

Vega Strike Universe Development Document

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(at least until it's sufficiently done to be presentable, intelligible, etc. - even then, it'll be full of spoilers :-/)

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Preface

Welcome, intrepid reader, to the Vega Strike Universe - or at least a document containing a lot of text concerning it and its design.

When we first started developing the current back story for VS, the existing premise could be reasonably summed up as follows: “An alien species called the Aera are aggressively invading human space, and there’s this other group called the Rlaan who don’t like either of the humans or the Aera, but probably dislike the Aera more than the humans” - which is to say, someone out there had played StarCraft and liked it. In the years since then, we’ve added a bit more, as the somewhat larger size of this document may indicate. While this document may take a bit longer to digest than the above one-sentence summary, we happen to think it’s worth the extra reading.

About this document

This document is best described as a sort of “design doc” for the Vega Strike Universe (hereafter often “VSU” – this document uses a lot of initialisms - please consult the [Glossary](#) section for any of them that aren’t clear). It contains a number of different things: general cosmology and physics for the VS universe, back story for the *Upon the Coldest Sea* game setting, discussions of design philosophies, and discussions of the game-play-relevant implementations thereof. In that it splits its time among sections discussing the design philosophy behind the design of the VSU, sections best viewed as discussions of the resulting decisions, and swaths of expository data dumps detailing particulars of the backing fiction, it is an uneven document. However, in serving all of the audiences it intends to inform, it would seem difficult to achieve full blown elegance.

This document aims to do the following:

- Provide a cosmology and highlight key rules for the VS universe so that some intuition as to what is and is not likely to be canon can develop. This includes delineating where we are taking liberties with physics and where we are holding firm to our grip on reality. Moreover, this delineation must be addressed twice - once for the purposes of creating and editing fiction, and again for the artistic representations, which may not always correspond exactly to the ostensible VS reality (e.g. the VS universe demands that we have substantial radiators on starships during the *Upon the Coldest Sea* time period, but the artistic direction may resolve, on many craft, to token/symbolic radiator surfaces in order to preserve aesthetic and other artistic freedoms). Within the bounds of what has been declared possible in VS, we must likewise be sure to indicate where optimism is assumed and where the VS

universe makes more pessimistic assumptions about how much of the possible is actually achievable by given groups at particular points in time.

- Provide both back story and future-history for large-scale events, so that those looking to create stories set in the Vega Strike universe have both a backdrop to frame their stories in, and a set of future events to preemptively constrain continuity.
- Codify game-play philosophies and examine the effect that universe decisions will have on potential game-play options, and vice versa.
- Provide sufficient detail on relevant species, factions, and technologies, as they appear in the UtCS setting, that artists can become familiar with the subjects they are to portray.

Before going any further, an important point - at the time of this writing, this document is far from finished. It is not polished, it is not, in some places, even fully skeletal. This document will change over time. The odds approach certainty that some pieces of it will eventually require retconning and that others will be missed during various evolutionary changes and thus become desynchronized. Still, what is in this document, even in its unfinished and mercurial state, is the VS canon until changed, and should not be ignored, skipped over, or otherwise elided lightly.

Who is this document for?

It should be acknowledged that this is a somewhat oddly targeted document in that there are several audiences that it needs to inform. These audiences are rather diverse, ranging from texturing artists to writers working on player-driven plot-lines. In keeping with this mixed-usage model, a fair portion of the people who read this document will not need to read the entire document. Artists, for example, are encouraged to read the philosophical overviews in Chapter 1 and the overviews of physical and social realities in the VSU, in Chapters 2 and 3 respectively, before jumping to the portfolios portion of this document (Chapter 7), but may find little use for much of Chapter 5's treatment of VSU time-lines, and Chapter 6's discussion of player-centric plot development. That said, those looking to do any additional fleshing out of the framework are strongly-advised to read the whole document with some degree of attention before considering pushing forward with such an undertaking.

Additional notes on reading this document

Certain sections of this document may contain passages in the first person. These can be assumed to be written by JS unless otherwise specified or indicated by context.

Sections not otherwise specified should be assumed to be written from an omniscient viewpoint. In particular, some of the Appendices, such as Appendix A and Appendix B are **NOT** written from an omniscient viewpoint, and are intended to represent generally available knowledge that would be easily obtained in the UtCS time period. For information intended to become player-visible, please pay special attention to said appendices, *especially* when they are in conflict with data from the omniscient viewpoint sections of this

text, as the difference is likely an intentional implementation of ignorance or misconception on the part of the VSU's inhabitants.

Some parts may be so unpolished or incomplete as to be difficult to parse or otherwise comprehend. Similarly, they may use non-standard vocabulary or jargon that has yet to make it into the glossary or rely on mention of external sources that have not yet been appropriately added to the references section. However, these shortcomings are not cause for ignoring the sections in question, but rather are cause for developing questions pertaining to said sections, thereby prompting their improvement. For insight, consider this previous VS-related example of communication breakdown: one of our audio content creators is told that "X sounds like a campanile" and comes back with a sound for X that has no relation to bell towers with an explanation along the lines of "well, I didn't know what a campanile was, so I just did something nice." The root cause (campanile is apparently an insufficiently common word and should be defined) is left untreated, the work in question balks canonicity, and some fair bit of time may well have been spent on something that could have been rectified with a simple clarifying question. While asking the reader to invest additional energy in comprehending the more tenuous portions of the text and actively responding to their shortcomings is a more than normal demand, attempting to use an incomplete document as a guide is a somewhat awkward undertaking, and comes with its additional burdens. Those not interested in walking through the textual debris and construction zones are welcome to wait - we do eventually plan to make this document fit for normal reading - but the realities of the schedules we're working on means that this document will continue to see use in various stages of its genesis, refinement, and extension.

For all it's glaring flaws, compiling this document has been a time consuming effort, and we imagine reading it may be one as well, so we sincerely hope that those of you who take the time to read it in detail find it a useful resource.

Chapter 1

Overview and Genesis of the VSU

This chapter, along with Chapter 2 and Chapter 3, provides an overview of some of the high-level aspects of the Vega Strike Universe and the design philosophies at play. They indicate with broad strokes what forms of content and approaches to topic matter will be appropriate for the Vega Strike Universe. This chapter primarily focuses on the history of the VSU's design, the forces and influences at play in its genesis, and outlines some of the broader design philosophies and directions for both the Vega Strike Universe and the games it is designed to support. More detailed discussions of the nature of the VSU in terms of physics and social realities are left for later chapters.

1.1 The nature of the Vega Strike Universe

Everyone, it seems, has their own, often deeply held, views as to what the future will be like. The Vega Strike Universe, as a whole, doesn't happen to correspond to any of the developers' ideas of what the future will actually be like. Let's pull no punches - real space travel and conflict, should it ever occur, will almost certainly be arduously long, heavily automated, and completely boring to look at without a lot of magnification and false-color filters. FTL? Probably not possible. Manned airplane-like fighter-craft? Unlikely - missiles and probes do most of the potential jobs a lot better. They can withstand much larger material stresses, don't die from radiation sickness, and don't run out of food and water if it takes weeks to get to the target (which, if there's no FTL, it probably will). As one can imagine, the list goes on.

1.1.1 Requirements of the VSU

What, one may well then ask, does the Vega Strike Universe correspond to? The genesis of the VSU started with a set of game premises - there was to be an Elite [19] style game heavily influenced by Privateer [25] featuring humans and at least two other prominent alien species. There was to be an ongoing interstellar war between the humans and at least one of the prominent alien groups. Scales of celestial objects and distances were to be comparable to the known scales of celestial objects. Physics was to be respected where possible. Complicating things greatly was a desire for the game to be multi-player, thus ensuring that arbitrary dynamic time dilation would not be a viable game-play mechanic - much of the game must happen in something approximating "real-time".

The canon of the VSU is therefore crafted to allow, and occasionally reverse-engineered to fit, game-play. Some may find this a backward approach. However, we began with a game concept, not a universe concept, so the direction of influence was to some degree unavoidable. Moreover, there are practical limitations of human attention, comfort, and even speculative game-engine capabilities that prevent us from creating content in a vacuum. If we were to approach the creation of the VSU for a game setting as if we were doing universe building for a novel or movie, it is almost certain we would produce something less than satisfying as a game-setting. That we have chosen to embrace this direction of influence rather than attempt to reverse it is indicative of the relative importance we place on the type of game we wish to create, even if it demands an impossible or implausible universe over the particulars of the universe designed to support it. It is not that we do not consider universe design important - the scope of this document should speak to that. Rather, to resolve certain tensions between game-play and reality as we know it, we have merely decided in advance to render decisions biased toward the former, because the fundamental drive that lead to the entire VS project was fuelled by a vision of a particular style of game-play and an engine that would support this sort of game across many universes, not by a desire to construct a particular new universe. While a fair portion of my own drive to work on VS is fuelled by the opportunity to add creative content to an original universe, this role must remain secondary to the development of an engine capable of providing the sort of game-play the project's founders envisioned if we are to pay proper respect to the wishes of those responsible for the VS project existing at all.

The VS game specification

The goal of VS engine development is to support a set of games with particular, similar features. In this sense, all of the games using the VS engine will be reflections, near or distant, of a sort of "Platonic" Elite-like game. In the VSU, as in any other universe that aims to support such a space-trading-combat game, there are certain requirements, tenets and tropes of such games that have far reaching impacts on the sort of properties such a universe must have in order to make the sort of activities inherent in the desired game play internally coherent. Listed below are some such properties of VS engine-appropriate games (hereafter VSGs).

- Heritage

VSGs will be able to trace their game play lineage to Elite [19], Privateer [25], and similar games.

- Setting

VSGs will be primarily set in space, and focus primarily on actions taking place in space. While the engine may eventually provide meaningful support for atmospheric flight and interior spaces, neither is a primary focus: VSGs, by default, are not atmospheric flight simulators or FPSs.

- Transactional economy

Goods and services can be obtained through payment. Obtaining sufficient resources to pay for desired transactions is a key aspect of game play and progression.

- Means of Interactions with the Universe

- Avatar

In keeping with the setting, the player's current spaceship will be their primary mechanism for interacting with the universe and its inhabitants. A more personal avatar may exist for interactions internal to bases, large starships, and planets, but is not expected to be used during the primary focus of game play. A player's starship avatar can be customized by purchasing upgrades.

- Combat

The player will be able to engage in combat with other entities and objects in the universe. Death for one or many parties must be a possible outcome of such interactions. Disabling, capture, surrender, and other less-than-lethal outcomes of conflict resolution should also be supported.

- Trade

The player must be able to take on a role resembling that of FREE TRADERS [14]. This is one of the more difficult requirements to reconcile with other aspects of a universe, as the economic, political and technological developments that would lead to widespread personal starship ownership are frequently antagonistic to trade conducted by such a vessel being a plausible vocation option. In particular, it makes a post-scarcity economy borderline impossible.

- Communication

The player must be able to communicate with other sapients and, through these interactions, influence the actions of other entities.

- Scale

Moving beyond the limited confines of a single planet and its moon, VSGs will take place in full-scale star systems. In order to convey the scope of the economic and industrial bases needed for interstellar FTL conflagrations, key polities will span numerous star systems.

- Dynamic Environment, Non-linear and NPC-driven Game play

VSGs must give the player a window into a large universe where events and happenstance continuously flow. Empires themselves must be able to rise and fall with and without player intervention. Even if a player may not see the entire empire at once, the player must be able to experience the effects of vast political shifts in a universe that dwarfs the current scale of humanity by many orders of magnitude. Even if the player does not significantly participate in major events, major events will unfold on their own as a function of NPC actions.

VSGs allows for players to find their own path, including assessing market rates and trading and profiteering as well as using those profits to purchase equipment that may help them achieve their goals. VSGs will allow free form 'sandbox' style exploration even where story based campaigns are also supported. Limiting deviation from a story based campaign should be enforced by environmental factors (e.g. going AWOL on a military campaign should be an option, but not without consequence) rather than artificial fettering (e.g. you just can't go AWOL because jump points not leading back to base mysteriously don't work).

- Multiplayer

VSGs should be designed to support real-time multiplayer interactions. The multiplayer actions must be able to influence the dynamic playing environment: when enough people are interconnected, they can themselves drive the rise and fall of empires even if no single player can achieve such a monumental task. While technology may limit the density of players to a minority in any given system, players need to be able to congregate in sufficient numbers to allow for interesting conflicts and engagements.

