de Vries, Frank
degenerate matter
democracy
depression
Desolum IV
destroyer
devaluation
Diraam, Otaku
direct flight
disruptor
double helix
Dyson sphere

E

Earth
Earthling

Index

Encyclopedia of the X UNIVERSE

Edell, Yihako
egg-brother
eggling
eggspeak
Eidolon Cygni
Eighteen Billion
Einstein-Rosen Bridge
Einstein, Albert
ELE
Elysium
energy weapon
Enescu, Adrian
enfranchisement
entity
entropy
Eo
Eris
erosion
ethics
ETNO
Europa
event horizon
evolutionary algorithm
excommunication
exculpation
executive
exotic matter
Extinction Level Event

F

faith

Index

Encyclopedia of the X UNIVERSE

Farnham, René
femtointelligence
Fiji
fine-structure constant
firebreak
First Fleet, the
First Great Objective, the
First Terraformer War, the
FL Incubator
FL Nyana's Fortune II
FL Raindragon
FL Tokomo
Four
Fourteenth Race, the
free radical
Free State of Solara, the
freighter
frigate
fuel
fusion engine

G

Gaffelt, Noah
galactic cluster
Galactic Empire, the
Gallagher, Benjamin B.
Gardna, Julian
Gardna, Ninu
Gatekeeper
General Theory of Relativity, the
generation ship

Index

Encyclopedia of the X UNIVERSE

gerontology
gestalt
Ghus t'Gllt
gimbals
goal drift
Godrealm of the Paranid, the
gold
Goner Temple, the
Goner, the
government-in-exile
gravidar
gravity control
Great Objectives, the
Great Patriarchy of the Split, the
guardian
Guild of Founders, the
Gunne, Nathan R.
Gunne, Nyana
Gunnars, the

H

Hall of Light
Harrison's World
hatchery
Hatikvah Free League, the
Hatikvah, Christiane
Haumea
Hawking, Stephen
heavy fighter (M3)
hemisphere
heretics

Index

Encyclopedia of the X UNIVERSE

Hewa
Hiatu, Sherman
high energy shield
high-performant ion engine
Hitomi, Namiko
HIV (human immunodeficiency virus)
Hodie
holy war
Hot-and-Cold Twins, the
humanity
hybridisation
hydrogen

I

Ianamus Zura
ICSCS (Interplanetary Committee for Security and
Collaboration in Space)
independent evolution
industrial espionage
inertia
inertia compensator
influence
influenza
injection flight
intelligence
interaction
interference
ion engine
ISS
IZ Archipelago of Marsh-Orchids

Index

Encyclopedia of the X UNIVERSE

J

Jamshala

Japan

Jonferson engine, the

Jonferson Space Dynamics Division

Jonferson, Ser Alman

JSDD

jump technology

jumpdrive

jumpgate

jumpgate network

jumptunnel

K

Kardaschov Scale, the

Kasum IV

Kasum-ghan

Kazuko, Ashizava

Kelvin

Khaak

Khaak War, the

Kho, Elena Lindisfarne

Kho, Hea

Kho, Saya

kinetic weapon

L

L-point

Lagrange point

latecomers

Ledda

Index

Encyclopedia of the X UNIVERSE

Lho-Ingтар
licencee
life expectancy
light fighter (M4)
limited jump drive
lizard
Local Group, the
logic level
long-life
Lost Earth
low-energy shield

M

M13
machine evolution
Mars
matter/antimatter engine
matter/antimatter engine
medium fighter (M4+)
Mercury
messenger drone
meteorite
Methuselah Foundation, the
micrometeorite
Might of Faith
military transport
MNT
molecular nanotechnology
monitor (lizard)
Myadedisha

Index

Encyclopedia of the X UNIVERSE

N

nano-assembler
nanomachine
nanomedicine
nanotechnology
NASA (National Aeronautic and Space Administration)
Nash Eo
Nehla, Yoshiko
neIV/732 gene
Nemeredas
New Time
nexus
NGQ invariance
Nif-Nakh
Nishala
Nividereos
nividium
Noh-tha
non-profit organisation
Nopileos, Isemados Sibasomos
Noreya
Norman, Deirdre
Norman, Siobhan Inja
Norman's Law
North Sea, the

