

SKYMARSHAL 12

SLAUGHTER OF ALPHA CENTAURI: A BEGINNING

He rested alone in a pitch black room, savoring the smell of the aromatic incense.

Cinnamon, the humans had called it.

As the alien sat in the darkness he contemplated, his sub-divided brain was working simultaneously in four different areas. One region was perusing the interesting tantric poetry of the Hindu humans, while another part worked on a multi-dimensional math problem that could possibly see a breakthrough in exotic beam weaponry, while another area he focused on potential military strategies for the upcoming battle, and finally his right forebrain perused enjoyable memories of home and his people.

He wasn't a "person" per se but was actually a stabilized bundle of highly intelligent organic fibers, several hundred years old. In that regard, Vestrii were unique in a galaxy of odd-ball aliens. He could also take a piece of himself and emplace it into other creatures, other beings, and control them from a short distance. He himself managed 4 semi-organic ships, with over 400 additional Vestrii crew, eight massive organic oxygen-generating plants, and over 4,000 sub-animals and near sentient plants aboard those same vessels. He could, possibly, take control of a human using the same process, but it was doubtful it would succeed. Nor had it ever been tried.

During their colonization of space, the Vestrii had encountered just two races, both of which had immediately gone to war. Eventually they defeated both races, but then they stumbled upon an ancient amalgamation of races: the Hre'Daak.

It was the Vestrii's supreme ill fortune to find that the majority of the warp lines emanating from their systems ultimately connected with either a dangerously jumbled cluster of closely linked and unstable warp lines they called the Maze, or, even worse, worlds on the fringe of a vastly older and more technologically advanced society than their own, the Ah'ihroz Hre'Daak.

According to the Vestriian accounts, the Hre'Daak are a tightly confederated alliance of ancient races who long ago put an end to their centuries of warfare by a deep consolidation of their philosophies and principal beliefs into a powerfully unified mass culture. The guiding insight that led them out of conflict was that the concept that "like minds don't fight each other". The four principals who were to become the founders of the Ah'ihroz Hre'Daak (literally translated as the Unified Empire of Like Minds) each made the effort to offer what

Planets in the New Beijing Chain

Dakota System: asteroidal system, 200 million pop
Devon's World: (fleet yard) mining planet, 150 million
Everest: mountainous world, 8 million
Hardrock: prisoner colony, 18 million prisoners
Kilimanjaro: animal/nature preserve world, 50 million
New Beijing: 200 million pop
New Kenya: African colony, 35 million
Nouveau Dijon: (end of chain) agroworld, 62 million
Seabright: vacation world, 80 million
Silverblue: vacation world, 12 million
Springworld: iceworld, 20 million
Sunnybeach: vacation world, 43 million

Planets in the Balthasar Chain

Balthasar's World (HD stopped here), 2 billion
Chatapoultec: jungle planet, 150 million
Dhassa: jumbo world, 2 billion people
Free: independant world, 15 million
Gujarat: high-population planet, 4 billion
Kali: high-pop world, 2 billion
Kennedy: high-population planet, Corporate World, 4 billion
New Idaho: mountainous world, 80 million
Nouveau Quebec: (end of chain) agroworld, 20 million
Pilgrim System: 200 million
Quetzalcoatl: jungle planet, 20 million
Rajasthan: high-population planet, Heart World, 3 billion
Ultimo: high-population planet, 2 billion
Uttar Pradesh: high-population planet

they felt were the best aspects and products of their cultures and to forge a unified, and ultimately superior, metaculture out of those mutually accepted virtues. It was, by all accounts, a grand success...at least in the beginning.

The Hre'Daak were eager to accept new races into the Ah'ihroz, and to build a dynamic, thriving culture with as varied a philosophical base as was available.

But now, hundreds of years later, their desire for diversity has vanished. The once dynamic Unified Empire of Like Minds has become a homogenized, completely standardized and intolerant society, wherein language, dress, architecture, philosophy, art, worship, marriage, and all manners of public and private behavior, have been proscribed into formalized protocols, minutely described in the codex Hre'Daak Tre'shet (Literally translated as: "Like minds act like this...").

The Tre'shet is, and has been for untold hundreds of years now, the beginning and end of virtually all Hre'Daak wisdom and life. This same playbook also tells them how to conduct matters of state, run their economy, and what to do when they bump into other races that are not yet Hre'Daak.

Unfortunately, while the cooperative principals of the Hre'Daak have allowed them to achieve an extraordinarily advanced level of technology, it has ultimately retarded their desire for growth and exploration. In times past, during the flourishing of the Ah'ihroz, the Hre'Daak would actively seek out new races and societies and try to incorporate some portions of their culture into the Hre'Daak, operating on the principal that "races must strive to become like each other to coexist". At length, however, as the Hre'Daak grew from four races, to twice that, then to scores, the principle subtly changed to "races must strive to become like the Hre'Daak to coexist". It had come to say in the Tre'shet that in the interests of hegemony and in keeping with a successfully implemented social policy that new races had a simple choice to make: become Hre'Daak or be destroyed.

By the time the Vestrii encountered them, the Ah'ihroz Hre'Daak was an immense Empire, with hundreds of systems under its control. The Hre'Daak had ceased to actively explore any longer; rather they were content to let new races stumble down the warp lines into Hre'Daak space. They had never encountered a race more technologically advanced than themselves and smugly did not ever expect to, and the rolls of the names of all the races encountered by the Hre'Daak were immense. To the Hre'Daak, the Vestrii seemed to be just another star in the sky, more or less. They were wrong.

Within weeks of their first accidental encounter with outlying forces of the Hre'Daak, the Vestrii knew they were in deep trouble. An Emissary of the Hre'Daak entered the orbit of a Vestriian outer colony system in an immense ship, several times more massive than anything the Vestriians had ever seen. It bristled with huge weapons bays and glowed with the frighteningly unfamiliar light of such technically advanced energies that even for the pragmatic and capable Vestrii, it must have seemed like magic.

SECOND BUG WAR TIMELINE

Oriskany Destroyed (January 24th, 2450)

Battle of the Killeen System (February 17th, 2450)

Battle of the Dueteronomy System (April 1st, 2450)

Battle of the Helleye (March 16th, 2451)

Battle of Canby Station (October 5th, 2451)

Battle of First Masada (June 21st, 2452)

Tolat Intervention (January 30th, 2453)

Battle of Second Masada (May 13th, 2453)

Massacre at Warp Point 2 (June 7th, 2453)

Battle of Third Masada (PSU intervention) (February 10th, 2454)

Battle of Home Hive 2, Admiral Rubinova killed (November 22nd, 2454)

SWMBC Final Battle, Admiral Chavarra killed (December 19th, 2454)

The Emissary casually referred to the vessel as an “Arbitrator” and began to lay out his terms. For four days, Representatives were summoned to the Arbitrator from the home world. The Vestriian government, an assemblage of scholars and logicians selected on the basis of interest and merit, were given copies of the Tre’shet prepared for their use, and were asked to peruse them, and to ask whatever questions they might have. The general Vestriian populace was also provided with the Tre’Shet. They were offered the opportunity to share in the wealth of technical knowledge that was so obviously present in the Emissary’s ship, and in the “spiritual” wealth that the Emissary claimed was attendant upon becoming a “member” race of the Hre’Daak. When the Emissary was asked what the Vestrii would have to give the Hre’Daak in order to be allowed to become one of them, the Emissary made a dismissive gesture and replied that there was absolutely nothing that the Vestrii could possess that the Hre’Daak could possibly want or need. In fact, he went on to say, the Vestrii would have to give up their culture and completely accept the Tre’Shet. The first generation, he said, was always the hardest, which is why all the newborn Vestrii would be matched with others of another, more “acclimated” race. It was all in the Tre’Shet. The penalty for refusal was “sanctioning”, which entailed the destruction of the race.

To this day the Vestrii claim that they have no real idea why they were the first race to take a stand against the Hre’Daak. The oldest of the Vestrii, the ones who were there to witness the arrival of the Emissary, say that there was something in the cruel way he casually dismissed the entire course of Vestriian development with his “nothing you could possibly have...” comment as if he were wiping away the significance of the thousands of years it took the Vestrii to achieve sentience, acquire a cultural identity and reach out into space, all with a wave of his manipulative digits.

At the time the Vestrii had no allies (they had fought two small interstellar conflicts already: one with the aggressive reptilian Kess and one with the techno-horror J'Rill alien race) and were sorely, in fact completely, outclassed by the Hre’Daak. But the price the Hre’Daak asked was too high. The Vestrii, motivated more by pride than by logic, had already decided their answer. They would say No, and deal with the inevitably high price. Fortune smiled upon the Vestrii, however. Sensing the mood in the people, the Emissary told the Vestriians that they would have a year to mull over the offer, believing from past experience that a sufficient period of time would allow the young race to pass through its initial desire to refuse, and for the inescapable logic of acceptance to be adopted.

Realizing that they could never withstand the terrible firepower of the Hre'Daak forces and refusing to bow down, having their history erased, the Vestrii fled en masse. They entered the Maze with hope and fear.

A hundred years later (when the Vestrii finally exited the Maze) that vast jumbled network of unstable wormholes, and they arrived into an area of space that contained more than a dozen habitable worlds that had clearly been rendered unlivable by devastating antimatter weapons. The high levels of radiation on these planets made them impossible to colonize, and deeply worried the leaders of the Vestrii race. Clearly the region was a deadly warzone and they feared that they had gone from the frying pan into the fire. They were still being chased by the indomitable Hre'Daak forces that were bent on assimilating them but now they were faced with a new danger, the dead worlds of the Arachnid Omnivoracity.

Humans, Orions, and their allied races had fought two wars with the Arachnids (also known as the Bugs). This voracious and deadly high mind race sought no quarter in their expansion across the galaxy. When they captured a world, they began eating the local humanoids while still alive and sparing some as breeding cattle. The first conflict between the Allied Races and the Bugs was devastating, and decisive. With over 50 billion dead, the humans and Orions rampaged through the Arachnid Home Systems, annihilating their forces and wiping out their worlds. However, a single Bug sat system remained hidden and 80 years later another smaller, final conflict between humanity and the Bugs ended that race forever when the Allied Races committed genocide against the Bug galactic tyranny.