- Continued Engine Evolution

Lastly, Vega Strike must be open source with such a license that allows anyone to modify the game to suit their own requirements and also that allows anyone to sell the game should they need to support a costly network arrangement that would benefit all players. The current engine is licensed under the GPL which allows for these requirements to be fulfilled, but future versions, should the engine be rearchitected, may be licensed under the more liberal new BSD license to increase interest and adoption. This mode of development makes universe-engine co-development more flexible, but also make it more difficult to bake in particular assumptions about what will be easy or difficult to represent.

1.1.2 Genesis of the VSU: dependencies among game, universe, and game-engine

The VSU, therefore, has to provide an environment in which all of these prerequisite sets of features can coexist. Serving a particular type of game and style of game-play, it is constrained in ways that lead to compromise, both with reality as we know it or expect it to be, and with the aesthetic and artistic predilections of those looking to design the universe as they would prefer it to be. Speaking as the chief architect of the VSU, I can vouchsafe both that the VSU as it stands diverges noticeably from the sort of fictional universe I would create absent the particular game constraints, and that I sleep perfectly well at night having made that compromise. The task I was given was to oversee the creation of a universe that would allow a particular type of game powered by the VS engine, an entirely different beast than the VS Universe, to have, for a target audience much larger than the project leads or the developers and contributors themselves, an engaging and entertaining setting. There is no sin in seeking to entertain, and neither is there shame in targeting an audience centered far from where one stands oneself. There is a deliberate scent of popcorn to the requirements the VSU must meet, and that necessarily colors the universe that serves it, but that in no way keeps us from aspiring to quality, even if we must resign ourselves at times to painting soup cans instead of canvas.

VSU requirements

Listed below are some of the key requirements specific to the VSU that were presented at the outset of its reimagining:

- Contact with alien sapients
- Interstellar war
- Political inequality

- Space-based crime/Piracy

Key implications of requirements

Between the general requirements of VSGs and the specific requirements demanded of the VSU, there are certain properties of the VSU that can be inferred:

- Scale + Real-time Multiplayer

Precludes time-dilation. Requires FTL.

- Aliens + Interstellar War

Contact with alien species likewise implies FTL in such a setting. For there to be something recognizable as an “ongoing war” on an interstellar scale, neither the attacker (borders completely permeable to primary FTL mechanism) nor the defender (fixed points of FTL transit) could be unduly advantaged - hence two different mechanisms for FTL. Early attempts at a unified FTL mechanism (point-point) that differed for in-system and out-system use only in terms of some sort of presumption of scalability were eventually retconned due both to difficulties in reconciling the ability to jump from one side of a system to another with the necessary drawbacks for interstellar travel that this same system must still possess, and for poor reception of the game-play aesthetic: the sense of scale in distances between intra-system objects was deemed greatly diminished. While the early point-point mechanism was widely criticized for being too fast, its replacement (SPEC) was widely criticized for being too slow, except by those who continued to argue that hours, rather than minutes, should be the bare minimum for crossing a star system.

- Economic Scarcity

Precludes/inhibits cheap nano-fabrication of mass-production goods or other feasible replicator technologies.

1.2 Philosophy of scope and goals for plot and protagonist

1.2.1 Small protagonists in a big universe

Many people enjoy pretending to be heroes (or villains), but I believe that there exists a great and pervasive confusion that conflates heroism with actions on a scale of epic myth. There are a number of classical archetypes for heroes and their journeys. One can wander down the Freudian/Jungian pages of Campbell’s *Hero with a 1000 Faces* [2] and see everyone from Siddhartha to Luke Skywalker. That’s not quite the sort of protagonist we’re actually going to be looking for in most interactive content set in the VSU, at least in terms of player characters. This is because, certainly for UtCS and likewise for most other planned tales, we’re not looking to craft a mythic journey centered on the player character. A mythic perspective could be much more appropriate for the “coming of age” aspect of the primary story in the *Rimward of Eden* setting, but even there, restraint is warranted. We wish to avoid having the player character become the, witting or unwitting, linchpin of all further history. We aim for epic scope in setting, not in the degree of impact that

the player characters actions will have upon future generations to come. We wish to allow opportunities for heroism, but on a personal scale, not a galactic or cosmic one.

We wish the setting to be epic, and the player sized on a human, rather than comic-book superhero scale. Compelling examples of the personal heroic within an epic setting are not hard to come by in either reality or fiction. One can think of Sgt. Alvin York's exploits [15] in the context of the first world war, or any number of characters from various world war two epics. One can play a very active role, both helping to effect and being affected by the changes occurring in a turbulent period of history, without being the primary determinant of outcomes. A VSU protagonist should not be a Gordon Freeman [22] stand-in. They will not be, from the perspective of the history books, the most important person of the era. They will, however, be among the most important people in their own lives and in the lives of those close to them.

We should not avoid big stories, epic stories of sweeping scope. Merely, there appears to be frequent confusion that, in order to tell the tale of *Moby Dick* [9] the player somehow must have to be either Ahab or the whale. This is why, for the purposes of story development for VS, I want to distinguish between the big plot and the little plots. The big plot is an epic canvas, a great, boldly painted backdrop with thick lines and firm colors against which and within which smaller events are set, contrasted, and constrained. The big plot should concern itself with what would be written in history texts after its conclusion, whereas the little plot should concern itself with what its surviving characters would tell their grandchildren about what they were doing during some chapter in the aforementioned history text. The epic actions should remain mostly constrained to actions of sufficiently sized groups, those who command such groups, intelligible chance happening, and other such mechanisms as are required to create the epic sweep of time and space beyond the ken of small beings. This is not to say that players in the little plots cannot affect the events of the big plot, it is rather they need not do so, and are likely to only have extraordinary effect when they have performed extraordinary action. The converse, of course, is not true - actions that occur in the big plot can clearly have profound and immediate or delayed and subtle effects upon the player - the fall of a government will obviously change a player's experience if they were to go visit that region, and the stresses of a war economy should become apparent in various price levels, patrol levels, availability of side tasks, etc. To rein things back a bit from the general to the specific: UtCS (the first undertaking set in the VSU) will, at root, be the story of one man's life during wartime, seen through his eyes.

1.2.2 Appropriate player-level plots

Cosmic significance is not necessary for compelling drama or, more generally, good stories, drama or otherwise. In *Catch-22* [6], Yossarian never strikes a deathblow against the Nazis. In *All Quiet on the Western Front* [13] the protagonist accomplishes precious little militarily, and if that's not a compelling story for being too far from the SF vein, then ponder *Blade Runner* [17] - the world is just as screwed up in the end as in the beginning, but one is consumed by the story of even the few people (and Replicants - not all interesting characters need be truly human) involved. Another story to consider for inspiration is Iain M. Banks' *Consider Phlebas* [1] - the backdrop is enormously large, but the protagonists remain on a more modest scale. One can credit much of the success of the first season of the new *Battlestar Galactica* series [16], and the relative decline of subsequent seasons, to the strength that can come from focusing on human interactions and frailties even in a dire and cosmically important situation. In short, it is sufficient for the story the

protagonist is directly entangled in to be important to the protagonist and those around him/her, even if it is not directly important to most of the other beings in existence.

When it comes to specific plots, there are too many reasonable ones to list, although something that meshes well with the themes discussed in Section 1.4 would be preferential. There are, however, a number of approaches that one is explicitly dissuaded from.

- Morality plays.

I'm not interested in the crafting of thinly disguised morality plays, as many Star Trek episodes often amounted to. A game set in the VSU probably isn't the right platform for beating the audience over the head with the fact that having a war because one group is black on the right side and white on the left and the other group is white on the right side and black on the left is both a demonstrably unjustifiable cause and a forced allegory of 1960s American race relations.

- Juvenile empowerment fantasies

I'd prefer to limit the degree to which things devolve into an expression of teenage fantasies of godlike empowerment - Dragonball Z [12] and it's level-up obsessed ilk are not a good starting point for much of anything, even ignoring the sequel strangling power growth whereby planets are being absentmindedly smashed. If players want to blow up planets, let them hack the files themselves. There's no need for us to hand them a chest-thumping anthem of non-constructive violence on a platter. Likewise, there's no need for us to make it easy, nor even possible, for the player to have "the best" attainable possession as it presumes both that such a monotonic ordering over all objects exist and that the purpose of the game is somehow to reward them with increasing levels of destructive capacity or shiny whatnots to sate a lust for unending one-upsmanship. Neither is the case.

- Standard RPG tropes

The standard RPG premise wherein the young weakling levels up repeatedly until he becomes a veritable force of nature that the course of all history depends upon is not a desirable goal. Even the more subdued Freelancer [21] variant thereof is something to be avoided - especially the standard "enemies keep getting more powerful just to match the player's progress despite the fact that this means that later stage enemies could slaughter entire civilizations from earlier in the game" and "fate of humanity rests upon the player" problems. Privateer [25] levels of player significance are probably as far as we should consider treading, and, where possible for VS, I'd like to move the bulk of the significance to before the player takes control of the character. I find it preferable to have a character intrinsically with some significance and then let the player do with that what they will rather than to force a player down a path that will cause them to become significant. I think it's much more interesting to have (as a purely hypothetical and unrelated-to-VS example) a scenario where the player, as a powerful entity, decides to spend its time surfing, gambling and sowing its wild oats instead of saving the human race because it can't be bothered to care than to yank the player incongruously along every time they start to wander down a path that doesn't take them toward becoming some "powerful entity". Cosmic significance for an individual is really difficult to not screw up in SF. Perhaps it may be less so in a fantasy setting where there are easier outlets for suspension of disbelief compatible with the base universe. However, the VSU strongly attempts to not be just such a universe.

- Excessive romanticizing

This category has several subcategories with similar root short-comings:

- Pretending that human expansion into space is some previous time period

Those who cannot distinguish between drawing parallels and forcing them are doomed to repeat the past in ways extremely implausible to occur again. Even if certain periods, most notably, *Icarus descended* have notable similarities with the expansion of the western American frontier, this isn't a reason to bring back the ten-gallon hat and spurs. Flogging the midshipman is not going to come back into style. Likewise, feudal empires and other such historical arrangements of governance and/or society (at least as we know them in humans) tend to arise out of particular circumstances that may be difficult to reconcile with the current state of a space-faring civilization.

- Excessive romanticizing of Neo-Feudalism

There's a reason why most of us aren't ruled by monarchies anymore. Correction - there are a staggering multitude of reasons most of us aren't ruled by monarchies anymore.

- Excessive romanticizing of anarchism

No matter how much you may rage against paying taxes, governments aren't going away any time soon. Anyone who believes without any doubt that we'd be better off without any government at all has probably never read Niven's *Cloak of Anarchy* [10], and should.

- Returns to a golden age

There never was a golden age when everything was better, so it's hard to return to it. The quest for utopia is an unending struggle for the unattainable, not a nostalgic search for that presumed lost.

- Noble savages

No. Really, just no. Not only is this attempted Rousseauism almost certainly inappropriate, it's also a misconception of Rousseauism (the phrase is actually from Dryden's 1672 work, *The Conquest of Granada*).

Plot(ting) versus story(telling): a brief aside

Plot and story are often used interchangeably, but, in the context of this document it is preferred that they mean two slightly different things, and the following definition, while not standard, should be intelligible. A plot is a sequence of events and a set of relationships among them. The plot is "what happened" organized by time and high-level causality. Left to itself, plot is a sequence of set pieces, that, given sufficient focus on the causal organization, provides motivation for the transitions between said set pieces. However, left to itself, the plot isn't *about* anything. It is merely "A happened, and then B happened and then C happened because B happened after A and not the other way around." The story is what the plot is supporting. As mentioned in section 1.2.1, UtCS will feature, at highest level, the story of one man's life during wartime, seen through his eyes. This will progress as a series of sub-stories, each with their own plot graphs that sequence and relates the sets of events that comprise, for instance, a sub-story relating how he managed to deal with grief,

his best-friend's relatives, and find a new direction for himself on an interstellar wake on the eve of fighting breaking out between Confederation and Aeran forces spanning numerous extravagant/important locales that the deceased wanted to visit that will become inaccessible once the war that everyone now knows is coming finally arrives. Storytelling, then, is what results from the placing of characters or other observers in the plot's set pieces and giving voice to all that happens as they progress from plot point to plot point.

To approach from a different angle, if plot is lacking, there is not enough structure. Thus, the audience cannot entirely figure out why, when, or what happened, in the overall sense, even if every individual moment is exquisitely described. If storytelling is lacking, then the audience may see only the strings that are pulling characters from plot point to plot point without ever actually being in any particular moment in between. An overabundance of plotting without room for anything to happen between plot points turns into a laundry list of event descriptions. Overly brief or overly simple plots, even with abundant and well-executed storytelling feel shallow or short out of proportion to expectations.