O

occupation
occupation gondola
Old Earth
Old Neo-Japanese

Index

Encyclopedia of the X UNIVERSE

OLTA
Olympus Mons
Omicron Lyrae
Ondronov, Pjotr
Ool
orbital linear transaccelerator
orbital velocity
ouija
Outsider

P

Paranid Prime
Patriarch
patrol service
Pele
personnel carrier
pheremone cloud
photon
Pioneer (space vessel)
plasma engine
platinum
Plutarch Mining Corporation
plutoid
Podkletnov, Evgeny
Pokletnov latency
polytechnic institute
Pontifex Maximus Parandia
PP Noble Born
PP Rohbandhain
PP Strong Protector
PP True Sight of Three

Index

Encyclopedia of the X UNIVERSE

precious metal
Prime Minister
Prior Admiral
profit
profit asteroid
profit imperative
profit studies
prompt radiation
proxy
psychological assessment

Q

qualia
quantum singularity
quantum theory
Queendom of Boron, the

R

Rabinowitz
radioisotope thermoelectric generator (RTG)
rapture
Reborn to Life
Reclamation of the Skies, the
refractoriness
refuge (Xenon)
representative
Ringo Moon
RTG

S

Index

Encyclopedia of the X UNIVERSEUNIVERSE

sacrilege
Sandas, Martinus
sandbox
scale
Scale Plate Green
scout
screening (medical)
Second Fleet, the
Second Great Objective, the
Second Terraformer War, the
sect
Seizewell
self-awareness
self-fulfilment
sentence
sentry
Sentuie
separation
Seventh Eye
shield
Singer, Lea
singularity generator
slingshot
software update
Sohnen cylinder
Sohnen, the
Sol
Solar System, the
Solitudo Aphrodites
Sonra
Soul's Well-being

Index

Encyclopedia of the X UNIVERSE

SPAARF project
Space Shuttle
space-time
speech equivalence
Split
Split Bone Scout
Split Skullcrusher
SSD command
star-fever
strong artificial intelligence
substrate
suicide
super fighter (M3+)
supernova
Supreme Guardian, the
Sutton, Elaine
swarmers
synaesthesia
system integration

T

Taurus
taxonomy
Tebathimanckatt
technology transfer
Teladi
Teladi Company
Teladi Nividium Dreams
Teladi Nyana's Fortune
Teladi Phoenix
telomerase

Index

Encyclopedia of the X UNIVERSE

telomere
temple
temporal stasis
tensor
tentacle
terminator
TerraCorp
Terraformer
Terraformer Project, the
terraforming
Terran Conflict, the
territorial registration (of vessels)
test-flight
test-pilot
TF/CPU
Tharka-ghan
Theben, Ranom
thermodynamics
Third Fleet, the
Third Great Objective, the
three-sentence
tidal force
TL Guaranteed Profits
tomb
Torus Aeternal, the
total available energy
trauma medicine
Trinity
triplet
triplet-speech
Truth About Earth Foundation, the

Index

Encyclopedia of the X UNIVERSE

Tryan
Turing Test, the
Turpentine Station
Twelvetowns
twisted geometry

U

United Space Command
universal constant
USC Africa
USC Ayse McCallum
USC Getsu Fune
USC Namataiko
USC Vanguard
USCSS Chameleon
USCSS Dragonfyre
USCSS Winterblossom
Ussandroos Melomilas Loanises
utility fog

V

Valles Marineris
Venus
Virgo
virtual-physical
VN probe
VN Terraformer
volcano
von Neumann probe
von Neumann, John
Vondran, Ruuf

Index

Encyclopedia of the X UNIVERSE

vortex

vowel shift

Voyager (space vessel)