Ten years ago the Vestrii entered Allied space in the former Bug worlds and made contact with a human fleet that was patrolling the Dead Worlds. First contact between the two powers were shaky at first but eventually got off to

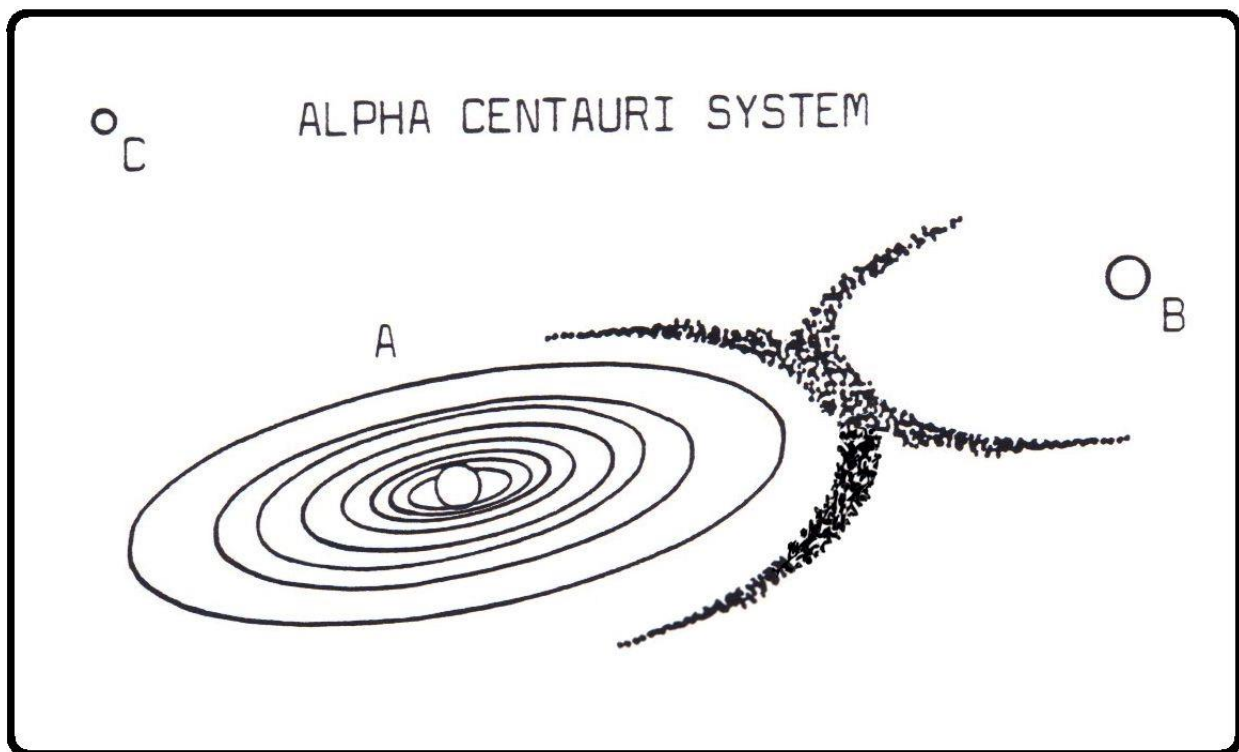
a good start when all sides found common cause in eliminating the growing Tangri raider threat.

Relations between the Vestrii and the newly formed Pan-Sentient Union (an alliance of most races in and around human space) went well and the Vestrii were eventually ceded the star systems of the former Arachnid Omnivoracity to colonize. They did however warn the PSU that they were being pursued by a vastly superior race, the Hre'Daak, and that they would eventually be coming for all of them. However, PSU military and political officials scoffed at the warning; the Pan-Sentient Union was vast, with thousands of worlds and nearly a dozen allied races joined together in a growing economic and military alliance. Nothing, they said, could threaten something as vast and powerful as the PSU. And there they were wrong.

Eventually the Hre'Daak appeared, following the fleeing Vestrii race, and appearing in a distant border star system of the Pan-Sentient Union. Initial contact between the PSU and the Hre'Daak was disastrous, sparking an ever-increasing orgy of violence and mega deaths across PSU space. After nearly two years of hard fighting, the Humans, Orions, and their allies were on the edge of virtual collapse, unable to stop the advancing enemy forces. The Hre'Daak had multiple centuries to perfect their hyper-advanced weaponry and fleet tactics and those deadly results were showing: more than 80% of the PSU's main battlefleet had been destroyed and millions of military personnel killed. Nova bombs were being detonated in human-occupied star systems, killing billions, and the political leadership within the joint-PSU government was utterly desperate.

So here he was, just a few years later, posted as a military attaché to the Pan-Sentient Union warfleet guarding the wormhole entrance to humanity's homeworld, Terra. His assignment was to help the PSU military forces operate the new black hole projector antimissile system and advise them on Hre'Daak weapons and tactics. The PSUs' technology was totally inferior to the Hre'Daak, as seen by the disastrous performance of their military forces during the nearly two year campaign to try and stop the enemy fleets from advancing deeper into PSU space.

MORE HERE SOON



POST ARMAGEDDON WAR WARSHIP CONSTRUCTION (AN ARTICLE)

After the devastation wreaked by the Hre-Daak against the Pan-Sentient Union during the Armageddon War, naval commanders were forced to severely evaluate its military doctrines and hardware in its wake. Below is a listing of naval construction by a select few interstellar powers that has occurred in the 10 years after the war ended.

New Human League (the League, Leaguers)

Following the abysmal performance of the Pan-Sentient Navy during the war, a series of major changes was imitated among the new navies that had sprung up virtually overnight in the former PSU. Within the newly formed New Human League's armed forces, "c-boomers" were an end-result of these changes. Faced with a stunning defeat at the hands of the Hre'Daak (and the utter destruction of humanity's homeworld), the League began a serious re-evaluation of its military ships it had on hand, specifically looking at the size of such ships and their armaments which proved woefully inadequate during the Armageddon War. Heading this group of enterprising officers was Rear-Admiral Richard Hale, a well-known weapons theorist and innovator within the former PSU Navy. Hailing from the warlike planet Darkover, Hale had an extensive history of military tactics, planning, and development of new weapons and combat ideas. He had fooled around for years with the concept of a massively armed kinetic spinal weapon based on smaller sized warships that could be quickly constructed and that could cause tremendous damage, not only to ships but to any static object: orbital bases, asteroid forts, space stations, and even planets. Designed from the keel-up, this huge weapon was created initially as a asteroid fort killer, the League political leadership informed Admiral Hale that they only had limited funding for military projects and that he would have to make due with the ships he already had under his command. With nearly two dozen outdated and nearly useless cruisers and battleships at his naval depot, Admiral Hale conceived a plan to upgrade these vessels into more lethal military hardware. Choosing an older *Belleisle-B* class battleship, his work crews stripped out every unnecessary part and emplaced a large kinetic spinal mount in the warship. These large KEW rounds could be devastating; a single hit usually guaranteed a kill on most smaller vessels and their use against planet produced enormous destruction across a wide area, without the radiation that nuclear or antimatter rounds would release. All armor and shields were upgraded as well as a light armament suite (a dozen plasma guns and three rapid-fire missile launchers). Topping it all off was a military-grade AI that would control the entire warship and hurl it into battle without fear of naval personnel losses. Being totally automated, this new class of battleship (the *Long Lance*) could cause enormous damage by hurling a basketball-sized tungsten slug up to near c. Combat in space had advanced to the level where any ship smaller than a battleship wouldn't survive just a few minutes in battle but ripping out the life support and crew quarters of these vessels allowed for more armor and shielding, significantly increasing their survivability while under fire. Testing was concluded several years ago; the design proved so valuable that the League Navy continues to field a growing number of these automated warships. Finally, rumors of "battlemoon" construction by the League Navy has not been substantiated even though it is now capable of such a stupendous endeavor; having *seen* a Hre-Daak battlemoon most human navies can now build that sized vessel, but the sheer cost is far beyond most interstellar nations' capabilities.

Frontier Alliance Worlds (the FAW, the Alliance, or the Frontier Worlds)

Several other stellar nations began adopting similar versions of the League AI-controlled ships, but the FAW admiralty refused to consider using older or less-capable vessels in this configuration and laid down several new capital warships to test the newest concept of large spinal mount weapons. The FAW Navy *Resolute*-class superdreadnoughts are an entirely new design of warship, with a radical new weapon system (the Hypermass Generator) at its core. First constructed nearly two years ago in the Guinea Chain, three superdreadnoughts (*Restitution*, *Resolute*, and the *Renown*) were completed and recently turned over to the FAW Navy for evaluation. While only in the prototype stage, these vessels have performed well at the Guinea Test Range and during the Cumberland Naval Exercises. Commanded by Vice Admiral Dominique Loye, the three experimental superdreadnoughts will continue their evaluation of the Hypermass Generator (HMG), including live-fire tests at Kline Station later this year. Also, a single hit by a hypermass shell will destroy most warships and orbital bases due to its ultra-dense neutronium warhead. The HMG is a ultra-top secret weapon that has not been shared with any other allied nation and has taken decades to bring online as a successful battlefield weapon. Also, a large

missile suite (multiple VLS arrays), XO-mounted automated self-defense fighters, heavy passive defenses, and rapid-fire lasers round out the *Resolute* design. New computerization, including the latest generation of cybersynth and computer combat programs, was recently installed in the mainframe. The decision to use superdreadnought hulls for this highly experimental system was the fact that the Hypermass Generators themselves are quite large, so large in fact that they are currently now the biggest engineering system that the FAW Navy produces.

Britannic Navy

The newly formed Britannic Navy grew out of the collapse of the Pan-Sentient Union at the end of the Armageddon War. A wealthy Corporate World located near the Reformation Group, this planet began crash construction of military warships to protect their star system from further Hre'Daak incursions, as well as pirate raids. These raids had sprung up virtually overnight in the chaos that ensued when the majority of the PSU Navy was destroyed in the fighting in and around the nearby New Beijing Chain. Three new types of advanced superdreadnoughts were laid down in the orbital yards surrounding Britannica, and all of them were new radical designs.

The *Majesty*-class are a beam-heavy of superdreadnought (Cascading Antimatter Beam-Cwa and rapid-fire fourth generation plasma guns-Pg4) that fulfills the warp-point assault role as well as fleet beam-support. Also having a huge antimissile defense array and extensive passive defenses like the up-to-date compressed armor and new nearly impervious shield "envelopes" developed strictly by the Britannic Navy has made the warship design very lethal.

The *Britannia*-class superdreadnought (six advanced strategic bombardment missiles-ASBM) is a missile-heavy platform (ten in class) that covers the fleet long-range offensive role as well as anti-fighter support. The *Britannia*-class was also built from the keel-up with the new AI-directed fire control system and the advanced Phaeton long-range sensor array. It also has an impressive secondary array of 4th generation rapid-fire missile launchers (Wa4) that can target both warships and small craft.

The *Iron Duke*-class superdreadnought (HETLASER Cone-HET5 and rapid-fire plasma mounts-Pgl2) are a completely new design and only 3 test bed vessels have been completed to date. Further testing is needed before military leaders on Britannica will pay for more construction of this class.

The *Hektor*-class heavy cruiser is similar to *Mauna Loa*-class in that it carries a large number of boarding sleds and elite troops to attack ships, bases, space stations, and even planets. These SLEDs use boatbay technology (BbL) to move about on the battlefield. The Britannic Navy wanted several different options when using boarding techniques and the *Hektor*-class gives them a strong punch in a small package.