In an interactive medium, plotting gets a lot of attention. However, choice should not translate into a needless proliferation of arbitrarily complicated plot graphs, storytelling must not be forsaken, and nuance cannot be replaced by pretzel-envious plot-twisting alone. Any particular traversable path would be well served to strive for reasonable internal elegance in plot. Complexity for the sake of complexity is unlikely to result in the end product actually desired, and much more likely to end up contrived. This is doubly true when operating in a region of bounded possibilities, such as the VSU is, with the large-scale plot being fixed, and events in the canon well into the future already being determined. However, there are a lot of stories to be told about or within the sphere of the effects of the same set of events or subsets thereof. Stories about how those events affected people because of choices they made before, during, and after those events can be just as powerful and compelling as if the choice provided determined whether the key events had occurred in the first place, provided that the events and the consequences of the player's related choices are made sufficiently real to the player. Making things real to the player is the domain of storytelling, not plotting (which must only not make things unreal via illogical sequencing or strained causality). Thus, even in an interactive medium, plotting and storytelling must both be given full concern.

1.2.3 Moral certainty, prerequisite idiocy, and other things worth avoiding

As for characters themselves, let the fools be fools and the sages, sages. However, no matter how cynical one may be, constructing plots that require the vast majority of entities involved to be either blithering idiots, willfully ignorant, or (even worse) schizophrenically swinging between brilliance and incompetence, is poor craftsmanship. Hinging a plot on some important thing not being known isn't a bad thing, but if, absent intentional dramatic irony, the readers are all able to discern what is occurring several chapters ahead of any of the characters, the author is serving the reader poorly. Although there may be something to be said for wandering down a cliché path and then twisting it at the end to inform the audience that you were aware of the clichés - Alan Moore's *Watchmen* [3] has some good examples of such twists - you need to really know what you're doing to avoid botching such an attempt at deconstruction in an irredeemable fashion. The odds are that the people working on VS stories will be capable, but not masters of their field, and should thus likely limit their ambitions for literary cleverness accordingly. Equally important to avoiding unnecessary idiocy on the part of the characters is to avoid "genius" or "flashes of genius" as the chronic

deus ex machina for plot resolution(Stargate Atlantis [24] I'm talking to you here). Science by epiphany is farcical. The Manhattan project wasn't finished in a day, or a week, or a month, and involved large numbers of painfully brilliant people who expanded on existing bodies of work - the atomic bomb was not summoned whole from the intellectual aether. As one of multiple people on the VS design team who has worked in actual research labs, the "genius model" for problem resolution as portrayed in many forms of media is somewhat insulting to the actual amount of effort and infrastructure it tends to take to actually accomplish interesting research.

Hinging a plot on an otherwise perfect plan crafted by keenly intelligent planners having a "fatal flaw" that allows 'good' to triumph over 'evil' is just plain old fashioned bad storytelling, and magical thinking at that. Let me be clear on this - there is nothing good or evil in the VSU, but the thinking of some group therein terms it so (my apologies to the Bard). *Good* and *Evil* of the capitalized variety are good fodder for terrorizing children and certain underachieving elected officials, but, at the risk of alienating the vast potential audience of the nuance-averse, to the degree possible and appropriate, material set in the VSU should deal with the more complicated and more interesting problems of adults. There are settings where this will not be entirely the case (stories in the Rimward of Eden setting, for instance would be reasonable places for "coming of age" themes, even if it's an Aera coming of age) but, while some have said that the golden age of SF was not the late 1930's to the 1950's but was instead 14, there is nothing that prevents us from telling realistically complicated stories in an SF setting. Everyone who's been a teenager already did the teen angst thing and can perhaps thus relate to it somehow, but there's no reason to keep reveling in it, even if many of us can't always keep from doing so. If we manage to get ourselves accused of moral ambiguity, of an uncomfortable gap between actions noble and actions necessary, we're probably on the right track. There is a very telling scene in *The Third Man* [4] wherein it is revealed that the protagonist, Martins, echoes the works of Zane Grey [26] in his own pulp western writings. Showing that he still actually believes in the black hat and white hat archetypes of simplified good and evil present in such works, Martins then proceeds by failing to adequately capture the nuances and complexities of the people and situations around him, generally worsening the outcomes for all involved. In so doing, he shows himself, and his views, to be childlike amidst those who, for better or darker purpose, have moved on to more adult world views.

1.2.4 Blank slate vs. pre-determined protagonists

There is a lot of room for character development between the extremes of the stock amnesiac character who will come to be defined solely by player actions and the traditional JRPG characters who remain completely as pre-defined no matter what actions the player may take or wish to take. Moreover, there are different types of games that are best suited to different points in this spectrum. If one wishes to tell a somewhat particular story, it is useful to have an anchor, but if one is primarily offering a sandbox, then there is no need for such a restriction. The latter is appropriate for multiplayer and "free-play" modes, which games set in the VSU should support readily, as the setting contains stories independent of the single-player player character. The former, anchored approach, however, is what we will focus on for our first major game attempt in UtCS. There is a tension between defining the character enough to allow the telling of pre-crafted stories in a sensible fashion, and allowing enough flexibility and growth potential that the player feels that

they have control over an avatar of their own will, and are not merely being asked to bang on buttons until the plot moves forward linearly. For our first effort, UtCS, we will take the approach of joining a character with a well defined past, Deucalion, at a moment of considerable unrest in both his personal life and the universe around him. Thus, he is both defined and pliable. How he has been defined makes the degrees of pliability finite, and not all equally likely, but it will still allow each player to develop Deucalion in the fashion they wish him to be played.

Let us consider this example in more detail. At the beginning of UtCS, Deucalion is a bit of an emotional mess, but this is to be expected. He's just gone through a traumatic event that nearly killed him and did kill his best friend and (for simplification) brother-in-law. He's rather a bit shaken, his life plans have just been rudely interrupted, and, to add insult to injury, the Aera have just started invading Forsaken space while Deucalion was recovering from his injuries. It's a situation that is hobbled with guilt and the impotence of any individual against the blind and uncaring motions of the universe. It's a situation ripe for catharsis and, just as importantly, for life altering change - it is therefore a good starting point for a player to take over a character who already has a defined past. They can take the character in rather different directions without it breaking all suspension of disbelief, as "he cracked" and "you're not the same since XXX" are easily intelligible human reactions to tragedy. At the same time, they can use the existing past and the benefits and limitations it has bestowed upon the character as either guide or leverage - his past gives him skills that make him useful, hence a target for interaction with other entities, and it limits his direct involvement with governance or military forces. As he's already left the Protectorate navy, he can much more believably stray further, or wander back - the choice is his, and thus, the choice is the player's.

There is always the issue in an open-ended game of when things end - where is the resolution? For UtCS, the big plot will advance whether or not the player does too much. For pragmatic purposes corresponding to player learning curves, we may decide to put the galactic events of the Big Plot on some degree of pause during the prologue or first chapter, but beyond that, events will play out as scripted whether the player pushes them along or not. If one only wants to see what happens in the big picture, one need only play a bit, and then play a (safety-seeking) waiting game - in doing so, one has played out a rather boring life, but it's a player's choice. If they aren't actively playing, then they won't get to see the effects. For UtCS, I think having a number of soft-endings for a set of little plots (hence, the plurality) is the best choice. Profession/lifestyle specific plots can have an apex or plateau if not a conclusion.

1.3 Philosophical assumptions

In this section, we briefly note some of the underlying axiomatic assumptions at play in our crafting of the Vega Strike Universe. We don't ask that contributors necessarily agree with these assumptions, but we do ask that they be respected when working within the confines of the VSU. Whether or not one believes they apply to the real world, within the VSU, the following should be held to be true, if sometimes not self-evident.

- There is a measure of absurdity to existence

The VSU does not make accessible to its inhabitants objective morals, valuations, and innate purposes, although many of its inhabitants do not choose to view it in this fashion. No matter how much a given

group within the VSU would benefit from validation, we, as the creators of this universe are under no obligations to provide it, and, indeed, should not. Doing so would make us (the authors) interventionist deities, and the actions of such will not be seen in the VSU (See also: Section 2.2).

- Some problems cannot be solved

One of the defining characteristics of Golden Age American science fiction is a reliance on ingenious (often technological) solutions to every problem that presented itself. This was an expression of unbridled optimism, a romanticizing of “good old American know-how” and “pioneer values,” and the firmly held belief that man is an unlimited creature. In these works, not only were all problems capable of being solved, but, specifically, a hero would always solve them when the need arose. These sentiments would not be well-echoed in post-WWII science fiction authors, some of whom presented futures so pessimistic as to paint humanity’s struggles as innately futile. Alexandr Kramer’s 1979 short story *That Invincible Human Spirit, or, The Golden Ships* [8] is a good example of a piece that works directly against many of the presumptions of the American Golden age. Likewise, later American authors, especially those influenced by such missteps as the American role in Vietnam, would come to present futures that, if not necessarily bleak, were as likely to be damaged by our actions and innovations as saved by them.

The VSU is not so pessimistic and futile a future as those such as Kramer imagined, but it does deny some of the premises of the earlier, optimistic ages. Some problems are inherently difficult, others actually without solution, and some have solutions, but only unpalatable ones. The universe is limited, and we with it likewise so. Perhaps most important to the scope of this document and the construction of narratives, there are nearly innumerable problems that, while solvable, have solutions that cannot be reasonably effected by single individuals, such as the player character.

When it comes to solutions to problems, it is also very important to consider limitations of foresight. The locally optimal solution may not be the globally optimal solution. Poor choices can be made, not because the decision making process was flawed, but because the information needed to determine that another choice would be preferable was unknown or even unknowable at the time.

- Perfection is usually either unattainable, or subjective

Most valuations that ascribe perfection to something are subjective in nature or arbitrarily defined. In particular, this topic is raised so as to make the following point explicit: Humanity is not perfectible. Moreover, introducing perfect objects, concepts, etc. should be generally avoided and approached with caution, as they are probably implausible.

- Good will not always triumph over evil

Even assuming that both good and evil are well defined from the perspective of the narrative in question, there is no requirement that one should defeat the other, nor even that conflict between them is in some way inevitable, save as conflicts between any two distinct world views are in some way inevitable. The VSU is not defined by conflicts among innately opposed absolute moralities, but rather by conflicts among a myriad of overlapping semi-arbitrary ideologies.

1.4 Themes in Vega Strike

There are certain themes which are either already introduced directly via the existing VSU history and heavily featured, or that we feel would be particularly well suited to explore in the VSU setting.

1.4.1 Generational conflict and impositions

One recurring theme that is present in the overarching VS universe story (although echoes of it will be seen in the player stories as well) is that of intergenerational relations, of the dynamics among parents and their children. In this case, the figurative species-children of various groups and the effects that the actions of those who came before them have on their own development. Our parents are our first gods, and even if they succeed as parents, they will always fail us as gods. I thought it would be particularly interesting then, to start the VSU cosmology off with a parental group, the TWHON, that really was, in many ways, godlike in the scope of its powers - but still failed, and in their greatness, had their failure cast a commensurately large continuing shadow over those who came after them.

The history of the VSU, however, as much as the TWHON may impact the events that unfold, should not be seen as a story about them. Their day, and indeed, their greatness, and even their existence as anything but vague and warped shadow of what they once were, has long passed by the time we examine the VSU. While it is worthwhile to understand their place in the story, I would caution giving them too lavish a portion of our attentions - gods may seem interesting, but stories about people are much more involving in the long term, if for no other reason than we're not particularly good at portraying things beyond ourselves in any closeup detail. It's easier to believe it's not a man in a rubber suit if the behemoth is only seen at distance, from the corner of the eye, or, as I would prefer it for most portions of the VS time-line, evidenced primarily by what they have long since wrought. This likewise removes many burdens of contemplating what godlike beings would do interacting with the likes of us, or even our post-human successors - with the action in the past, we can leave many motives enigmatic, and focus on how characters more like ourselves must deal with a reality of consequences, and not the possibilities of dead gods.

Generational conflicts will come into play strongly when considering the interactions among humans, post-humans, and the Grandchildren, the latter being the product of collaboration between the AI Quorum (themselves species-children of mankind) and the post-human Andolians. The time period in which the playable parts of the VSU transpire is one in which being merely human is an increasingly untenable position if one wishes to remain competitive. However, as we can well imagine, the more recognizably human of our descendants, will not be predisposed to sit idly by while they are being supplanted.

Gods and Titans

The Greek myths concerning the conflict between the Gods and Titans are a good example of intergenerational conflicts, and there are some easy parallels with certain events in the VSU's history. The titan Cronus fears being supplanted by his children and attempts to destroy them. In the end, his children do supplant him, just as he had castrated his own father and supplanted him. There is room for sympathies with both sides: an older generation who lingers too long can stifle their erstwhile successors, and a younger generation too impatient in their ambitions can deny the previous generation the fullness of their potential existence.