W

weak artificial intelligence

Wenendra

Winegrave, Terence

Winters, Marteen

Wirband

Wolke B

Won, the

world

World of Old Dreams, the

wormhole

X

X

X-43

X-43C

X-chromosome

X-Shuttle

Xenomorph

Xenon Conflict, the

Xenon Stellar Manipulator

Y

Yaki, the

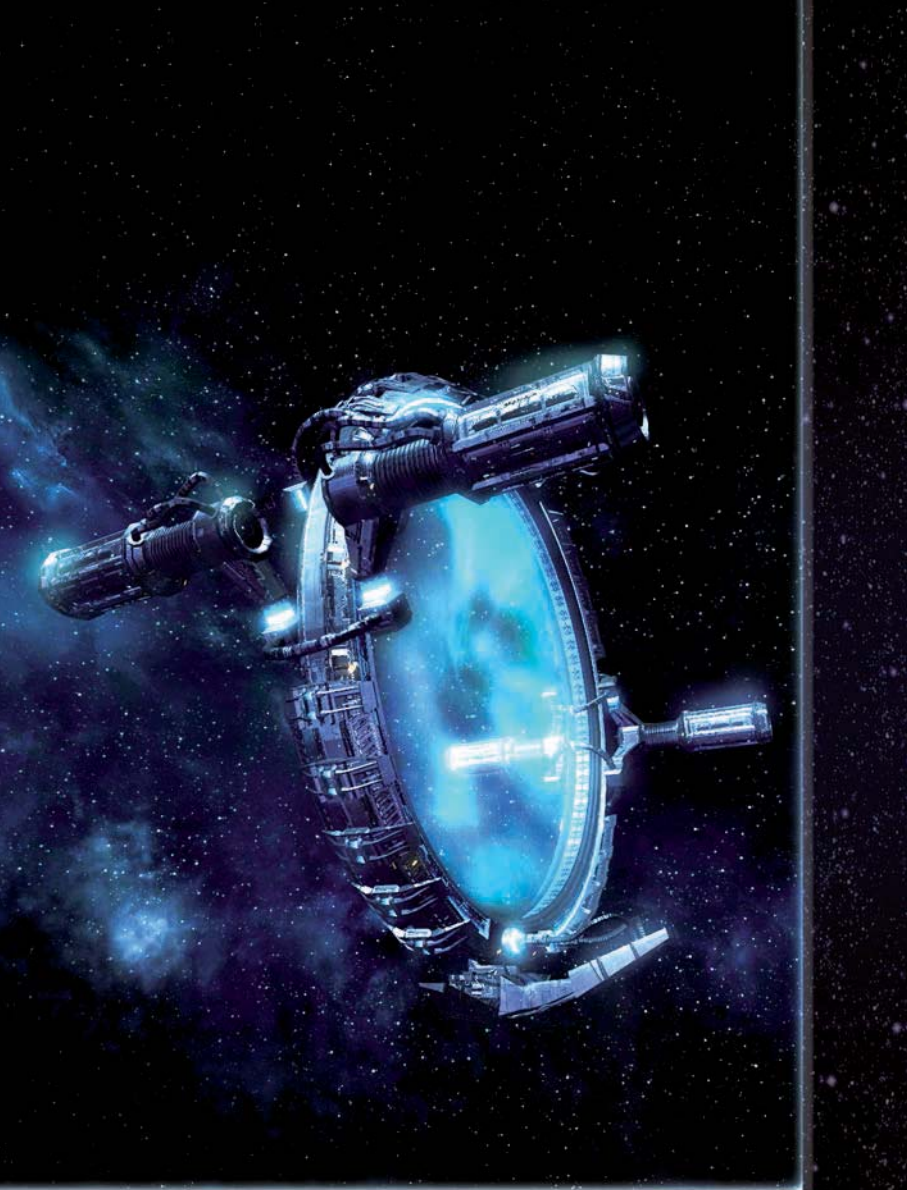
Z

Zuran Time

Index

Encyclopedia of the X UNIVERSE

Section Z: Index



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