The full complement of the Britannic Navy is composed of 14 super-dreadnoughts (SDs) and 6 dreadnoughts (DNs), 16 battlecruisers (BC), 22 attack cruisers (CA and CB), 26 destroyers (DDs), 3 full gunboat wings, and 3 heavy combat carriers (CVH) under construction. It also has strong contingency planning with the Reformer Navy for operations in and around their shared space borders. The Britannic Navy can maintain this sized fleet because of the fees paid by nearby planets for protection and the extensive numbers of state-owned merchantmen (100+) generating revenue for the Britannia System.

Esteeler Navy

The creation of the infant Esteeler Navy is a direct result of combat by Hre'Daak forces in that system, which badly damaged the planet, several moons, and left a slew of destroyed warships in its wake. Just before the outbreak of the Armageddon War, the PSU built a large fleet shipyard in the Esteel System, a planet that had grown into a powerful PSU Corporate World in less than 200 years. Esteel itself was a "full goldie" world with a population of more than 3 billion people by the time the war began. The shipyard was built for the purpose of

supporting the PSU Grand Fleet during its potential future operations against the Hre'Daak but humanity's armed forces were easily annihilated in the Red Rocks System on January 14th, 2465 AD. The conflict raged for months as the allied fleet fell back deeper and deeper into PSU space. The second enemy axis was stopped in the Esteel System on May 11th, 2466 but the fighting demolished much of the systems' infrastructure. In the aftermath the Pan-Sentient Union broke up, and like many worlds in and around the Fringe, Esteel found itself on its own. The only large interstellar state that was close was the Reformation Group and several nearby worlds rapidly developed an associated relationship with the Reformers, including Esteel.

After repairing most of the damage to their home system, the new Esteel naval commanders began laying down warships with a vengeance to protect their homeworld from further invasions. These military leaders also consulted closely with the Reformers on naval design needs and specifications, since Esteel would be working side-by-side with the nearby Reformation Navy. It was decided that Esteel would supplement the Reformation forces by building large warp-point assault ships and several other advanced cruiser designs, and a single enormous juggernaut prototype. By focusing on bigger vessels, the Esteel Navy could keep most of its forces in the home system as well as scaring away any pirates or foreign attackers by the immense size of their ships; smaller ships were generally used to patrol frontier areas while capital ships were generally kept in a planets' "home fleet". This philosophy would also free up a lot of Reformation personnel, letting them use smaller ships across a larger area of space, and enabling both fleets to come together in case of another Hre'Daak assault. With the combined advanced Reformer tech and the enormous Esteeler warships, it was believed that the joint forces wouldn't be a push-over for future enemy attacks in their region.

For the Esteel Navy, its prototype juggernauts were laid down in the fall 2735 and were completed three years later, despite numerous technological and hard-wear challenges. Named the *Auster*-class, these gigantic warships were built with warp point assaults in mind and fielded the new blazer guns, and mega-blazers, as well as a newly designed e-cannon (an advanced energy beam). Virtually nothing could survive the *Auster*-class juggernauts attention for long at point-blank range since it was a beam-heavy design and the fusion-based blazer guns and e-cannons could deliver unimaginable damage to any nearby warship. As a nice side effect, the e-cannons could also damage warships internally but leave them intact for later salvage by Esteeler forces.

New *Spike*-class attack cruisers were also built to escort the *Austers* and armed with deadly "positron lances" the cruisers could also inflict enormous damage upon the enemy from medium to long range with these new energy-missile weapons. A total of 16 of the *Spikes* were built on the moon Atsog (in the Esteel System), with secondary armaments being fourth generation plasma guns.

In addition, to maximize its warp point potential, the Esteel Navy fielded the stupendous *Conquerant*-class mobile siege platforms, which are also known as "bombards" and "maulers" by their onboard crew. These titanic warships were considered "siege platforms" because of these very slow engine speeds and when travelling through a warp point they could release enormous antimatter "bombs" that would devastate enemy minefields, orbital bases, and anything near the extended-range blast zone. These special weapons (called WoLopars) are released automatically after warp point transit and are built into special heavily armored "bays" within the *Conquerants* belly. A total of 6 *Conquerants* were built at the Mariner Fleet Yards and during battle these warships are meant to be escorted by Esteeler cruisers and light Reformation warships; they are *never* sent on missions or patrols unescorted.

Finally, the Esteeler Navy now has an extensive officer exchange program with the Reformer Navy, and is working on allied R&D on several promising military related techno-projects.

Olympic Navy

The Olympus System is unique in the known galaxy as it is an expansive star system inhabited by both humans and Orions. It is distant double binary system with eight stars and eight habitable planets, and with a rapidly growing population of 2 billion inhabitants. When first discovered, a political crisis within the Pan-Sentient Union erupted in 2459 AD when this amazing piece of interstellar real estate was found by a human scout near the Fringe. Claiming the worlds for humans, scout Noah Andoya initiated a serious political blunder which was only overcome when human leaders in the PSU Congress finally offered up half of the new worlds to the Orions' for colonization. Since then, it has become a major colonization zone for the PSU and trillions of credits were spent to create a substantial industrial infrastructure in what would surely become the largest and most lucrative planetary system to date. In 2465 AD the Armageddon War broke out between the alien invading Hre'Daak forces and the PSU, and conflicts raged in and around the Olympus System until it was cut off on June 12th of the same year. By that time, several industrial asteroids had been towed into orbit of each populated world and six major shipyards had been constructed, all able to produce the latest military vessels that the PSU could make. As the fighting wound down in the Armageddon War, the ashes of the conflict were bitter for humanity; Terra had been utterly destroyed and the many human regions of the PSU rebelled, breaking away to form their own petty interstellar states. During that same time, the Olympus System made the decision to become independent as well; it was out near the borders of the Fringe with few nearby PSU worlds to ally with. Being a growing powerhouse, the Olympic worlds chose to build a defensive fleet that would withstand any assault into the systems only warp point entrance. With that in mind, they began building military vessels at an impressive rate, starting with an asteroid-sized juggernaut warship.

The *Zeus*-class juggernauts form the core of the Olympic Navy and armed with both missile and beam weaponry (Wca and Fca); the missile launchers are able to fire newly created "dark matter warheads", which cause terrible damage, damage so devastating that no enemy warships could withstand multiple strikes from this deadly new weapon. A total of six of these enormous warships were built and manned, creating the "home fleet" of the Olympus System. Fleet Command Headquarters on the planet Andoya maintains control over these vessels and has built an extensive military support system to maintain them, including three naval academies on the various Olympic worlds. One of the newest *Zeus*'s (the *ONSS Hera*) is testing a new "stasis envelope" that prevents damage to a ship, as well as a new high-speed minelaying system that contains self-maneuvering mines with micro-antimatter warheads.

In addition, dozens of support ships have been constructed and are in use, including fleet tugs, hospital ships, repair vessels, military couriers, quartermaster ships, and ammunition colliers. A new class of attack cruisers (the *Lightning*-class) has also been built specifically to escort the *Zeus* juggernauts, with a total of 16 being laid down. These warships are built around a brand new "Positron Lance" and a series of advanced rapid-fire plasma guns (Pg4), with new fourth-generation gunboats mounted on the XO racks on the exterior of the ship in a support role. This varied equipment gives the Olympic cruisers a wide range of options on the battlefield, including gunboat interdiction strikes, warp-point assault support, close-range interdiction, and long-range positron missile barrages.

Finally, as the population of the Olympus System continues to grow, it will eventually become the largest population concentration in the Fringe area and will most likely have the largest future naval force in the entire region. Olympic forces regularly train with nearby Esteeler and Reformer fleets with an eye towards preventing future Hre'Daak incursions into their area.

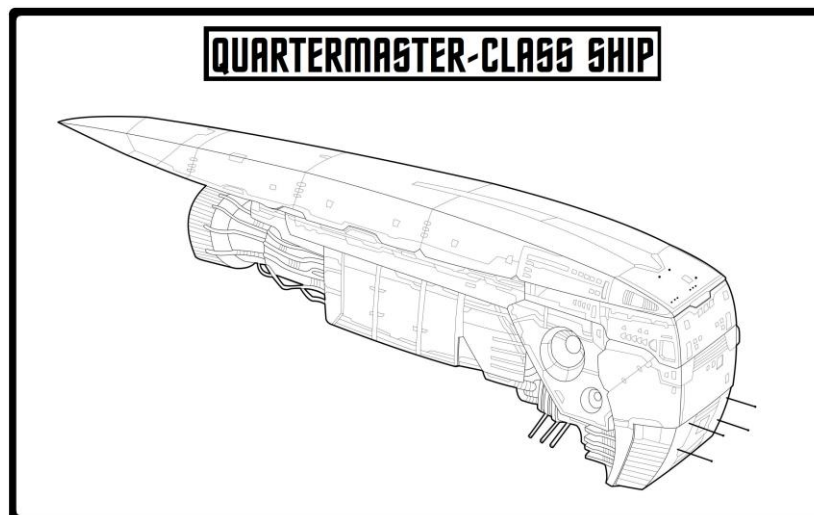
Wynter Navy

Wynter shipbuilding began in the post-Armageddon War period. Lacking the extensive income and industrial base of the former Pan-Sentient Union, the Wynterians felt they could still benefit from the new astonishing breakthroughs in hardware and software since the end of the war. The planet Wynter itself wasn't suitable for any sort of naval base so a large one was built inside its massive moon, Hijoramm. Dozens of enormous caverns were dug out, enough to hold the entire growing Wynter Navy. The shipyards to build these new warships were also encased deep inside the moon, and two full gunboat wings were stationed inside in hardened launch tubes. New advances in software enabled Wynter to build a new naval android, one capable of handling many ship functions; a total of 70% of the navies' personnel is now robotic.

Wynter has jumped into advanced warship production with both feet. Its first capital ship is the *Hellspont*-class superdreadnought, armed with a powerful Cascading Antimatter Beam (Cwa) and more than two dozen HETLASER Cone beam weapons (HET5). Autonomous battlepods mounted on the ships' XO racks serve various functions: intel gathering, ECM spoofing, and a half dozen other unique warfare options. These drones could also be used for planetary bombardment, anti-ship, and anti-space station applications. A final coat of neutronium armor and variable shields rounded out this superdreadnought design. The six advanced shield generators provided a considerable defensive shield against energy and reactive weapons and all are capable of being overlapped in any given arc of the vessel to provide multi-layer shielding. While the older PSU shield/defense systems were adequate before the Armageddon War, they were eventually replaced in by these new designs once Wynter began selling this astounding new technology to foreign navies. Overall this vessel was constructed for possible war point assaults and twelve were built inside the Hijoramm Moon; they comprise the core of the Wynter Navy Home Fleet.

Additional ships laid down by the newly formed Wynter Navy included twelve of the *Griever*-class assault cruisers (CA) which was equipped with a massive spinal mount laser and teleporting mines. Three *Drago*-class C3I battlepod command ships were also built, but under heavy security so little is known about this classes' capabilities.