The Ancient/TWHON conflict draws to some degree from this mythical conflict, but also draws heavily from a reading of the story of Abraham and Isaac that posits Abraham as being necessarily conflicted by the order to sacrifice his child.

Abraham and Isaac

The conflict between the Ancients and the TWHON draws somewhat from the biblical story of Abraham and Isaac and later analysis thereof, such as Kierkegaard's *Fear and Trembling* [7]. Here, however, in an extremely important divergence, the TWHON are both Abraham and god. Wherein profound human indecision might result in grinding of teeth or pulling of hair, the mental division within the singular TWHON mind over how to proceed with those Ancient groups that had come to resemble more their children than their experiments had consequences proportional to the scale of the TWHON.

In the VSU, this tale relates less in terms of faith, as the binding of Isaac is usually viewed, than in terms of the context of intergenerational power and trust. It shows, among other things, how guardianship can readily be abused by those willing to sacrifice their own children, or, more figuratively, their own children's future. This is not only seen in the Ancient/TWHON conflict, but is also repeated time and time again when short-sighted actions are taken that benefit the current generation at the expense of those to come.

1.4.2 Trans-humanism

The people of the future will, at some point, cease to be people as we know them. While we tend to think of the *uncanny valley* in terms of approximations of humanity as they approach us but are not us, I am confident that a similar reaction will occur as we gaze upon people who once were as ourselves, but no longer are. It is no accident that those groups in the VSU capable of making viable forms of governance and economics that have been very problematic here on earth (e.g. the Andolians and Shapers) are no longer fully human, or not human at all (e.g. various alien groups, or AIs).

1.4.3 Man (and Alien) against the Environment

Space is an intrinsically unpleasant environment for terrestrial lifeforms. This may seem in some ways too similar a theme to *Man against circumstance*, as represented by the inter-generational baggage of the previous residents of the galaxy, and thus not a good choice for focus, but the two are actually distinct. This theme also encompasses the often unwittingly futile struggle against the laws defining the VSU (i.e. physics and such) that impose their own limitations on the desires of the VSU inhabitants. The non-futile struggles will be those wherein it is realized that a given path has been denied by what exists and can exist, but that another avenue remains possible.

1.5 Player advancement

There are many things to be learned from existing games, which we will focus on in section 1.6. One of the key lessons, however, especially poignant in the multiplayer era, is that must take great pains to separate *tools* from *achievements*. While both are types of *rewards*, separating tools (rewards that make subsequent

tasks possible or easier) from achievements (rewards for particular accomplishments) is of significant utility in crafting game balance and determining models for player advancement. Many players will strive for achievements regardless of their necessity - achievements provide personal, and, if public, group validation of efforts or prowess. Some players, however, are motivated by completion in depth, rather than in breadth, especially in long-plotted games. Forcing the player to gain unrelated achievements in order to unlock the necessary tools to advance game-play is at best distracting, and more often immersion breaking and sometimes directly insulting in the jarring disconnect between actions and the goal being worked toward. Likewise, achievements that are tools, i.e. necessary, are diluted. Either everyone will achieve them, making them unremarkable, or forward progress (at least on a given path) will be too difficult: denying players the tools for further character progress makes game-play literally unrewarding. Thus, when tools and achievements are conflated, much is lost.

Getting the balance right is hard. Having a plot that the vast majority of the audience is capable of advancing through, given the associated tools doled out along the way, while having a set of meaningful in-game achievements that few players will fully complete is not an easy scenario to construct. Likewise, the construction of the tools themselves is a non-trivial undertaking, even more so in the context of multiplayer gaming. Rewarding tools applicable to many tasks can make more advanced players vastly more capable not only in the breadth of tasks achievable, but also the degree. Implemented poorly, this imbalance will unduly affect game-play. Achievement design can be somewhat more forgiving. For example, granting players customization options on items, that are the same or nearly the same, in terms of functional statistics, as readily available items, is cheap from a game-balance perspective, but can buy a fair bit in the incentive category.

1.6 Things we can learn from other games/universes

- [Fallout \[20\]](#):

Putting an armed grenade in a child's inventory and then watching them go off to play with their friends and exploding is a vile act. Shooting unarmed townspeople is not a friendly thing to do. However, allowing the character to perform fairly vile actions if it's reasonable to assume that they could perform such actions and the game-play mechanisms exist to perform such actions is good game design. The constraints on interaction with others should be limited to those provided by the game engine, not those provided by any moral compass other than the player's. Likewise, the "evil" acts that can be perpetrated should be allowed as much potential for subtlety as "good" acts are allowed ambiguity as to who actually benefits from them.

- [Brotherhood of Steel](#):

The only people who think that excessive swearing makes a game mature are juvenile. It just makes it vulgar. This is not to say that the language in a VSU game should be squeaky clean, just context appropriate. If a character just got shot in the foot, he or she may have some choice comments to make. Depending on the particular game version, these may be bleeped out, but the obvious content should be implied. If, however, a character is negotiating a business deal and can't go half a sentence

without veering Anglo-Saxon, that's probably just crude, and we should be classier than that.

- Oblivion:

If you're not in a sandbox game, you shouldn't be forgetting the main plot-line(s). Oblivion is a very interesting game in an expansive world with many, many side quests. However, since the side quests tend to be completely orthogonal to what's going on in the rest of the plot progression, it's a little too easy to not be able to see the forest for the trees. Likewise, the pausing of all aspects of the main plot during the pursuit of long running side-quests greatly lessens any sense of urgency or impending peril.

Oblivion's scale is odd. This is easily seen in contrast to the subsequent Bethesda effort of Fallout 3. In the latter title, the game area is restricted to a region of metropolitan size, with sparse, post-apocalyptic inhabitation levels, and feels more appropriately scaled. In the former, the scope of the landscape is roughly the same, but it purports to be a populous province spanning much of the center of a continent and several diverse ecological environs. The cities are populated as if they were villages, or at most towns,

- Shadows of Amn (Baldur's Gate 2), Hordes of the Underdark (Neverwinter Nights expansion)

If you have a well defined past, starting at something beyond level one makes a lot of sense.

- Mass Effect

- Freelancer

- Privateer

- Megaman (series)

This series does a very interesting job of separating tools (rewards that make subsequent tasks possible or easier) from achievements (rewards for particular accomplishments).

Chapter 2

Physical Reality in the VSU

2.1 Suggested reading

Before considering the nature of reality in the VSU, it is worthwhile to consider the nature of our own, especially with respect to properties relevant to space and spacecraft. To that end, those particularly interested in low-level details are recommended to consider looking over resources such as [Project Rho](#) and the occasional college physics text to get into the right frame of mind for some of the more physics-oriented sections occurring later in this chapter.

2.2 Things that should not / will not be seen in the VS universe

There are many things that *could* be in the VSU. To list them all would be impractical. Rather, to provide a framework for insight into the nature of reality in the VSU, we will begin by discussing the sorts of things which are expressly prohibited from being in the VSU or should otherwise be avoided wherever possible. This section presents, in no particular order, an indicative set of prohibited items, categories and entities. Section [2.3](#) takes the opposite tack, and highlights some of the key features that should be seen in any appropriately canonical rendering of the VSU.

- Interventionist deities or agents thereof

Whether or not a divine being or beings exist in the VS universe is irrelevant. Neither evidence nor action by any such entities occur in the VS universe.

- Interventionist deities or agents thereof (pretending to be aliens)

The term “god-like” could easily be applied to any type II or type III civilizations (Kardashev scale [\[23\]](#)), or even members thereof. This does not make them actual gods. Nor should they be used as stand-ins for traditional human deity-figures, redemption figures, moral archetypes and so forth. That they are profoundly powerful does not make them well intentioned, infallible, or even necessarily wise. That they are “god-like” in power merely denotes them as powerful enough that they possess a potential for actions at greater scales. It is worth noting, if nothing else, the number of powers previously reserved

for gods that even our own civilization (not yet even a type I civilization) has already secured for itself without attaining any demonstrable measure of divinity.

- Absolute Morality, embodiments thereof, and anthro-exclusive destiny

There is nothing intrinsically *good* or *evil* in the VS universe, be it an action or an entity. More importantly, there is no external guidance toward “the good” or away from “the evil” that acts as some imperative societal force, nor a presumption that what we consider elements of “the good” will prove to yield higher survivability than aspects our modern societies do not deign to associate with goodness. While it is certainly more difficult to see some actions as beneficial than others, as there is no presumption of an external calibrating entity in the VS universe, such judgments are societal, and their merit only capable of being judged properly long after any associated actions have been taken. Additionally, the continued existence of humanity should not be blithely assumed to be a universal “good”. While humanity and their descendants will play an important role for a certain time-period in the VS universe, this is happenstance, and not Providence. Indeed, much of what happens after UtCS is in many ways a decline of humanity and the supplanting of humanity by its children.

- Magic (as magic)

The following, among other things not listed, do not exist (at least as people currently describe them) in the VS universe: ESP, psionics, talking to the dead, spiritual possession, auras, telepathy, telekinesis, purity of essence, and clairvoyance. Events in the VS universe will not be determined, nor even affected, by ‘fate’, gods, prophecy, or other elements of the supernatural.

- Magic (pretending to be technology)

While Clarke’s law posits that any technology, sufficiently advanced, is indistinguishable from magic, the converse is decidedly **not** true in the VS universe. Just because we can think of some magical means for doing something does not mean that any technological implement, no matter how advanced, can ever achieve the same effect. This is not to be confused with things such as fusion reactors which we have firm understandings for how, in general principle, one might work, but cannot fathom how to build a practical one. Allowing leeway for overcoming implementation difficulties, or even profound knowledge gaps is a different beast altogether than positing something to exist which we can already know to be in violation of numerous aspects of our model of reality. This means no perpetual motion machines, no instantaneous galactic communication (although we do still regrettably violate causality with non-instantaneous FTL), no living-super-armor (it’s just a fad fuelled by, one presumes, a poor understanding of high-tech carbon composite materials and the sorts of metabolisms needed to produce such on the fly.), no life-force, no ascension, and no “energy-beings” without a concrete definition of the sorts of energies involved (i.e. “being existing as patterns in EM waves” is OK, but “ascending to pure energy” is just pandering to a magical reality, all apologies to Stargate, Babylon 5, etc.). We must strive to differentiate the unlikely (even perhaps sometimes coming close to the borders of implausibility), which is fertile ground for science fiction (e.g. room-temperature superconductors) from the truly magical masquerading in the guise of science (e.g. though I do enjoy the series, most Doctor Who episodes are fantasy, not science fiction) and from fundamentally

unsound propositions passing themselves off as profound knowledge or advanced technology (e.g. splitting the beer atom, gaining mutant powers from gamma radiation, almost anything from the movie *What the #\$*! Do We (K)now!?*, entities that gain mass without consuming anything, re-spinning the earth's core with a hydrogen bomb, neutrino weapons, hacking alien mother ships with a laptop, instantaneous evolutionary accelerators, "polarity reversal" as the answer to everything, and claims that "humans only use 3 percent of their brains").

While the VS universe allows some liberties with known or expected physics for the sake of plot and game-play possibilities, we are bound by the laws of physics unless explicitly relieved from said limitations. Deviations from our base physical reality have a nasty habit of causing cascading implications that aren't desirable, and should only be undertaken with both good cause and firm caution.

We make explicit and limited exceptions for FTL, shields, and other related space-warping technologies which we bin under "gravitics". Gravitics is known to be junk-science, but, as magical additions to reality go, can be presented in a reasonably self-contained fashion as long as nobody stares too long and hard at it. FTL is, for better or worse, necessary, and shields are, if not necessary, sufficiently desirable and expected that we've made room for them.

Toward the end of limiting the sickly spread of junk science and outright silliness into every aspect of VS, we should avoid technobabble like the plague that it is. While it's fine, in documents such as this, to ponder to some degree how some of the VS tech is presumed to work in order that we can coherently and consistently describe the properties of objects using said tech, the user should be heavily insulated from such discussions. Firstly, what the user needs to know are the end effects (e.g. does it pierce shields, how does the range fall off, how much energy per second does this reactor provide, etc.) and what the useful inferences they can make are (e.g. this is a "shield-type" weapon, other "shield-type" weapons will have similar properties) more so than any nitty-gritty made-up details of how tech we don't actually know how to build works. Secondly, if we attempt to explain how something no one knows how to build works, we're almost certainly going to come off sounding like either outright fools (for using real terminology incorrectly) or as purveyors of gobbledygook (for using unreal terms randomly). Star Trek is the perfect example of what **NOT** to emulate here. There will be no "transferring of power from the rear neutrino phase shift emitters to synchronize our tachyon-positron field into a stable co-phase matrix". In the long term, it will only be held against us.

I find that the following quote from Alistair B. Fraser's [Bad Science](#) webpage neatly sums up the most key argument against technobabble: "When discussing the behavior of the natural world, you are not obliged to explain it; you could merely describe it. However, if you do offer an explanation, you are obliged to get it right." As technobabble almost invariably gets things something other than right, it's clear to see the unfortunate directions to which overuse can lead.

2.3 Things that should (eventually) be seen in the VS universe

It is important to decouple the VSU, as described in this document, from our current attempts at implementing a rendering thereof in-game. The following items may currently be unimplemented, or implemented in a contradictory fashion. They are, however, key to the nature of the VSU, and **will**, barring profound retcon, eventually come be expressed as described in anything that can be considered an accurate portrayal of the VSU.

- Law and order

With all apologies to such noted SF authors as Ben Bova and Poul Anderson, space (at least in the VSU) is not reserved for libertarians. In the VSU, statist influences will persist, and, by the UtCS period, will have pulled much, though not nearly all, of the frontier back under various degrees of control.

- Large Scale industrialization and infrastructure deployment

Interstellar wars are not fought by economies built around goat herding. Heavily developed planets should be common, and feature similarly heavily developed orbital infrastructure. Docking stations, planetary mass drivers, dedicated shuttle fleets, other key components connecting planetary populations to space, and even various flavors of space elevators should be widespread.

2.4 Physics and Technology in the VS Universe

2.4.1 Supraluminal Propulsion

Jump Drives: Primary FTL mechanism

SPEC Drives: Secondary FTL mechanism

2.4.2 Normal Space Propulsion

Whether or not it a vessel is *capable* of escaping the gravity well isn't the only reason to not have capital vessels flying around inhabited planets. In the VS universe, it isn't even always the primary determinant (though clearly this is one-sided: if you can't get out of the well, that's the end of the discussion of should/shouldn't). We do not have reactionless drives in the VSU. Even the Rlaan ships rely on momentum transfer (even if we're going to be intentionally fuzzy about specifics). If a large vessel were to travel through a populated zone, there would be (to use intentional understatement) "significant disruptions". No developed world is going to allow any sizable vessels anywhere near its developed portions due to the nature of the drives required to keep them aloft. And let's not even think about a vessel of that size "hovering."

As a practical matter, I'd say one shouldn't expect to see anything larger than the corvette classes (roughly speaking, up to a few hundred meters in length) ever wandering into the atmosphere of a full-sized terrestrial planet with the intention of leaving unassisted (if ever). Even then, depending on the particular craft and planet in question, it may be a no-go – a Mule or other cargo craft may (after some future balancing round) be able to pull a couple of Gs empty, but fully loaded, may not be able to manage even one G, etc.

Additionally, even if you see larger-than-strike-craft in-atmosphere, they're not going to be flying anywhere near a city-center, or, truthfully, anywhere near a city. This isn't a case of city noise ordinances or some such intruding on convenient transit options – it wouldn't be like living under a jumbo-jet flight path, it'd be like letting the space-shuttle launch from your cul-de-sac.

For reasons of efficiency and safety, most commerce should be conducted via a planet's orbital infrastructure. If you're going down to the planet in person, you take a shuttle from the station or a pinnacle from your capital ship or freighter. In particular, as far as canon is concerned, several political entities would engage in hostilities with your vessel if you attempted to land in anything other than one of their regulation landing craft upon one of their industrialized planets (by law, they might claim to do so on undeveloped planets as well, but they probably wouldn't notice the attempt Smile).

Your normal, industrialized world in the UtCS era of the VSU will have some combination of elevators (efficient, but very slow), mass drivers, and dedicated orbital shuttles (inefficient, but both fast and capable of handling delicate cargo) moving things to and from orbit, depending on the particulars of the planet and the occupying entities. Unless you have personal business on the planet, you're not going to go down to the surface yourself, and even less likely, in your ship, just to move some cargo. That's what the orbital stations are for - they specialize in dealing with moving goods in and out of the gravity well. VSU freighters specialize in moving goods outside of a gravity well. The spaceships (shuttles aside) should generally be living up to their name and staying in space.

Backwater planets are a bit of an exception – they don't have the orbital infrastructure, so there'll be a lot more shuttle traffic, and said traffic will be a lot less regulated. Still, you won't see large craft. Just numerous erstwhile space-craft pretending to be atmosphere friendly.

As far as what the largest ships capable of pulling a g or two will be... a precise answer isn't going to be forthcoming, because that boundary is going to be fiddled with and it's going to move a little - but I can certainly offer some rough outlines of my expectations. As I currently envision things progressing, there will be a couple of different key items affecting acceleration. Pilot, crew, and passenger accommodations will end up being key in some of the limiting factors. Most VSU ships (Rlaan excepted) use direct(ed) fusion exhaust as their means of movement. Most ships are going to operate below their maximum thrust potential. Freighters and shuttles, in particular, will have engines designed to provide reasonable accelerations under recommended load, thus giving a potential for significant acceleration when unloaded, but they, like other craft will be pilot-limited. (I don't particularly like inertial dampeners/compensators, and they **will** be retconned out of existence at some point. What mention of them we have is primarily a holdover from some of VS's WC-ish roots). Smaller passenger craft will have accelerations clamped closely to planetary normal for their respective species, and probably be capable of pulling about twice that for takeoff/landing scenarios. Larger passenger craft will likewise have accelerations closely clamped to planetary normal, but not be capable of much more than that. Bulk freighters will have fractional g accelerations, so crew considerations are moot. Shuttles will probably end up with operating ranges in the 1-3 g range, so not much walking around under way, and special suits for crew for periods of sustained acceleration. Nothing with normal passengers is going to operate beyond 2 g.

Combat strike craft and military sub-capital vessels are a bit murkier. It'll certainly be less than 10g for anything crewed by organics. Whether that translates to, for example, 4, 6, or 8 g operating ranges isn't

something I've completely settled on, and there's definitely going to be some significant variation within the set as well. What I am crystal clear on is that the military craft and, to a lesser degree, the paramilitary craft, will operate in a significantly different forward acceleration band than the civilian models hewing to the limitations of passenger and crew comfort. Military strike craft cockpits are going to be gel/fluid-filled affairs (see *The Forever War* [5] – still a good book). The smaller end of the sub-capital vessels is probably the murkiest bit - suffice it to say they'll be able to chase down any larger civilian craft or support vessels, but exactly what that ends up amounting to isn't clear yet.

For most capital and sub-capital military vessels, acceleration in any direction other than forward is likely going to be sub-g. A subset of the capital and, especially sub-capital, vessels will have asymmetric acceleration capabilities in the forward direction (chase/retreat capability) that will allow them to overtake civilian passenger and freight craft, thus, likely in excess of one g. However, this will mostly be a sub-capital phenomena. Most capital vessels will be capable of running down sub-g freighters and other support craft, but not particularly designed to keep pace with 1-g passenger craft.

2.4.3 Orbital Infrastructure

2.4.4 On Weaponry, Defense, and Damage in the VS universe

So, assuming one has the ability to diddle with the surrounding space (leaving discussion of whether this, or any other stated principle, was/could be a good choice for a fundamental assumption to another time) how might one construct a shield? Well, I thought perhaps one could set up something based around gravitic shear forces (locally violent, but, with opposing forces mostly canceling each other out at greater distance due to super-linear falloff).

I then figured it would probably be worthwhile to augment such a setup with an EM component, so as to assist against charged particles, as charged particles are easy to accelerate, and therefore a likely choice in assorted weapons systems. So, when descriptions (minimal as they were) were written for shields, they were referred to as providing a combination of gravitic and electro-magnetic protection.

Now, where did this lead me (at least as far as I saw it) - almost everything except for something that looks like a shield should penetrate a shield in some manner to some degree.

(a brief aside: ship collisions are somewhat outside the scope of this post - suffice it to say that they should be much more catastrophic than they are, but the reason is not related to shields - it's that our damage model only works on energy right now, and doesn't look at time related components, so if a ship smacks into something at 300m/s and bounces off at 100m/s in the opposite direction we apply damage due to the loss of kinetic energy, but don't currently address the problem that, if this collision took 1/10 of a second, the ship experienced an acceleration of 400g's, the pilot should be paste (even assuming some (limited) means of inertial compensation as a cheap way to warp space may be deemed to provide), and the ship should be assorted bits of fine debris - this is a bug, a feature failure in need of fixing. We don't have a model for acceleration tolerance, clearly, we need one.)

Shield effects, by category:

- LASERS and other coherent EM radiation

hard to get a beam of light to interact strongly with this setup at all (unless one assumes that photons passing through the distorted topology can be convinced to dump energy and shift down the frequency spectrum in return for degrading the desired topology - but the more that I've thought about that, the less it appeals to me, so let's not spend much time there) but it might interact weakly, de-focusing the beam. For low frequency radiation, de-focusing is going to be quite detrimental (in terms of the likelihood of armor being capable of dealing with incoming beam) but one imagines that xasers and grasers are still going to be quite damaging even if the incoming beam is distorted and defocused. Hence, at best, fair protection against low end laser weapons, to negligible protection against high-end laser weapons. This translucency (not transparency) has the benefit of making it easier to explain how EM spectrum sensor data gets in, but causes some problems with pilot-line-of-sight (upon further reflection, I've come to the opinion that chuck raised an excellent point with respect to his comment about the insistence of early astronauts on capsule windows - there are only two major human groups in the VS universe with pilots that likely wouldn't demand the same, if not windows per se, then some semi-direct optical access (I also briefly, and not in particular seriousness, pondered the notion of an "optical fuse")- but this delves into a whole other train of thought, so I'll stop it here for now.)

- Solid objects

should interact fairly strongly with the shear forces. Complex objects could end up giving up non-negligible amounts of energy in undergoing deformation or otherwise smacking into bits of themselves. However, given high initial velocity, sizable portions of the incoming remnants of the object will not be sufficiently diverted and will still intercept the target. This is still a preferable scenario, as a defocused impact of something more resembling dust and shrapnel should be a lot easier for armor to handle than an intact shell. (Unless of course, one doesn't have armor, in which case one may have just traded one set of holes for many sets of holes.)

- Particle beams

A) Charged - high velocity makes them hard to divert with the gravitics, again just gaining a defocusing, but that's what the EM systems are there for helping out with. Still, in the end it's just a very good defocusing and diverting, and can't be expected to stop all the incoming particles completely.

B) Neutralized - EM field doesn't help in any meaningful way, defocused, more-so than a laser, but protection is pretty poor, and it's mostly up to the armor.

- Plasma

A) Net-neutral, or B) net-charged clouds of high temperature ionized particles that are likely to be fairly effectively diverted by an EM field unless the plasma density was quite high at the time of interaction (still efficiently diverted in such a case, but perhaps not effectively).

- Shields and shield-like weapons

Directly act upon the topology created by the shields, significantly degrading them. However the directness of their interaction also means that their effects do not penetrate the shields.

How I saw this playing out in terms of game mechanics:

Firstly, as shields degraded (topology becoming unstructured, shear forces going away), anything that penetrates a shield already would penetrate more. The EM field wouldn't degrade in the same manner as the space-warping component, but it was only useful in mitigating charged particles anyway.

Weapons, by category:

- Lasers

would seem to be quite nasty beasts in that they mostly ignore shields, especially at higher frequencies, except that lasers have lousy energy efficiency, especially at higher frequencies, and especially given that laser inefficiency tends to materialize as waste heat. Thus I saw lasers as weapons with extreme cooling problems, either resorting to open cycle cooling (venting coolant = limited ammo, limited re-fire rate) or *very* slow re-fire rates (also a source of perhaps interesting complexity if/when any form of heat modeling gets implemented). Likewise, the higher frequency lasers would be prohibitively expensive and potentially bulky beasts, probably not found in small craft. Additionally, as they don't interact strongly with shields, they wouldn't be good weapons for degrading them rapidly. Range would be good though,

(lasers don't degrade as the inverse square, but diffract according to something along the lines of

$RT = 0.61 * D * L / RL$ where: RT = beam radius at target (m) D = distance from laser emitter to target (m) L = wavelength of laser beam (m) RL = radius of laser lens or reflector (m))

- Solid objects

Lower energy requirements (could also have internal energy sources, as per rockets), easier cooling solutions, good rates of fire, degraded by shields but degrade shields, and become increasingly effective as the shield degrades. Limited ammunition. Can be augmented (at increased size/cost) by addition of shielding, and/or nuclear or anti-matter warheads. At the (expected relative) velocity these would be impacting at, conventional explosives would not be useful additions. Damage does not decrease with range (although for reasons of limited processing power, a "max range" still needs to be specified engine level).