Finally, the extremely large *Quartermaster*-class freighters (F8) were built to support and sustain Wynter naval forces over great distances if needed. Six in the class were built and others laid down for export; this huge class of military transport sells extremely well (over three dozen sold to nearby powers and another half dozen directly to the Reformation Navy). Its huge design enables it to carry a wide variety of items, from simple crewman necessities to boxed fighters and missiles. A few military-grade *Quartermasters* are used for radiation neutralizing technology, cleaning up of old bug worlds, taking just 3-5 years to get rid of the radiation on those formerly dead planets.



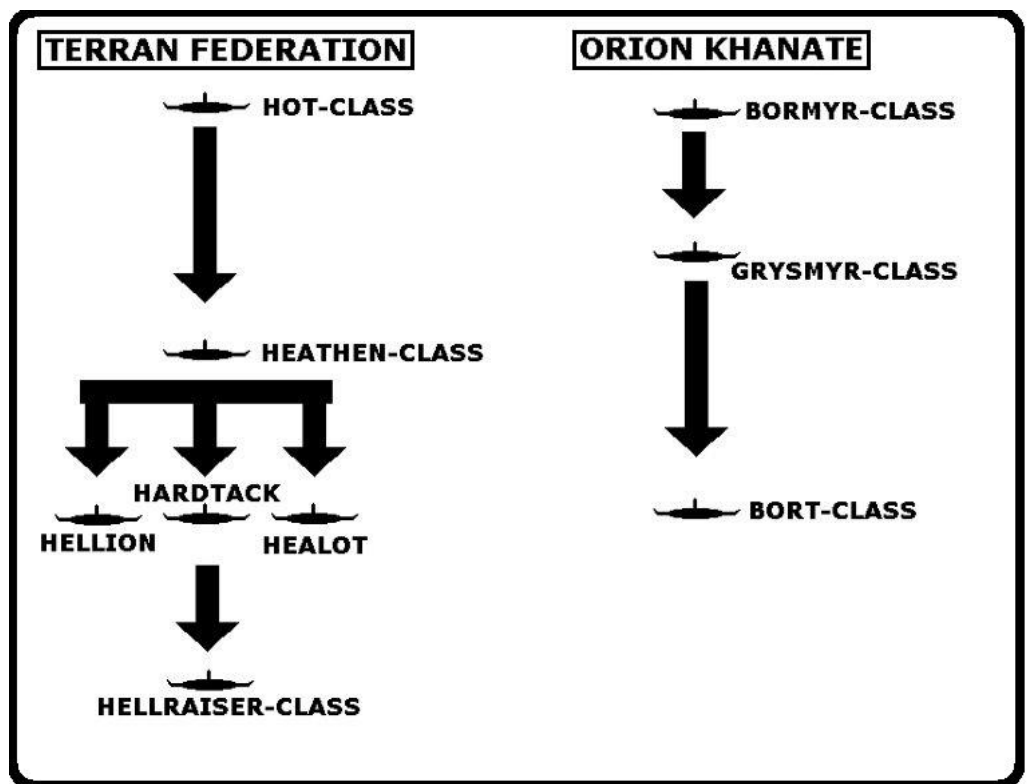
HAVOC-CLASS GUNBOAT: AN ARTICLE

The development of the Reformation Navy *Havoc*-class gunboat was direct result of the enormous losses that humanity and its alien allies suffered during the Armageddon War. For the most part, small craft of all types were ineffective against the super-technology of the Hre'Daak Dominate. In fact, many of the new interstellar powers (like the Rim Federation and the FAW) have argued in favor of abandonment of all small craft units completely. The Reformation Group, however, has learned a different lesson from that stupendous war: most stellar nations are not as large and powerful as the Dominate (which has retreated back into the Jambles), and military forces must be built with that in mind. In the eyes of the Reformation Navy, policing smaller nations and guarding lightly defended border regions requires medium-to-small ships, not capital warships. Post-war production would soon reflect that with the construction of the *Havoc*-class gunboat.

Initial planning and development of the *Havoc*-class took place at the Reformation Navy's Toricelli Naval Research Labs on Jehovah Station. Lessons learned from the Armageddon War were brought into the design phase and finalized. A single, powerful phased polaron beam would be mounted in the prow of the gunboat, which of course kept its wormhole-transiting ability. In addition, new recessed antimatter torpedoes were developed for the *Havoc*-class, vastly increasing its firepower and striking range while keeping it out of most ships point defense systems. Phase shielding was added to the class late in the construction phase when it was finally developed, protecting the crew from enemy phased weaponry. A single point defense system was added to the gunboat, creating a protective antimissile shield around the craft and spray-on armor was added as well, boosting its defenses even further. Finally, a micronized cloaking device was built into the *Havoc*-class as an integral part of the design, making this small craft one of the smallest to have that ability. Cost estimates of the new design were woefully inadequate, and the final price tag came out at triple the initial estimates, which severely cut back on production within the Reformation Group. The *Havoc*-class was slated to replace the older, more venerable Hardtack-class gunboats on a one-to-one basis, but with skyrocketing costs that idea was scrapped. *Havoc*'s would now replace the Hardtack-class on a two-to-one basis, with an accompanying decrease in firepower and patrols.

Long term production of the Havocs is taking place at the Jehovah Fleet Yards in the Deuteronomy System and training classes are carried out on the nearby asteroid forts and orbital bases in the system. Two full wings of the new *Havoc*-class will be permanently deployed within the Deuteronomy System to cover its strategic warp point nexus. In addition, these newly minted gunboats will be deployed in the Del Rio nexus and at the Kodiak Naval Base (which is also a WP nexus). Secondary flight schools and training will take place in the Noah Trinary System, which has some of the most challenging asteroid

fields in the region. Continual testing at the Reformation Fleet Weapons Testing Range in the Maccabees System will allow for new weapons and defense updates as they come online in the near future. In the planning stages are micro-drones that can be fired from a gunboat to simulate additional gunboats as well as antimissile defenders that



can shoot down incoming enemy missiles are longer ranges.

Finally, antimatter production for the *Havoc*-class weaponry will continue in the Cardinal System, deep within Reformation Group space. Gravitic lensing devices for the polaron beams are being outsourced to the industrial planet Cczwyck, a close Reformer ally. Sales of the *Havoc*-class have been strictly limited only to the Reformation Navy (RN).

HEAVY COMBAT CARRIER: A PAPER

The creation of useful carriers that hold space fighters (and later bombers and gunboats) occurs fairly early on for most space-faring nations. Very large sapients, like the Gorm for example, are one of the few rare examples where fighters and carriers are not developed at all, for obvious reasons. Some races, like the Orions and Ophuichi, excel at this type of combat but it was humanity and their creation of space-going carrier warships that advanced these vessels into a new form of warfare to its supremacy. With these warships, humans and their allies were able to gut their enemies at very long ranges, with fighter operations proving critical components in the First and Second Bug War and Revolt of the Parallel Colonies. While the Orion Navy had more carriers at any one time, it was humanity that constantly pushed the edge of this warship design, making them larger and more powerful and at times much more smaller and agile, when needed. The last major development in this class of warship was the Heavy Combat Carrier (or CVH), which was meant to operate alongside a space navy's order of battle and force open warp points as well. Warp Point battle could be brutal but the new CVH designs made they were meant for such combat and could survive it most of the time.

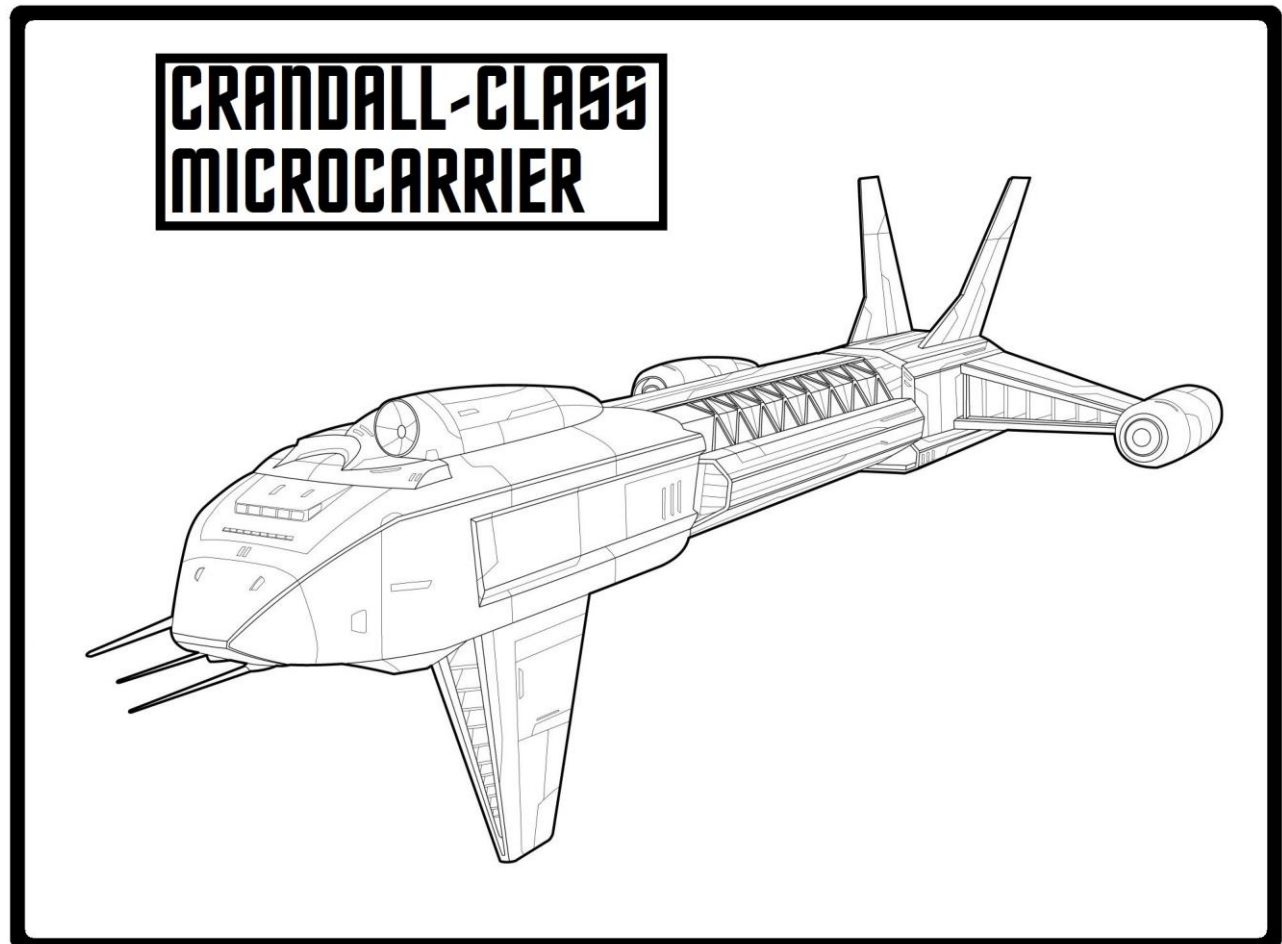
Design of this new class of heavy warship took place in the mid-2400s when the Pan-Sentient Union (an amalgamated interstellar nation of humans and Orions) decided it needed a new striking carrier designed to survive on the modern battlefield without hiding, with the option of being able to force a hostile warp point open through direct invasion by their fleets. The Heavy Combat Carrier program within the PSU was initially overseen by naval staff at the Harn Shipyards, located deep within the Fringe territory. With the violent dissolution of the Terran Federation, this research and development base fell into the hands of the hostile "Fringer" government. Overall the design to date was a failure; it was horribly over budget and behind schedule even in the most basic electronic network of the ship. A serious bribery scandal within the PSU naval ranks during the project also crippled its construction timeline: five high-level corporate officials plead guilty to criminal intent and a retired rear admiral (Bruce Yarrow) was also charged in the case. Technology issues, design and construction problems, and the outbreak of the Terran Civil War (TCW) also led to cost immense overruns on the project and its eventual suspension.