- Particle beams

A)Charged - low yield electron beams can already be made with very high efficiency - but cranking up the power will drop the efficiency a lot. More importantly, any charged particle beam suffers from severe thermal and electro-static bloom. The constant on the super-linear (I believe it's actually an inverse-square) decay in beam density can be helped by using more massive particles, or accelerating to relativistic velocities for the sake of time dilation, but at the expense of efficiency (significant relativistic velocities are a *huge* energy investment, neutrons are dead weight to an EM accelerator, and only so many electrons can be conveniently added to or removed from an atom). To make matters worse, one's ship will accumulate net charge if repeatedly firing a charged beam, unless the excess charge is bled off somehow (I've seen indications that alternating between positive and negatively charged firings is a "bad idea (tm)" due to creating a current loop involving the vessel). So, to sum up, the range is pretty bad, the efficiency is questionable, there's probably a hell of a re-fire delay as

one cleans up the charge accumulation problem, and EM fields can do a lot to defocus the incoming beam. However, if you are close enough, and your particle density is high enough, then what does get through would do nasty things to armor, surface mounted electronics, and throw off lots of secondary radiation.

B) Neutralized - (and by neutralized I don't mean "neutron beams", because I haven't the foggiest idea how to generate or accelerate them effectively in anything resembling a coherent beam unless we start talking about space-warping that is probably powerful enough that'd we'd have to go back and revisit the whole "can't do too much to photons" issue which I'd rather not, and besides, that would probably mean that shields were impervious to just about anything... which is rather much not the goal either) more specifically, a beam of particles that has been rendered charge neutral; one in which oppositely charged particles (likely electrons) are added back in after acceleration (both must have been accelerated) to neutralize the beam. This will almost certainly defocus the beam, and again almost certainly drop efficiency even lower. However, it avoids the local charge accumulation problem, this removes electrostatic bloom, leaving only thermal bloom, increasing range, and it also negates the effectiveness of EM fields to disperse the beam at the target. However, it also negates the current and charge accumulation effects on the target that might damage electronics. Still, plenty unpleasant on impact, only mildly affected by shields, but range isn't as good compared to lasers, and efficiency is only questionably better, and could easily raise similar cooling/re-fire issues.

So, as for beams - mediocre range due to bloom effects, efficiency questionable, neutralized beams achieve good penetration against shields at cost of even lower efficiency, charged beams have lousy penetration against shields, but can probably be used in efforts to disable the target's electronics (at the least, those present on the surface, or accessible by necessity (engine/reactor) - the core protected elements are going to have to be in some Faraday cages with optical links to the externals (optical links don't like shear forces though, so they could break with some probability upon impact or impact resembling damage). Ammunition (the particles in question) necessary, but in sufficiently small quantities per firing that it can either be ignored or modeled as extremely cheap, small, and plentiful. Some noticeable degradation of shields due to some interaction.

- Plasma

Last I investigated, unless there's some way to make plasma somehow generate its own magnetic fields of exceptionally interesting (read: somewhat absurd) strength, or one wants to accelerate the plasma to very high velocity (which would start to look something more like a shorter pulsed version of the beams above), it's not going to be an effective weapon at anything beyond the shortest of ranges, because it expands like no one's business (our dear friend the inverse square law, but with indications of unforgiving constants, the prevalence of plasma weapons in many sci-fi works notwithstanding) and in every direction. High-tech flamethrowers with interesting electrical properties are cool, but not very effective unless one is close enough to read the serial numbers on the target's fuzzy dice, never minding the effects of EM fields on ions, which further limits effectiveness.

In short, one could build the bolt (short pulse) rather than beam version of a particle beam, and it would be rather similar to the particle beams, and not what one traditionally calls a plasma weapon.

Or, one could build a reasonably efficient plasma weapon, but be limited by rapid falloff to the shortest of ranges. Ammo for plasma weapons should be in the dirt cheap, small, and exceptionally plentiful category. If you're actually close enough to get any reasonable number of particles past the EM fields, you'll do nasty things to the electronics, and you can probably afford to keep firing for a while. Shield degradation can be somewhat more pronounced than particle beams if more matter is being thrown at the target.

- Shields-and shield based weapons

Ammo, none. Shield penetration, none. Efficiency, mediocre-poor, hence re-fire, fair-slow. Target shield degradation better than any other damage source. Transmitted damage after shield collapse (topology unstructured) worse than any other damage source, but non-zero. Damage vs. unshielded objects significant.

- Missiles

Mostly depends on warhead type. Shielded kinetic is one option, single shot weapons of various types also options, as are bomb pumped lasers or simple nukes. Ultra-low-yield (0.5 - 1 ton range) fusion warheads are presumed commonly available (preferable to chemical explosives due to the manner of transmission of the energy, namely, high frequency radiation and neutrons).

2.5 Biology

2.5.1 Genetics

Most lifeforms in the VSU are not DNA/RNA based. The particular structures used as the genetic blueprint vary from lifebearing planet to lifebearing planet. Thus, almost all alien viruses are incapable of threatening human life, although xeno-microbes may still be threatening if they can metabolize the same types of organic compounds we do (handedness, etc.). Those biospheres which, through convergent chemistry, happen to be DNA/RNA based, or minor variations thereupon are rare and valued to humans, and likewise for the equivalent isomorphic sets for the Aera and Rlaan. Beckett's Murky Venture was one such planet, hence the extreme interest of both the Light Bearers and the Shapers, and the profound degree to which said groups were able to readily alter the ancestral Dgn to their new specifications. The Shmrn, in particular, were altered by the LightBearers to contain DNA of human origin. Chemical similarities of the genome also factored heavily into which species the Rlaan chose to attempt uplifts of in their Lmpl and Nuhln projects.

2.5.2 Evolution

In the VSU, evolution, both micro and macro, is fact.

Chapter 3

Social Existence in the VSU

3.1 How to think about various groups

This subsection isn't designed to give you all of the info on a given group (check out one of the appendices for that). What this subsection **is** designed to do is to give an idea of what frame of mind one should be in when considering a particular group in the VS universe and how that group relates to others, themselves, and their surroundings. Frequently, I will list other groups or entities that come to mind when I am pondering a given VSU group. However, please do not confuse influences with instantiations. If, for example, the Moties from *A Mote in God's Eye* [11] are listed as an influence in the development of the Aera, it does **not** mean that the Aera are necessarily similar to the Moties. Rather, it means only that the Moties were on my mind when developing the Aera, and are perhaps a useful point of reference to be familiar with for framing one's own pondering of the Aera. Some listed influences will, in fact, be strongly negative in their correlation to the actual nature of the group (e.g. the Borg [18] may be listed as an influence because I am actively trying to ensure that a group **doesn't** get considered as similar).

3.1.1 Humanity

One might think this part the least necessary group to consider, but it's actually the most tricky. As humans, we've got a pretty good idea of how humans operate. As we drift away from our current conceptions, either confusion or disbelief can ensue. And we're going to have to drift away a bit here, both for groups with trans-humanist directions or aspirations, and simply because of the 1200 year gap between ourselves and most of the VS cultures.

- **Rule number one** - These are not the people around you. At least, many of them aren't. The people of the 33rd century, by and large, bear less resemblance to you than you do to a 10th century peasant - this much is to be expected.
- **Rule number two** - Some of these "people" REALLY AREN'T the people around you - at all. It's not just the cultural gap. Thinking about the Purists as fairly normal, if scared, people, the Unadorned as somewhat nutty religious people, the Forsaken (even more like modern man than the Purists) as bitter people, the Highborn as self-absorbed (and perhaps mildly self-deluding) people and the Merchants as

greedy people can lead to somewhat reasonable grips on how these groups operate - they are, at heart, fundamentally still human, if culturally distinct from today's climate. Even the Mechanists can be superficially grokked by starting with a zealous level of self-hatred directed at the limitations of their human bodies. However, thinking about the Andolians or Shapers as just human will delude you, and lead your conclusions astray. They are not yet alien, but they are intensely foreign to the humanity we are familiar with; they no longer think like us. The Andolians, collectively, haven't forgotten anything meaningful for over 900 years. Each generation grows up with immediate and nearly innate access to more information than each generation before. They are connected, not just in the simple physical sense of their link, but also in social senses that modern man simply isn't. They don't think about self and the other in the same way we do - they can't. The Shapers have adult minds by the age of 7 and even their dumbest healthy member surpasses most modern humans. They are a society whose rate of idiocy, mental defects, physical defects, malnutrition and insufficient pre-natal care is so microscopic, their disease rate so low, that one it suffices to think of them as a post disease, post illness, post weakness society. Theirs is a society of extreme individualists that runs smoothly because they're all up on the game that's being played - duping the Shaper electorate makes bribing the Supreme court look like something a drooling infant could accomplish by accident. We share more genes with the SuSims than with the Shapers. They are not gods or demigods, or any such thing, but to think of them merely as human, is to do them insufficient justice.

- **Rule number three** - The "Purist/Luddite" test: while you need not agree with the eponymous groups, if you can't understand on a permeating, gut level why these groups are so obsessed with bounding what constitutes humanity and what it means to lead a human life, then you don't yet understand the "humans" of the 33rd century that inhabit the VS universe.

Key differentiable human groups include:

- Andolians

It would perhaps be inaccurate to say that the Andolians are actually friendlier than the other major meme-groups. More accurate would be to say that they are more tolerant, as much because they can afford to be as because it aligns with their outlook. They are, however, often seen as patronizing or even condescending in their tolerance of other groups. This is still seen as preferable to the outright disgust, hatred, or dismissal that can often be experienced between the meme-groups. The Andolians often refer to each other with sibling terminology, the Klk'k, even the non-linked, with diminutive sibling references (bro-chan, sis-chan, etc.), non-Andolian humans in the protectorate as "steps" or "steppers", the Purth as "little ones" (an ironic touch, given that the Purth are extremely large), and non-protectorate humans as "cousins". Such references, however, are made only in casual discourse, and in generally unambiguous fashion, with actual relations being made pointedly clear.

- Forsaken
- Highborn
- LIHW

- Luddites
- Mechanists
- Merchants
- Purists

The Purists and Andolians are the most *POPULOUS* human populations, but the Purists are limited as an economic power and industrial power. Purist growth is unmanaged, their infrastructure is uneven at best, and their governments are varying degrees of corrupt, incompetent, or overwhelmed. Constantly looking backward, they stumble often as they advance toward into the future.

The Purists and the LIHW both live in some degree of economic servitude to the Merchant groups, and the outsourcing of their needs for capital vessels is business as usual in their governmental dealings. It's a far easier sell to their constituents than attempting the investments needed to build sufficient infrastructure to produce competitive capital vessels of their own design.

To contrast tersely:

The Shapers have the most productive individuals.

The Andolians have the most productive populations.

The Mechanists have the most per capita space-infrastructure.

The Unadorned have the largest per capita research investments.

The Merchants have the most trade volume.

The Highborn have the most political leverage over the Merchants.

The Purists have the most people.

The LIHW have the most diverse ideological viewpoints.

Recall that the Purists ended up with Earth

A) after everyone else had left

B) after a period of nearly abject governmental and economic collapse

Likewise, recall that the Purist philosophy is less cohesive than that of some of the other meme-groups. The rise of the Purist movement to dominance on post nano-plague earth was largely fueled by a scared and angry counter-reaction to trans-humanism rather than by a well-defined central message. Though they have since matured ideologically, their roots as an initially negatively defined world-view still shows through.

- Shapers
- Unadorned

3.1.2 The Klk'k

They're wisenheimers, to a degree. Their sense of humor permeates their civilization more so than ours, making for odd juxtapositions, such as it being entirely appropriate to be cracking jokes while fighting,

murdering, or engaging in serious policy decisions. The key to thinking about the Klk'k is this - as much as they may seem to have progressed along remarkably parallel lines, they're still aliens. As SF author Gregory Benford once said, "the thing about aliens is, they're alien." The Klk'k are enough like us, compared to all of the other aliens, and they can work with us, that we keep wanting them to be like us and expect them to be like us - but they aren't like us, and it's always disconcerting when they prove it. One must imagine asking a Klk'k why they have just done something, having them explain in what appears to be a rational fashion, and still just being dumbfounded as to why they did what they did - between differences in axiomatic values and divergence in the nuances of the explanation it just wasn't the same way of thinking about the situation, and thus they arrived at a different outcome.

3.1.3 The Aera

The Aera got the short end of the stick - they drew the bad lot in the running for "butt of cosmic joke" (perhaps they failed to appropriately bribe the AUTHORS). Their planet was unpleasant, their position in the jump network was supremely non-optimal, their timing was poor and made even worse by the fact that they didn't know that everyone else was going to run out of real estate soon enough anyway. They aren't boogie-men, they aren't monsters, they aren't ravenous alien invaders. They are an abused and shortchanged group looking to survive in a universe that has repeatedly shown itself uncaring to their existence. If the Klk'k disturb us when we are reminded that they are unlike us, the Aera disturb us most when we are forced to realize that we are not as different as we might like to think, beneath bodies that each considers extremely ugly. Their viewpoint tends to be colored by suspicions and certainties of antagonism, but these are the result of a profoundly guarded outlook, rather than the delusions of a human paranoid. Aerans are actually quite distinct as individuals, but their fundamental pack and abstracted pack loyalty structures allow them to operate cohesively in groups in a manner that seems far more lockstep, frighteningly authoritarian, and homogeneous to a human observer than it actually is. The individual is celebrated post-facto. A life's accomplishments cannot adequately be judged until that life is completed, from an Aeran perspective. Don't think of the Aera as bad, as evil, or as inherently inimical to the other races - this would be a miscarriage of justice, and not even an oversimplification, but an untruth. Rather, empathize with their miserable initial situation, even if the only sane way for humanity to deal with them, alien and resolute as they are, is to shoot back at them.

3.1.4 The Rlaan

The Rlaan are intensely alien. If the Klk'k are frustratingly alien, and the Aera are at times painfully alien, then the Rlaan are mind-bogglingly alien. They are, in fact, so alien that we can't really understand how alien they are, because we can't identify what in their behaviors is just complex and what is derived from more fundamental differences. The scale just saturates at some point. Neither they nor we really understand one another, and we merely have gotten good at pretending. Take their civilian/worker - defender split; they view any individual capable of willingly killing a worker the way we'd view someone who liked to feast upon a raw, unborn fetus, freshly cut out from its mother's womb, while wearing its freshly vivisected infant siblings as shoes so that his feet won't get cold while he's carving a scarf out of the mother's back and

humming along listening to the screams of the father as he slowly slides down an impaling post. We have nothing remotely comparable to that - nothing. They experience the world in parallel layers at a time, in sight, in sound, in thought, decomposing their reality into fragments and piecing it back together. They live for hundreds of years, but even if that's actually a fairly short time for life at their temperatures, they don't have any sense of individual urgency in their life. While the Aera are vibrant individuals underneath the firm veneer of their society, the Rlaan are, by and large, extremely similar creatures underneath the cloak of chaotic motion that constitutes fair portions of their society. Rlaan populations are large enough that, even with a much smaller standard deviation, there are exceptional individuals, but most Rlaan, especially the workers, are remarkably interchangeable despite their differences - this is not because they do not differentiate themselves significantly, but rather because they differentiate themselves in ways that are reversible. Underneath whatever they are currently doing and believing, Rlaan minds seem to function in remarkably similar fashion to one another. A conversion to a new mindset can make the average Rlaan a good stand-in for any another.

Humans, however, do not often interact with the uninteresting Rlaan, and it greatly colors our perceptions of them. Only those Rlaan trusted with having inklings of how other minds function are allowed to be their diplomats. The anthrophilic Rlaan-Briin are vital to increasing cultural understanding, but they're a distinct minority among the Rlaan, and those, even of the Rlaan-Briin, who are capable of moving toward "foreign" from "alien" are an even smaller minority. We, on the other hand, have never moved from "alien" toward "foreign" for them on our own. It is only as the result of great assistance and analysis from AIs and PAIs that we can now convince ourselves that the Rlaan receive messages truly similar to what we believe we are sending them.

3.1.5 The Uln

Boorish, feudal, and seemingly anachronisms, the Uln are alien, but surprisingly uncomplicated to the degree that our interactions are unobtrusive. They are willing and well practiced in mimicking aspects of the civilizations and societies of those they deal with, and, though it masks deeper misunderstandings and differences, this allows them to at least appear less alien than they truly are in the context of particular dealings with them. They are, in many ways, a deeply insecure people, given to grandiose displays of overcompensation.

3.1.6 The Shmrn

The Shmrn are fundamentally depressed and fatalistic. Their lives are short, and their existence tends toward one of chronic mild discomfort. We created them, and have left so deep an imprint upon their psyche that we are not entirely wrong to anthropomorphize some of our assumptions with respect to their internal mental states.

3.1.7 The Dgn

Though from the same stock as their Shmrn brethren, the Dgn have been far more effectively subjugated by their Shaper masters. They do not welcome their condition, but do not find it particularly irksome.

3.1.8 The Saahasayaay

The Saahasayaay thirst for violence and consumption is best described in terms of lust. Their embrace of violent means to achieve ends may lead one to believe them to be hedonistic sadists, but that would be somewhat askew. They do not perceive their domain to be that of pain or suffering, but of death. All else is incidental, except that it reflects their belief in ultimate dominion over life. With their own peculiar degree of immortality, they are consumed by their fascination with the termination of existence. The Rlaan have often regretted not leaving them to rot on their stagnant stone-aged planet.

3.1.9 The Purth

3.1.10 The Alphans/Betans

3.1.11 The Ancients

3.1.12 The TWHON

The most important thing to remember about the TWHON is what they are not: gods. The second most important thing to remember about the TWHON is that there was really only one of them.

3.2 Economics and Day-to-day Living

Lots of jobs in construction. Constant expansion.

3.2.1 Transportation and Craft Ownership

In the VSU, if you're in space, the odds are you're a passenger on a dedicated passenger craft, be it public or private in nature. Pilots are relatively few in number. In stark contrast to, for instance, the Star Wars universe, personal spacecraft ownership in the VSU is low. Not only are costs high, but security issues (even small craft can be highly destructive) limit the number of "tramp freighters" of dubious origin wandering about the VSU. Craft have official and well-distributed IDs backed by some sizable political or economic entity, or else they tend to get shot at. While these IDs and ID checks aren't immune to forgery or to corruption allowing less than reputable characters to get their hands on valid IDs, they do limit anonymity. As for costs, the cheapest spaceship is still going to cost more than many homes on well developed worlds.

Chapter 4

Astrography and its Impact on Destiny

4.1 The Jump Networks

4.2 Location and Planetary Compatibility

Chapter 5

Time-line (Omniscient Viewpoint)

5.1 Time-line outlines

This section contains two time-line outlines, the first, in Section 5.1.1 is abbreviated, and only focuses on the “playable” portion of the VS time-line. The second, in Section 5.1.2 frames all the events in the Vega Strike universe from the origins of the TWHON in the long distant past through the decimation of the jump networks that marks the future “Rimward of Eden” setting.

5.1.1 Abbreviated game-oriented time-line

The following abbreviated time-line shows points in time in the VS universe that seem like good matches for interactive content, and highlights some of the key occurrences that would occur/would be occurring during potential game play. The Vega Strike engine would be appropriate for some, but not all, of the points listed. Major point titles are taken from fragments of the following line:

”Icarus descended upon the coldest sea, foundering inheritance rimward of Eden.”

list of titles and highlights

(titles in chronological order)

- Icarus Descended: (circa 2684 CE)
 - Pre-SPEC Expansion in the Diamond Dust
 - Founding of the major human powers
 - Origins of the Merchant’s Guild
 - Devolvement of fallen colonies into piracy, etc.
- The Stars Are Also Pyres:
 - Fraternal War
 - Origins of the Confederation of Inhabited Worlds
- Upon the Coldest Sea: (3276 CE)

- Aeran War
- Maturation of "Grandchildren"
- Andolian power shifts
- Black Paralysis:
 - Exploration/exploitation of Jump Network
 - FTL maturation, discovery of "locked" gates
 - Changes in Human-Rlaan relations
 - Final death throws of Aeran Ascendancy
 - Origins of "marked" Aeran co-operators
- Foundering Inheritance: (circa 3663 CE)
 - Further exploration of locked gates
 - Revelations on the Ancients' libraries
 - Opening of gates
 - Launching of the Fleet of 10,000
 - Invasion of Rlaan space from beyond locked gate
 - Decline of Rlaan assembly
 - Near extinction of Saahasayaay
 - Devastation of Rlaan population
 - Evidence of TWHON stirring
 - Revelations on the intended role of the Nano-Plague
- The 10,000:
 - Travels and struggles of the stranded fleet
 - Origins of the Pen-Ul and Pen-Pen
- Rimward of Eden: (circa 11007 CE)
 - A young, marked Aeran struggles to claim his people's birthright and escape from human imposed bondage on a world never truly recovered from an interstellar cataclysm, the cause of which has been lost in time and strife to the inhabitants of his world. Old relics lead him to seek the help of the "demon" Kilroy, who is actually one of the original batch of Grandchildren.

5.1.2 Vega Strike Universe Time-line

The following is a time-line, in outline form, of the currently relevant time span of the Vega Strike universe, spanning from tens of millions of years BCE to tens of thousands of years CE. The events mentioned in the time-line will be examined in greater detail in the sections following it.

- TWHON Era: –irrelevant– to 80 Million BCE
 - pre-TWHON develop technology allowing creation of jump network and begin work thereon
 - pre-TWHON subjugate/destroy/incorporate all other competitors in galaxy
 - pre-TWHON become increasingly post-technological (no longer building tools)
 - proto-TWHON abandon bodies, transcend tool/body distinction entirely
 - proto-TWHON lead move toward unification of entire TWHON species
 - proto-TWHON emerge victorious after defeating other pre-TWHON factions
 - singular TWHON mind coalesces
 - TWHON spreads back out take advantage of galactic scale material and energy resources
 - thought-localizations within the TWHON bodies lead to heterogeneous faceting of the singular TWHON mind
 - various aspects of the TWHON mind begin designing sapients for a wide and varied array of reasons
- Ancient Era 80 Million BCE to 2 Million BCE
 - Several Million Years BCE
 - Ancients A, B expand throughout this region of the galaxy, interact with at least 4-6 other groups of similar developmental level
 - 2 Million Years BCE
 - Interspecies warfare among Ancients at the behest of TWHON
 - Advancement of subset of Ancient species to early post-technological development stages
 - Indecision by TWHON as to whether to nurture, co-opt, or terminate the more advanced Ancient cultures leads to internal unrest in the TWHON mind
 - Internal discord in the TWHON mind manifests as conflicts between physical TWHON bodies. Ancient-sympathetic TWHON aspects deploy autonomous defense system based upon TWHON immune system to stem production and deployment of TWHON bodies hostile to Ancients within Ancient systems. Several variants are produced in concert with different groups of Ancients.
 - TWHON aspects sympathetic to Ancients seek to use several remaining advanced Ancient species to assist in forcibly convincing the TWHON mind of the correctness of the pro-Ancient views

TWHON internal conflict and TWHON-Ancient conflicts come to a head in battle near research planet on current Uln homeworld. Attempts at using Ancient-implemented devices for forcible convincing fail catastrophically, causing insanity and rapid devolvement of the TWHON mind. Increasingly mindless TWHON bodies continue to act out echoes of the last few semi-coherent thoughts of the TWHON mind, seeking out and destroying all Ancient species in increasingly self-destructive acts of violence.

Slag worlds and planetary debris fields formed as TWHON bodies alternate between vaporising various Ancient worlds from orbit, hurling themselves into said worlds, and engaging in other equally inefficient acts of mayhem and self-destruction.

After some thousands of years of turmoil, and the complete destruction of all Ancient species, the remaining TWHON bodies begin to migrate coreward and go dormant.