After the Terran Civil War ended, sustained talks with the Fringe leadership allowed the PSU to gain access to much of the design information it needed: in 2458 AD. This information was passed to PSU naval command, which sent it to the Bureau of Construction (BuCon) to finally begin initial construction. The senior naval official overseeing the project was Commodore Javier Medina, who already had an extensive career within the career-burdened PSU Navy, and was quite adept at negotiating its complex bureaucratic halls. Medina had already had a very successful career within the Navy, advancing rapidly due to his popularity and his specialized command abilities, which culminated in one of the largest naval projects to date.

The keel of the very first *Yeager*-carrier (the *Nimitz*) was laid down on 2462 AD, and construction took over a year to complete. Later, Commodore Medina was forced to improvise when designing the launch facilities aboard the carrier since the previous Terran Civil War had badly gutted the number of pilots within the PPSU Navy. A specialized robot fighter plane was developed and a new "mechanical link" (Vm) was created to launch the fighter into space. Since these new fighters (called UCAV) were so small, they doubled the number of fighters that a CVH could field to over 240 in number. Once the PSU dissolved after the Armageddon War ended, other navies constructed their own heavy combat carrier but they used different launch systems for each one. The new Frontier Alliance Worlds created the *Airborne*-class CVH which launched its small craft and fighters from large "flight decks" (FDs) as did the Reformation Navy, while the New Human League used high-speed launch tubes (Va) that

hurled their fighters into space at astonishing speed with their *Rossiia*-class CVHs.

On the battlefield, the heavy combat carrier had mixed results since the first conflict it engaged in was the lop-sided genocidal Armageddon War against the highly advanced Hre'Daak aliens. Commodore Medina had deployed just three heavy combat carriers (CVHs) by the time the conflict erupted; the *Kitty Hawk*, the *Nimitz*, and the *Freedom*. During the initial Battle of Hamyang the majority of the human and allied fleets were quickly wiped out by the overwhelming weapons advantage of the Hre'Daak forces. During the fight, the *Yeager*-class carriers were able to launch all their fighters against the enemy, but to little avail, and all three warships were eventually destroyed by long-range missile fire from the hostile *Arbiter*-class vessel. After the Galactic Holocaust (Hre'Daak vs the Allies) ended, some of newly formed minor nations like the Rim and the Ivy League adopted much smaller carrier platforms such as the small carrier (CVV) and microcarrier (CVX) but most major powers continued to build the immense heavy combat carriers for their core fleets. In the end, the CVH remains an untested platform within most navies of Known Space.



THE GRIZZELANS

Grizzelans are extremely good humored, friendly beings, given to celebration and fellowship, boasting, boisterous games, and practical jokes. They are essentially peaceful, despite their bearlike physique and nine to twelve feet in height, and will take pains to avoid unnecessary conflict. However, because they avoid fights with such care, perhaps conscious of their huge power, when they do get into a fight they don't hold back. Grizzelans are famous for their personal duels and their family blood feuds, which can last generations.

Fiercely individualist, the "Bears" nonetheless have a rigidly defined set of laws and codes governing their lives, even off world. At home, these laws and codes are administered by clan elders. Paradoxically, while Grizzelans are devoted to the letter of the law, they feel it their "duty" to twist the spirit to the extreme. Many a Grizzelan tavern tale is filled with heroes who got away from seemingly breaking the law by just such twists.

This unspoken flexibility of the code is responsible for the stability of Grizzelan society. It also causes problems when Grizzelans fall under another race's laws or enter into contracts with them. A pre-industrial society, they are often found as laborers, farmers, and adventurers. The Grizzelan System is on the border of the Khanates' and Empires' space.



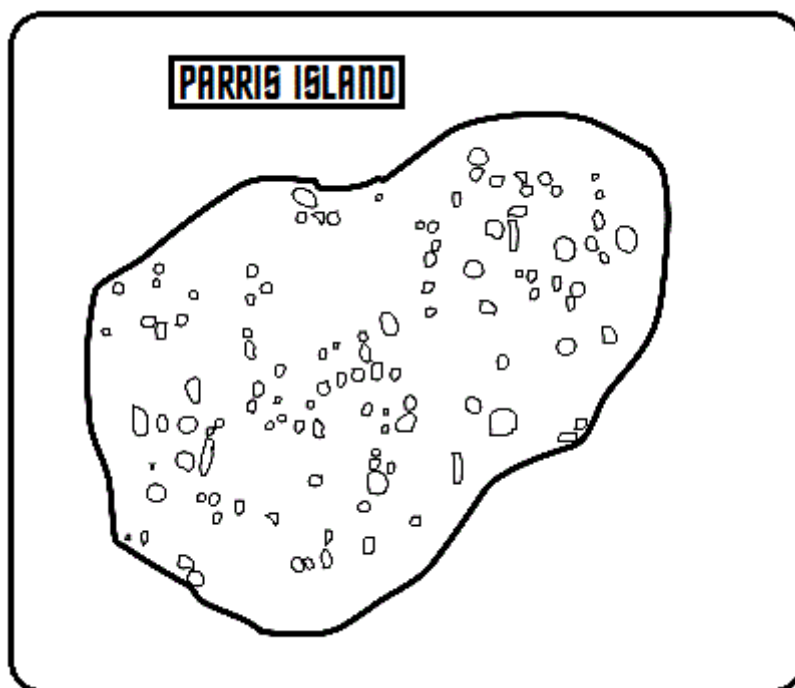
NEW PARRIS ISLAND

Located in the Quantico Combat Region adjacent to New Arachnid Space, the New Parris Island Drop Marine Base is a large nickel-iron asteroid some 100km long. Over 25,000 Drop marines are stationed in the ____ System, most of who are on training cycles in the region but also serving as a forward repair and logistical base for the Reformation's new war on the Arachnids. Nearly the entire asteroid has been mined out and filled with troop quarters, repair shops, munitions bays, and other support holds. Six huge small craft bays are located evenly throughout the core of the asteroid, providing the Marines with excellent small craft training. Also, dozens of fighter repair and flight bays have been built into New Parris, including three stupendous newly designed Flight Decks, which are capable of launching and retrieving fighters and small craft more easily and en masse. Extensive holosimulators have been constructed as well, enhancing Marine pilots' abilities and freeing up flight time for senior NCOs to fly the newest Spacehawk V fighter. With the largest Drop Bay in human space Marines at NPI get excellent Drop training and "Hollywood" Marines from the nearby new Pendelton Marine Base are sent here for Drop training as well. This base has several dedicated support craft, including the Ypres-class Dropship *RNS Ameins* and *El Alamein*. The area around the New Parris base is heavily patrolled by extensive automated defenses, fighters, and newly developed light attack craft (LACs).

When part of the TFN, three of the top Federation Marines commanded at New Parris, including current Skymarshal Brigadier General Douglas Krulak and famed Fourth ISW hero BG James Anderson, grandson of Howard Anderson. New Parris Island was built to patrol the Quantico Chain, support deployment of the 123rd Gunboat Wing when it exercises in the area, and to protect the high-population Akwaterra System. The Federation invested a massive amount of funds into the asteroid base, nearly 600 billion credits.

Eventually cut-off by the Terran Civil War (TCW), New Parris later became a major Reformation base, lending its powerful forces to stabilize the region under the Reformer banner. New Parris has recently received a substantial upgrade with the installation of new drop fighter mechanical bays; these systems double the number of fighters normally held in a launch tube. In an incident last month, a Reformation troop transport accidentally rammed the central docking bay of the base, killing over 300 marines and civilians. The ship, *RNS Testimony*, had to be scrapped and investigators later cited two faulty attitude thrusters on the ship as the cause of the accident.

Since the end of the Armageddon War, New Parris continues to be a front-line base for Reformation forces in the area.



123rd Gunboat Wing (Jennings): Originally a TFN unit during the Fourth Interstellar War (ISW4), the 123rd became an important element of the newly forming Reformation Group strategic defense reserve after the war ended. Although the 123rd had originally remained a TFN reserve command unit after ISW4, it sided with the rebels and served with honor during the Reformation Groups' break away from the Terran Federation in 2438. Reformed under the Reformation Group banner, the 123rd initially deployed as a full Wing during the Second Arachnid War but the significant drain of highly qualified pilots to other Wings (including the pressures of expanding the Reformation military and sustaining combat losses of gunboats already in action) severely reduced the available pool of gunboat-trained personnel. In 2453 AD more gunboats were provided, some other changes made, and the 123rd converted to a forward assault Wing by the summer of that year. Using its' newfound mobility, the Wing operated all over the Reformation Group and down the Quantico Chain. The Wing remained on active duty and trained numerous gunboat pilots during the Second Arachnid War and finally the Armageddon War. Substantial numbers of 123rd's gunboats participated in the defense of the Corporate World Esteel, which was at the time a major Reformer trading partner which found itself on the front lines during the Armageddon War.

WARP COMMANDO GLOSSARY (PSU ONLY)

In 2460 AD, the Warp Marines were developed for the Pan-Sentient Union armed forces, a premier strike commando group. They travel through man-made wormholes to raid ships in space and other critical targets on planets, moons, and military asteroids. Like any other tight-knit group, they have their own specialized lingo (listed below):

Biomarines: the Pan-Sentient Union has technologically advanced so much that it can now clone its own marine troops, as well as keeping them in stasis until needed. All capital ships in the PSU have a minimum of two dozen "tank marines", mostly to guard against enemy ship boarders.

Bad Tube: A bad wormhole connection, known by its odd purple color (good ones are blue, red, or yellow). "Bad Tubes" cause instant death to all life forms that enter it.

Blaster: Slang for the commandos primary weapon: a magnetically-propelled slug-thrower that usually fires plasma-explosive bullets.

Bloomie: A thermal-pulse weapon made specifically for commandos, it fires plasma rounds: the heat from them "blooms" outwards.

Boarding Sleds: Usually launched by warships, these small craft are an effective way to board enemy ships, bases, and asteroid forts; the Alliance SLEDs also have the ability to assault planetary targets as well. The Reformation Navy has several ship designs that incorporate boarding sled technology, including the Roughneck-class troopship and the Mauna Loa-class battlespace cruisers. Boarding sleds most common moniker are "boarding torpedoes". They vary in size and number of people they carry according to class, with Class V (military grade) being the largest.

Breacher: Super-explosives meant to cause massive internal damage on an enemy ship, antimatter warhead, backpack-sized, usually deployed deep inside a vessel, hopefully near an important power reactor or critical C3I node.

Bubblehead: slang for Navy spacers, from the shape of the 'astronaut' helmets issued during the early years after First Contact.

Cargo Wormhole: First constructed in 2470, a cargo wormhole is a AI-controlled facility that transports cargo from planet to planet, without using a ship or wormhole. These facilities are immense, the size of a small town and organic lifeforms are unable to transit through it and survive., Initially it began sending non-biological cargo to various star systems located nearby using an artificially created wormhole. The first prototype was constructed in the New Jerusalem System and has end points in 6 different locations; all chosen by nearby stellar distances in realspace. These systems are Del Rio, Newer Jersey, Dhassa, Golden, the Olympus System, and the Dakota System. Organic lifeforms are not currently able to transit through a cargo wormhole and survive. An experimental Tolat invention.

Dabrah: Pal, friend. Short for `dudebro!

Domass: Stupid, idiot. Contraction of the words 'dumb' and 'ass.'

ET: Extraterrestrial, common vernacular for aliens.

Eet, Eets: Slang version of ET; both terms are used interchangeably.

Full Goldie: A world with conditions nearly identical to Earth's (95% or higher on all major categories, including oxygen/nitrogen mix, gravity, and average temperatures). Also known as a “Goldilocks world” since this habitable planet sits in the “goldilocks zone” of its parent star.

Gacks: Slang and derogatory term for the large Gorm marines.

Hre'Daak Dominate: The largest known starfaring polity, and the only one comprising hundreds of member species of roughly equal power.

Imp(s): Short for 'implant,' a catchall term for the numerous bionic systems most humans use for communications, first-aid, protection and entertainment. Imp services include: full biomedical monitors, virtual reality displays, mapping and location apps, targeting and sensory arrays, among many others. Used by most branches of humanity except Reformers and some smaller anti-technic planets.

Infantry Weapon, Mark Three (IW-3): The standard issue personal arm of the Marine Corps, a dual-barreled grenade launcher and assault rifle, firing 4mm explosive plasma rounds and 15mm airmobile ordnance grenades.

Iwo: Slang for standard-issue Infantry Weapons.

Lampreys: Slang term for the techno-grenades PSU commandos throw that morph into power-seeking bots, snake-like in size and movement.

Lightworlder: opposite of Heavyworlder; someone who has grown up in a lighter gravity (or no-gravity) environment.

Long John: Another name for the life-extending medicine created by "xenosilicates" found on the waterworld Poseidon (located off the Quantico Chain in the Fringe).

Marsbody: a Mars-like planet of low atmosphere and low gravity, and low temperature. Usually a worthless planet or a terraformable body.

Mership: Slang for a “merchant ship”, they are almost always civilian-owned.

Otillery: Space-based artillery, normally only available to one side in a battle. Less accurate than regular ground-based artillery, but deadly and immune to enemy fire from the ground. Specialized Reformation planetary

assault ships are armed with these types of weapons, usually kinetic based.

Rat: A derisive term for large city dwellers of all stripes, originating from a popular song from the 1980s.

Remfie: Civilian, especially those with little understanding or appreciation of the military. Less-commonly, military personnel operating far behind the lines who show same. Origin: REMF, Rear Echelon Motherfucker.

Snakes: Derogatory term for the Ryxx.

Textic/Textic-American English: Written form of modern English, notable for the use of shortened words, anagrams and other minimalist techniques to maximize meaning with the minimum number of letters, numbers and characters possible. The spoken version can be found mostly among the lower classes in human cities or enclaves.

Vipers: Slang term for the Rishii species.

Warp Rating: A living being's ability to endure entering warp space, ranging from 1 - can only endure warp travel while sedated or unconscious, to 4 - can enter warp in a sealed suit and survive. Less than ten percent of most Starfarer species (the average is closer to five percent) are warp-rated. Humans, for reasons not yet understood, are an extraordinary exception, with fifty percent of their population rated at level 1 or higher.

Weiji-do: WD is a virtual martial arts form that enables soldiers to better interface and use combat weapons and systems that depend heavily on computer support or military virtual interaction. WD, also known as "the Way of Manifestation" is taught to troops, especially marines and special forces, to help them think and interact effectively in a virtual space. WD meditation techniques and mental exercises enable a user to control thought more, and to precisely control a machine or weapon that they are connected to. Modern power armor and aerospace fighter operations rely heavily on virtual interfaces with their pilots, and WD training has shown a marked increase in accuracy and survival rates when used on the battlefield.

Wyrrms: Slang term for members of the newly-discovered Wotan species; homeworld located near the Rim Federation.

Wotan Empire: A Starfarer polity dominated by the Class One species of the same name.

Zoomie: an air or space pilot, not a "ground pounder" like army or marine troops.

PAN-SENTIENT UNION MARINES

The human-side of the Pan-Sentient Navy has a little more than 120,000 active Marines in service, with another 360,000 in Reserve or available for activation. While the Marine service prides itself on expert combat, it also strongly considers the well-being of a Marine when considering them for deployment. The "Family Situation" rating is a result of this system and all Marines have this rating and the FAMSIT rating changes from time to time for each trooper:

FAMSIT (1-5)

1: completely deployable; few if any worldly connections (available within 24 hours)

2: mostly deployable; needs a few weeks to wrap up real life responsibilities and relationships (ready in 1-4 weeks)

3: eventually deployable; needs additional training or experience (available within 3 months)

4: undeployable; critically ill, significant family loss, or extensive real-life business or connections that require their presence; ie huge financial loss. (takes up to 6 months to become available for service)

5: not deployable; serious injury or illness, or mental health issues (availability unknown)

All "active deployable" Marines units must have 80% or higher at FAMSIT1 to be considered active and fully ready for combat. Reserve units also use the FAMSIT rating.

FAMSIT RATINGS

All Marines units must have 80% or higher at FAMSIT1 to be considered active and fully ready for combat

● **Completely Deployable
(FAMSIT 1)**

● **Mostly Deployable
(FAMSIT 2)**

● **Eventually Deployable
(FAMSIT 3)**

● **Undeployable
(FAMSIT 4)**

● **Not Deployable
(FAMSIT 5)**

THE RAO

Nearly everyone in the Rim Federation has heard of the Rao: prolific, aggressive, large insectoids. Stumbled upon by a Rim survey group just prior to the outbreak of the Armageddon War, the Rao have been beaten brutally down but the forces that did so have not hung around to lay claim to the deed. Curious and aggressive, the Rao developed space travel nearly 9,000 years ago (according to their data records) and became a truly powerful interstellar society within a small isolated pocket empire near “the Jambles”, a vast network of unstable wormholes. Their exodus to the stars was, in part, instinctive, for to do otherwise would have caused the Rao to engage in constant battle among themselves to maintain their population at the proper levels. Even in space, warring factions of Rao battled one another to prove their superiority or to seize a colony or resource. Several years ago they were discovered by a vastly more powerful and vicious foe, who bombarded all the Rao Center Worlds into oblivion, with only a few deeply dug-in Rao surviving on their homeworld.



RAO TECHNOLOGY

The Rao's warship weaponry developed along the normal lines of most interstellar nations: lasers, energy beams, forcebeams, and standard missile tech. However, they did create a few unique items that dramatically increased their battlefield performance, like the Phased Array Radar, the Laser Spinal Mount, and Hard Screen technology. When the "Unseen Attacker" suddenly and violently decimated the Rao Center Worlds, the Rao's tech level was a standard TL9, with a few wild cards thrown in: advanced hetlasers and plasma guns (surprisingly, the Rao never developed the Needle Beam or the Primary Beam family of weapons). The attack on the Rao by the unknown enemy lasted just 31 seconds across the entire Center Worlds, according to Rao military documents, which is just unheard of. Robotic ground troops also invaded Troma Rao itself and killed billions of its inhabitants before finally being annihilated by overwhelming numbers of Rao on the homeworld. Now, supportive joint PSU/Rim patrols are being conducted across Rao space as they attempt to rebuild their empire, with significant help from humanity. Finally, the PSU has introduced the Rao to gunboat technology, which they have embraced with a fervor because of the large body structure of the Rao.

Armory (Mor): The armory onboard a vessel, the "Morgue" (as PSU Marines call it) is the location of the ships battle and power armor, as well as the Marines' heavy weaponry. One needed for every 50 hull spaces, size is ½ hs, 10MCr cost, +4 to combat on a ship, TL2, 1,000 dev.

Courier Drone Bay (CDB): 1/2 Hs, 5MCr, and each holds 8 CDs, 2000 dev

Cryogenic Storage (Cr): This system was first developed by the alien Rao race who were seeking to transport more colonists than the standard Q could hold. This system stores twice as many the normal number of people as a Q, but in cryo suspension. If TL goes up during suspension, they must spend 4 months retraining them per HTL increase. Can be stored indefinitely. Cost 50 MCr, TL6, 5,000 MCr dev. One Cr needed for every three Q. ½ hs

Damage Control Room One (DCC1): One of the most serious aspects of warfare is battle damage, and the Rao Center Worlds came up with a clever way to fix such damage during the Kallista Emergency, by developing the DCC. One hull space in size, the DCC gives +1 to all damage control roles, TL5, 5,000 to develop. 35MCr each.

Energy Beam, Heavy (Eh): The insect-like Rao were experts in developing beam weaponry, which showed in their creation of the Heavy Energy Beam. Cost 60, 6hs, dev cost: 7,000

Energy Beam, Small (Es): The Rao were also experts in micronization of weapons, which showed in the development of the Small Energy Beam. Cost 42, 3hs, dev cost: 7,000

Enhanced Missile ECM (-q): This software upgrade is an evasive missile program (-1 to hit the incoming missile) that can be added to standard missiles. +25% to missile price. 2,000MCr to develop.

Forcebeam Dampener (Of): The predominance of the forcebeam on the battlefield with the Kallista forced the Rao to develop the Of. A system that operates similar to the Overload Dampener, the Of can absorb one point of forcebeam damage per unit, or five points and then destroyed. One hull space, 35MCr, TL5, 15,000 development.

Gun Launcher, Advanced (Ga): Developed by the Rao during their ever-growing conflict with the Kallista race, the Ga fires twice per turn, is three hull spaces in size, and costs 45MCr. It costs 9,000 to develop.

Laser Spinal Mount (L-SpM): The first in a generation of weapons, the laser spinal mount took the enigmatic Kallista by surprise when the Rao first used them in front line combat. Cost is 108MCr, 12 hull spaces, TL5, dev cost = 8,000.

Phased Array Radar (PhR): Invented by the Tigris (a Rao allied race) this system allows +1 to hit for point defense (only works vs missiles, not fighters, except in kamikaze mode). These are 'fins', mounted on the outside of a ship and are easily destroyed (before armor). One PhR per every five hull spaces and replaces one XO rack.

One per D system required. Each PhR costs 15MCr, 2,000 dev, and TL6.

Rotary Missile Launcher (RI): Developed during the Kallista Wars, the RI take up 2 hull spaces and cost 20 MCr each. RI fires 1 SM(no Sprint-mode) or CM every other round per launcher. Each launcher only holds 6 SM or 3 CM. RI become available at TL3. They are reloaded as XO Racks. 2000 to develop.

Sandcaster, First Generation (Cs1): Due to the incredible damage Kallista heavy lasers can do to a warship, the Rao military developed the ablative Cs1 system. The Sandcaster releases a cloud of ablative sand to block incoming laser fire. The sand cloud is contained and shaped by the drive field of the ship. At two hull spaces, and 45MCr, the Cs was considered a bargain by the Rao, who had suffered terribly from the Kallista heavy laser system. When entering combat, this system goes into automatic fire mode, dispensing its' canisters as quickly as possible. For each Cs on board two points of laser damage is ignored and the next two points is halved. This is per turn, not per volley! Any additional laser damage is applied normally. The dispensers are assumed to have enough ammo for continuous firing during any engagement (like D) 2,000 to develop.

Shuttles, Drop (std): As the Kallista Wars waxed on and off, these conflicts demanded the development of many new technological systems, thus the Drop Shuttle was invented. Drop shuttles have double the drop troop capacity of a assault shuttle and cost 40MCr to build. Dev cost: 2,000, TL 4. All other stats as ast.

Shuttle, Heavy Cargo (hst): This heavy cargo shuttle has a cargo capacity of 250csp and a personnel capacity of .25 Q. All other characteristics are as st. The hst is the preferred shuttle aboard CFN cargo freighters. the hst is developed with the st and takes up 2 bbp, cost 20MCr each, and is TL1.

Screen, Basic (Si): This shield system is a *active* defense system (activates as D) against incoming enemy fire. It works against both beam and missile fire. Any enemy *beam weapon* hit eligible to being stopped by shields can be blocked by the Si on a roll to hit of 5 or less. Each grade above or below average gets a + or - depending on experience (percentages: Poor 30%, Green 40%, Average 50%, Crack 60%, Elite 70%). This system only works for three turns (not necessarily consecutive), then burns out and does not work when shields are up. Designed as a low-tech defense, only one may be mounted per ship (the fields react violently with one another: both generators instantly burn out. Needle beams and primaries still can shoot through it. This system must be placed before the first engine room. TL7. Two hull spaces in size. 50MCr, 8,000 to develop.

Transport Shells (TS): First developed by the Tigris, Transport Shells were a cheap and economical way to ship pre-fabbed bases to remote parts of their Empire without tying up vital shipping. The pre-fabbed base is configured into a box configuration, a courier drone (CD) navigational system is tack-welded on, as are four (4) Ic engines and a powerplant. Anything larger than a BS4 needs 8 Ic engines to become mobile. The net effect is it moves Speed 2, period. A CD nav system is programmed with the destination (must be within CD range) and goes there on its moronic own. If it needs a crew, assume the BS life support and is just active enough to cover a caretaker crew of 5 or so. If it is caught by enemies, it is dead (don't even roll) but the attackers' option is to capture - free tech toys. It will move itself to a final point (WPx in System y) and sit there. It is strictly one-way, one-time trip: at its destination it must be moved by a tug. Cost 45MCr in addition to the unit cost (the Base). TL4, dev cost: 2,000.

JUMPGATE TECHNOLOGY

The Rao developed jumpgate technology early on; most likely they reverse-engineered an alien artifact to create them. Each gate requires an enormous amount of energy and ships travelling through it can only move to a nearby star system. Travel time takes a few weeks (depending on the distance) and the ships moving between them are outside this material universe while in transit. The "Unknown Attacker" destroyed several jumpgates when they attacked the Rao Center Worlds, causing immense destruction across each star system that it was destroyed in: all electronics were utterly burned out, colonies on nearby moons were totally demolished, and the ecosystems of several habitable worlds were severely damaged by this destructive wave. Unfortunately, humanity has been unable to figure out how to make these remarkable objects, and the Rao aren't talking when it comes to jumpgate technology.

RAO TIMELINE

Curious and aggressive, the Rao developed space travel nearly 9,000 years ago (according to their data records) and became a truly powerful interstellar society within a small isolated pocket empire near *the Jambles*, a vast network of unstable wormholes. They have also begun colonizing the remarkable "Rishii Maze", a series of dozens of planets connected by a **roadway** and a rotating black hole transit system.

-7,396 BC Rao begin slowboat colonization of nearby stars utilizing cryonics

-31 BC Last global war on Rao ends, planet unified

544 AD Kallista race discovered, wars begin

788 AD Rao invent Jumpgate technology, begin exploring nearby stars

1145 AD Rao stumble upon the Jambles, explore alongside it in space (but not INSIDE it), robot probes sent, discover the unstable WP network

1875 AD Rao discover the Rishii Maze, colonization immediately begins

1997 AD Tenth Rao world colonized in the Rishii Maze

2193 AD Kallista Wars end with Rao victory

2240 AD Twentieth Rishii world colonized by the Rao, Troma Rao population reaches 1 trillion

2306 AD Rao discover an alien race inside the Jambles for the first time: the Bolgers (a low-tech race)

2377 AD Rao Jumpgate Network at largest size

2455 AD Rao Center Worlds consolidated (at the height of their empire the Rao Center Worlds numbered nearly three dozen planets, with every nook and cranny inhabited by large numbers of Rao.)

2460 AD Troma Rao bombarded from orbit, Rao fleets destroyed, robotic occupation troops land on Troma Rao, Rao empire is decimated (only the Rishii Maze worlds escape destruction)

2461 AD Humanity meets the Rao (the Rim peoples), PSU introduced by Rim to the Rao

2462 AD Humans learn of the Rishii Maze, meet the "Friends" and "Elves"

Prometheus is the human nickname for the homeworld of the galaxies finest empath's, the Mehirans. Most Mehirans look similar to humans but have a large snake-like tail and pointed ears; humans find them incredibly attractive and their empathic sense goes a long way in helping them get along with other races, except the Rao who they cannot "sense". The sale of Mehiran high-tech tools and weapons to humanity has helped jump-start several critical military programs that may help fight the Hre'Daak aliens.

Pol has the largest population of the Rishii and it is considered their homeworld, with a population well over 100 billion citizens. It's also the administrative center of their mini-empire within the Maze; the Rishii have never discovered warp-point travel.

The planet **Naram XXVI** is a outpost of the humanoid Naram Confederacy, a vast interstellar empire that is fighting a genocidal war on the other side of the galaxy where their homeworld is located. Details about the war are scanty, although lately human ambassadors have been pressing for more details. Apparently Naram technology is similar to humanity's current tech-levels, except in the field of antimatter in which they are far ahead (especially in power plants and warhead payloads). Naram are very militant warriors and are also known for their extremely long head hair, which is almost universally dark brown or black (a blonde is unheard of).

Oh'a'a'o'o'o is an "Elf" colony world within the Maze and is a high gravity planet. The silver-skinned aliens were given the fantasy name by humans when first discovered because of the way they look; humanoids with pointy ears. They move incredibly fast on normal worlds since their homeworld is an astounding 25 gravities. Apparently the Elves have genetically altered their form to be humanoid and they get along well with most other races, but it is with humanity that they have formed a special bond. Elves are very spiritual but are also quite technologically advanced.

The **Markabb Homeworld** is also located in the Maze, and they are high-tech humanoid race who facilitate trade across the Skyway. They have a few outposts on other planets within the Maze but they seem to dislike the Rishii, who are the dominant species within the Maze. With a population of 10 billion people, their home planet is heavily overpopulated and is running out of resources. Luckily contact with the dozens of worlds within the Maze allow them a bright future indeed.

Finally, hundreds of "Friendly" encampments can be found across most of the Maze worlds and they are a peaceful race, with almost no technology to be seen. However, human scientists who have worked closely with the Friendlies are almost sure they are hiding their true technological capabilities, and it is apparently very advanced. This race continually visits nearly every world in the Maze and are always on the move, and oddly mostly on foot. It's a wise move to give a Friendly a "lift" when travelling down the Skyway since they often leave a "gift" that is helpful to their benefactor, most of the time this item is highly technological in nature. The premier xenologist Doctor Harry Harrison believes that while the Friendlies live in a primitive manner, they most likely travel from world to world within the Maze by using "personal" warp points. If true, it would represent a stunning achievement in warp travel.



Builder Technology

Movement between one planet and another within the Rishii Maze occurs when a ground vehicle transits the "Tollbooths", usually two dozen rapidly rotating pillars located alongside the Skyway. They are then instantly transported up to 100 light years away onto another planet that has a Skyway. These Tollbooths are immense, dangerous, and are possibly made out of strange matter or are encased black holes. They are indestructible and rotate thousands of times per second, and physically hitting them results in instant destruction; with the resulting particle blast hitting nearby objects with "gammashine", a lethal burst of gamma radiation that kills most organic sentients. Tollbooths are known in the scientific community as Kerr-Tipler objects are thousands (if not millions) or years ahead of humanity in technology. Each planet connected to the Skyway has two sets of Tollbooths, usually between 500 and 1500 miles of each other (but no closer). Travel to a new planet causes no harm to living beings and most worlds in the Maze have atmospheres that humans can breathe.

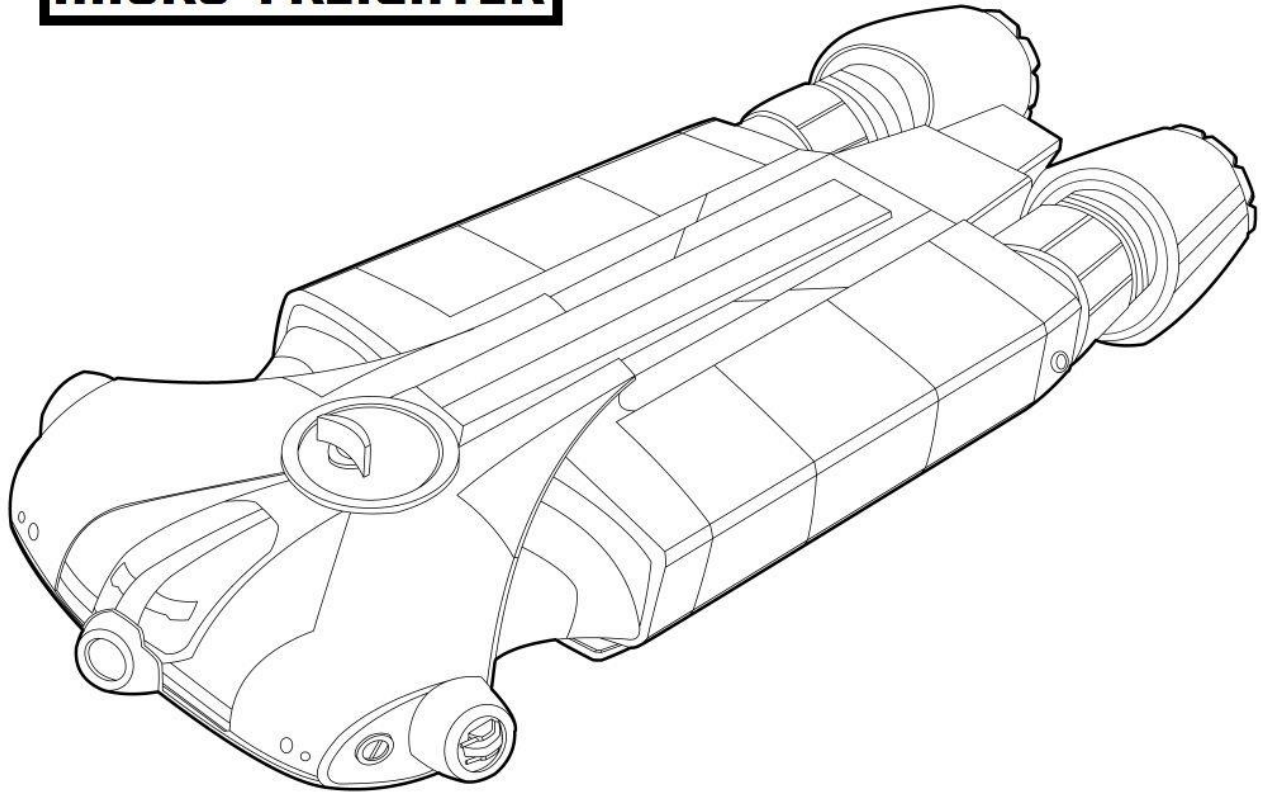
The Builders

The creators of the Skyway are obviously millions of years ahead of any known race, but little is known about the Builders. No alien race has had knowing contact with them. No Builder writings have ever been discovered, all Skyway signs are built a distance off the road and only by locals. The Builders technology is so advanced that nothing can stop their robotic minions if they choose to be hostile. These minions, the "Roadbugs", maintain the Skyway and enforce the road laws: no vehicle on the Skyway may be stopped by another, on pain of annihilation on the spot. The super-science of the Builders has made all portions of the Skyway indestructible, even nuclear weapons cannot penetrate the roadway; luckily, no one has ever tried using antimatter as a test. The patrolling Roadbugs seem to be automated and rarely appear, when they do its almost always a single Roadbug, come to overlook a situation on the Skyway. Also, Roadbugs do not concern themselves with anything that is more than 50 feet off the roadway. Each world in the Maze has a dozen Roadbugs, which repair the roadway, keep the traffic moving, and conduct constant patrols of the Skyway.

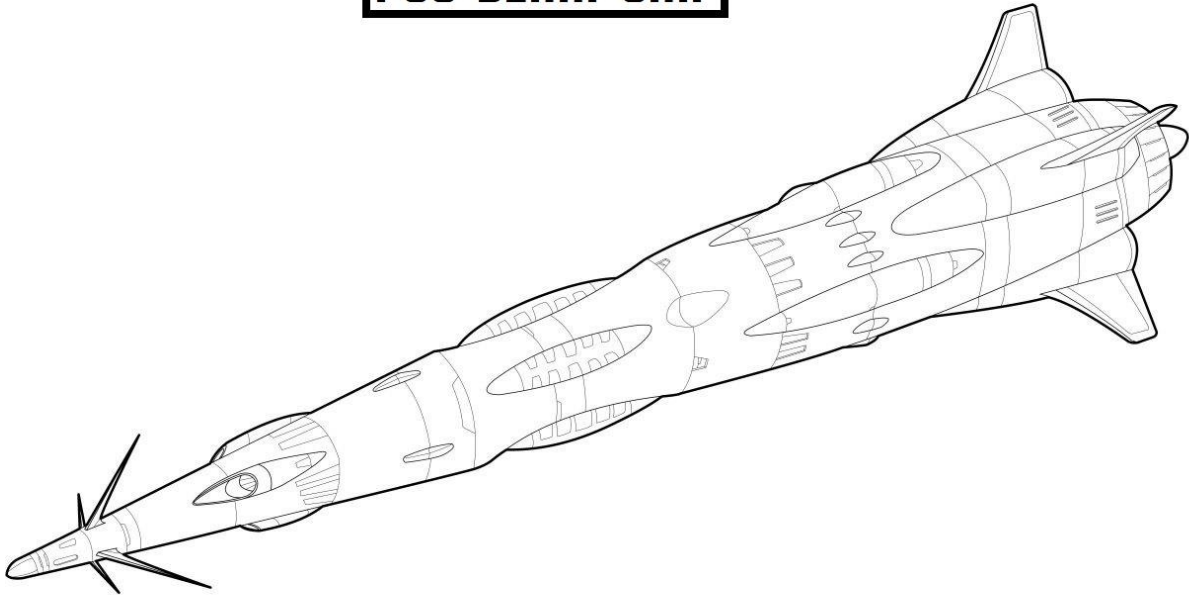
The Skyway

A system of over 80 worlds is connected to the Skyway and forms "the Maze" and the dominant lifeform within it is the Rishii, an alien race whose technology is on par with the Pan-Sentient Union. There are two types of portals that are formed by Tollbooths, a Known Portal and a "Potluck Portal". Throughout the Maze, most worlds are connected to each other eventually and thus form the Known Maze but some Portals do not reconnect to the Maze, and these are known as "Potluck Portals". No one has ever come back from a Potluck Portal but dimensional theorists among several races within the Maze theorize that the Rishii section is a "local Maze" and other mazes are connected to the Rishii one via Potluck Portals. The skyway, they believe, extends to at least one other world once you pass through an unknown portal, and most likely into another local maze of worlds. However, there is no proof of this and no additional maze has ever been discovered by any known race in the galaxy. Known portals form a network of trading worlds, colonization routes, and other normal road traffic seen on any typical world. The Skyway is maintained by the Roadbugs and various other specialized Builder bots. Overall the Skyway creates a fascinating way to travel among the cosmos and is welcoming to outsiders.

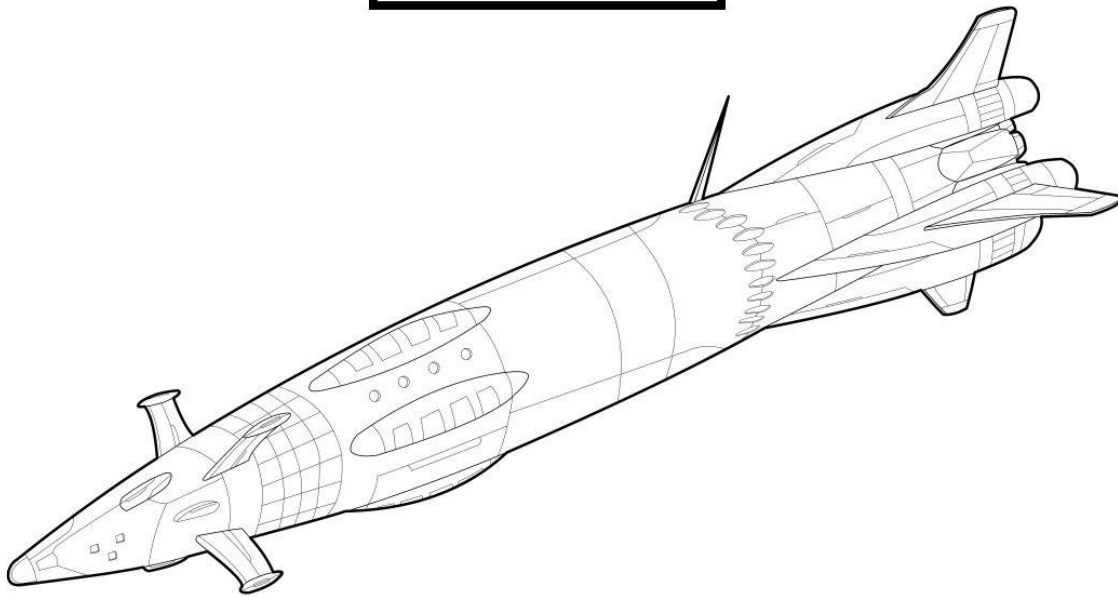
SKIPPY-CLASS MICRO-FREIGHTER



PSU BEAM-SHIP



PSU MISSILES



WEAPONRY USED DURING THE ARMAGEDDON WAR

(3rd Edition Technology)

TL16

Adaption Module(Mad)
Converging Anti-Matter Beam, Capital(Cbc)
Gun/Missile Launcher, Advanced 3rd Generation(Wa3)
Hetlaser, 3rd Gen. Spinal Mount(HET3-SpM)
LHAWK, 2nd Generation (LHAWK2)
Nano-Fabrication Units(Nfb)
Phased Communication Array(Pha)
Primary Beam, Third Generation Capital(Pc3)
Regeneration Module(Mrg)
Uninhabited Combat Aerospace Vehicle(UCAV)

TL17

Alpha-Synth Technology
Armorplast, Advanced(Ab2)
Antimatter Generator, Second Generation(AMG2)
Black Hole Point Defense(Dh)
Drone Fighters(Fr1)
Fold Space Power Transmitter(FST)
Gigaton Warheads(-GT)
Protomatter Warheads(-o)
Plasma Energy Core, Advanced(Pec2)
Planetbuster(PB)
Pod Bay (PBay)
Targeting Pod(TGP)

TL18

Anti-Technic Field(ATF)
Anti-Drive Battlepod(ADP)
Advanced Strategic Bombardment Missiles(ASBM)
Drone Bay(DBay)
Gun/Missile Launcher, 4th Generation(Wa4)
Hetlaser, Fourth Generation(HET4)
Shield Regeneration, 2nd Generation(\$R2)
Small Craft Bay(BbC)
Tractor Beam, Micro-(Ta)
Variable Focus Beam, 2nd Generation Capital(Fvc2)

TL19

Advanced Command Center(C41)
Automatic Attack Bits(AAB)
Armorplast, Improved(Ab3)
Anti-Drive Cannon(AdC)
Battleriders(brr)
Damage Control Network(DCN)
Drone Fighter, Second Generation(Fr2)
Quark Cannon(Qb)
Quantum Armor, First Generation(Aq1)
Proton Torpedoes(Pt)

TL20

Battle Pod, Heavy(HBP)
Black Globe Generator(BGG)
Dis Warhead(-dis)
Globular Shields(GS*)
Hyper Engines(lhi)
Hyper-L Missile Launcher(HLM)
Hyper Missiles(HM)
Multiphasic Sensors(Xz)
Nova Bomb(NvB)
Phase Torpedoes(PTorp)
Quantum Armor, Second Generation(Aq2)
Torpedo Bay(TBay)
White Globe Generator(WGG)

NOTE: I want to thank Timothy Olsen and Mark Costello at Task Force Games for providing canon material about the Hre'Daak (see *First Contact* for more information).