- Inheritor Era 2 Million BCE to present (3276 CE at beginning of "Upon the Coldest Sea")
 - 960,000 to 830,000 BCE
 - Alphan/Betan sub-light expansion
 - Conflict between Alphan and Betan species leads to development of FTL technology
 - Autonomous defense systems reactivate from dormancy due to detection of FTL activity. Begin benign ramp up of nano-manipulators and expansion throughout systems in which defense colonies are present. Both Alphan and Betan species assume this to be an attack by the other, and respond militarily.
 - Defense/Immune system develops allergic reaction response to nanites due to Alphan and Betan deployment of such against it. Takes on characteristics that would make it known as the "Nano-Plague" in Icarus Age.
 - Both Alphan and Betan species rendered extinct due to conflict with Nano-Plague.
 - 100,000 BCE
 - Rlaan Workers and Defenders speciate
 - 13,000-11,000 BCE
 - Humans develop agriculture
 - 9783 BCE
 - Rlaan writing system formalized across entire planet
 - Rlaan Assembly formed
 - "Icarus Age" begins (11th Century BCE)
 - * 11th Century BCE
 - Rlaan begin sub-light expansion
 - * 1st Century BCE
 - Aera begin clearing forests to create agricultural land
 - * 3rd Century CE
 - Rlaan research into FTL re-activates Nano-Plague
 - Rlaan expansion halted as Rlaan recover from Nano-Plague

- * 5th Century CE
 - Uln reach Sul-Gatwa High Castle
 - Gatwa dynasty cements Ulnish supremacy
- * 15th Century CE
 - Rlaan finish consolidating post Nano-Plague recovery, reintegrating surviving colony worlds back into the Rlaan Assembly
 - Rlaan encounter the Saahasayaay homeworld
 - New Rlaan Assembly expansion policies instituted, including stringent requirements for core-system development before expansion
- * 18th Century CE
 - Uln begin sub-light expansion
 - Negative Rlaan experiences with Saahasayaay lead them to concentrate on the construction of designer species from pre-sapient, including the Lmpl and Nuhln, rather than relying on encountering useful sapient.
- * 23rd Century CE
 - Death-throws of the nation-states on Earth
 - Increasingly cemented meme-groups
 - Humans begin sub-light expansion
 - Origins of the Forsaken
- * 25th Century CE
 - Second generation colonies launched (Human space)
 - Massive construction projects common (Human space)
 - Cherryh station
 - Hephaestus
 - FIXME MORE EXAMPLES TO COME LATER
- * 26th Century CE
 - Humans begin forays into jump technology, in particular, the Unadorned and Andolians
- * 27th-28th Century CE
 - Nano-Plague activates in Human space
 - Collapse of nanite-based technologies in Human space
 - Human societies stabilize, having adapted or failed.
 - "Interstellar Church of True Form's Return" founded
- * "Icarus Age" ENDS
- "Diamond Dust Age" begins (28th Century CE)
 - * "Reconstruction period" begins
 - Beginnings of human interstellar economy.
 - Initial formation of Merchant Cartels
 - Displacement of Forsaken by FTL claim-jumpers begins.
 - * 29th Century CE

- SPEC drive invented by Emilio Sofono
- Displacement of Forsaken accelerates.
- "Reconstruction period" ends
- * "Exploration period" begins
- * 30th Century CE
 - First Contact (for humans): Unadorned discover Mishtali
 - Joint Shaper/Light-Bearer venture discovers ancestors of Dgn and Shmrn in system dubbed "Beckett's Murky Venture".
 - Light-Bearers discover Ktah
 - Light-Bearers occupy Ktah
 - Andolians discover Ktah
 - First full-scale human interstellar conflict (later dubbed "The Fraternal War") begins
 - Hoshino uprising, Light-Bearer presence on Ktah neutralized, nuclear retaliation kills over 1 billion Klk'k.
 - Andolians liberate Ktah system
 - "Ktah restoration project" begins
 - Andolians reveal Light-Bearers' Space-Born slave-race project, muting Light-Bearer support from other factions
 - Widespread ramp up of space-based military assets begins (Human space)
 - Andolians systematically debilitate Light-Bearer faction, liberating Space-Born and Shmrn.
 - Andolians now responsible for more human deaths than any other group in human history.
- * 30th-31st Century CE
 - Surviving Light-Bearers turned over to Klk'k, Space-Born, and Shmrn custody.
 - Light-Bearer meme-group rendered defunct
 - Andolians cede control of several former Light-Bearer colonies to other factions, primarily Shapers as compensation for lost investments.
 - Independent Shmrn colonization effort begins.
 - "Andolian Protectorate" established as entity in control of Andolian and Klk'k affairs
 - Diplomatic talks concerning the formation of "Confederation of Inhabited Worlds" begin
 - League of Independent Human Worlds (LIHW) formed
- * "Exploration period" ends
- * "Diamond Dust Age" ENDS
- "Confederation Age" begins (31st Century CE)
 - * "Paranoid Avarice period" begins (Human space)
 - Independent human meme-groups aggressively absorbed by larger meme-groups.
 - Andolians discover Purth, begin redesigning them
 - Aera encounter Bzbr, become increasingly worried about potentially abundant sentient species
 - * "Confederation of Inhabited Worlds" formed

Internal conflicts abate. Military buildups continue due to increased assessments of risk from potential alien sapients.

- * (MORE PRECISE TIME-GOES-HERE)
Rlaan encounter Uln
- * (MORE PRECISE TIME-GOES-HERE)
Humans (specifically Shapers) encounter Rlaan
- * (MORE PRECISE TIME-GOES-HERE)
Aera encounter Uln
- * (MORE PRECISE TIME-GOES-HERE)
Aera/Humans/Rlaan/Uln expand to each others' borders
- * (MORE PRECISE TIME-GOES-HERE)
Aera colony passage negotiations fail
- * (MORE PRECISE TIME-GOES-HERE)
Aera attempt to sneak convoy through Rlaan space
Aeran convoy destroys Rlaan civilian vessels
- * (MORE PRECISE TIME-GOES-HERE)
Aera-Rlaan war
- * 3268
Aera-Rlaan cease-fire
- * 3276 CE
Aera invade Forsaken space
Confederation grudgingly mobilizes to support Forsaken
Aera/Confederation enter into a state of war
- * Upon the Coldest Sea events go here
- * Black Paralysis events go here
- * Events between Black Paralysis and Foundering Inheritance go here
- Fleet of 10,000 launch goes here
- Foundering inheritance goes here
- Fleet of 10,000 events go here
- Rimward of Eden events go here

The following sections provide details for key historical events. The sections have been placed in roughly chronological order, but may overlap somewhat in time.

5.2 TWHON Era

The species that would become the TWHON (for simplicity, let's call them pre-TWHON) were not by any stretch of the imagination the first lifeforms, nor were they the first sentients, nor even the first species to

leave their own worlds. They were not even, by many Nietzsche-esque metrics, the best of their contemporaries among the first crop of space-farers, being not particularly remarkable beings of not particularly remarkable chemistry and rocky-body planetary origins. What the pre-TWHON were, however, is driven, and they survived, and they prospered, and they expanded - sometimes with their neighbors, and sometimes at their expense. They boiled out from their homeworld, rolling out in great waves of ships limited to no more than a few hundred C, filling the stars with trillions upon trillions of pre-TWHON. Advancing in technology and power, they eventually did achieve a 'first' status, becoming the first group in the galaxy to discern how to re-carve the topology of space to connect pairs of star systems together. They constructed the beginnings of the jump network, and leveraged this to further accelerate their expansion. Eventually, over hundreds of thousands of years of exploration, conquest, subjugation, assimilation and extermination, they achieved their most important 'first': first species to bring the entire galaxy under their rule.

However, even with the speed of communication and travel offered by the increasingly inter-connected jump network, time and distance took their toll on the pre-TWHON cultures - for there were many cultures now, not only one. With their common goal of dominance achieved, there was progressively less to hold the pre-TWHON together. With few constraints remaining, and no clear goals, the pre-TWHON erupted into a decadent exploration of the possible. Cultures fragmented, groups willingly speciated, and all manner of experiments were performed on often grandiose scales. Many groups gave up on embodiment, preferring to live within the data streams, and others transitioned to amorphous colonies of pico- and femto-tech manipulators housed within space-going shells containing the more complicated mechanisms of power generation, propulsion, and thought. The latter groups frequently joined together to form ever larger ecosystems of body and thought.

One such group of the re-embodied (let us call them the proto-TWHON) yearned for a return to the unity of purpose that once had propelled the pre-TWHON across the entire expanse of the milky way. They had come to the conclusion that no species, nor even culture, could stand the test of time without coming undone. They believed fervently that such unfragmented immortality could only be achieved by an individual, and set out to become only one in number. A return to unity was a common yearning among the pre-TWHON, and they found many willing to join them in the promulgation of their cause. Gradually, the undirected fountain of exploration following the great achievement died, calcifying as the strongest few sentiments coalesced and overshadowed all other contemplation. The splits among the pre-TWHON had become too deep, and they were so divided that war once again played out across the galaxy.

In the many millennia that followed, the proto-TWHON would emerge victorious, assimilating the willing and exterminating those who defied unity. When all that had been pre-TWHON had been at last reconciled, the entirety of the proto-TWHON massed in one place to begin a period of nomadic existence, a single great ecosystem composed of an intricate and complex menagerie of spacecraft bodies in changing hierarchies and purposes, moving from star to star, grazing on the resources of system after system while the minds that shared the network of bodies coalesced and reduced in number. Emerging from this long meditative slumber would be a being of only one mind, and one body, albeit a body in innumerable parts.

This being was not yet, however, the TWHON as the Ancients would come to know them, for it had, for a time, truly achieved unity. By the time of the creation of the Ancients, the being had become internally heterogeneous. The singular being had spread itself across the galaxy, repairing, replacing, upgrading and

expanding the jump network and greatly enhancing the communication networks tying stars together. This time apart, however, introduced a slight drift. And from the drift, came a fluidity previously held at bay by rigid homogeneity. Localizations in the thoughts of the singular being began to form. Particular clusters of bodies became increasingly responsible for particular modes of thought, just as particular regions within the human brain are more responsible for certain processes than others. As this trend progressed, and then, eventually slowed again in a new equilibrium, the singular being had become the TWHON: a collection of personified aspects of a shared mind, distributed across body elements spread over the entire jump network, with all the communication hurdles such a galactic scope entailed. The TWHON was still a singular mind, but one now sufficiently compartmentalized for doubt, internal disagreement and something akin to dialog to play out from time to time. It was in this environment that the different TWHON aspects began their own independent projects, some of which would eventually give rise to the various species of the Ancient era.

5.3 Ancient Era

There were many species of Ancients. In space explored by the relevant extant species, there were two primary Ancient species and solid evidence of their interactions with at least six other groups of Ancients. The two in question were just the locals, and their domain was demarcated by the locked gates, an imposition of the TWHON. The TWHON, whether an Ancient group in question arose more or less naturally to a meaningful existence, or was created entirely from scratch by TWHON whimsy, were the creators of all of the Ancient groups in that they molded them and shaped them to their own designs and for their own reasons. Had their era not passed, there would have come a time when, whether directly or by Ancient proxy, the TWHON would almost certainly have manipulated Humans, Rlaan, and Aera alike for whatever motivation struck them at the time. If by odd chance we had remained sufficiently insignificant to escape the notice of the TWHON, then the local Ancients would almost certainly have had their own games to play, more likely than not at our eventual expense. There were, to distill the essence of relevant groups, only the Ancients and the TWHON, as no other groups were given license to develop.

Among the Ancients, however, there was a great deal of diversity. Some groups prospered as all but species-children of the TWHON, while others lead strange existences filtered through the particular perspective of the TWHON aspect responsible for their development. The local group of Ancients whose research planet was to later become the Uln homeworld were one of the former groups. The constructions of the TWHON aspect best described as “Worship” were certainly of the latter variety, eventually having to be euthanized for starting an undesired crusade against other Ancients in the name of their patron aspect as the one true nature of the divine. The delay in dealing with this situation, as “Worship” actively supported its children against their neighbors for some time until the TWHON mind could resolve itself to a particular decision on the matter foreshadowed the darker times soon to come. Their planet was burned, their bodies disassembled, their very system cut off from the jump network, and “Worship” reigned back in as the TWHON meditated on its own actions. Of their presence, little remains except the vast, moon-sized temple built to “Worship”, and even that a melted specter of its former self, its innards cleansed by redirected solar plasma.

The downfall of both groups was to come from a great indecision within the mind of the TWHON.

Whereas cognitive dissonance, indecision and frustration in a human may lead to shed hairs and carpets worn from pacing, cognitive dissonance in a galaxy-spanning entity has more dire side effects. As the more favored of the Ancients progressed into an early post-technological stage of development, certain aspects of the TWHON mind no longer saw it proper to use them as playthings and experimental subjects (both of the former as groups, not individuals - the TWHON didn't do "alien abductions" they just started massive interstellar wars, conducted xenocides, created plagues, monsters, new Ancients, challenges, rewards both equitable and not...). To keep things brief, and use metaphor and analogy (though it leads to an incomplete description), one can picture this all culminating in an eventual Ancient revolt, assisted by elements of the TWHON mind that, rather than being squashed, instead set off a "civil war" within the TWHON mind, spilling over into the TWHON bodies. The defensive assistance rendered by the pro-Ancient TWHON lines of thought against their urges toward continued usage of the Ancients as inconsequential entities, would eventually become very well known to the extant species (and cause many later species to cease to be extant) as the "nano-plague." A majority of the Ancient groups joined the revolt, though some continued to fight by proxy for their masters.

One decisive battle would prove to be the beginning of the end for the era of TWHON and Ancient alike. On one of the two research planets in what is now the UIn home system, indeed, on the planet that is now a noticeable debris field in the UIn home system, research was frantically being conducted on how to reinforce the allied lines of TWHON thought at the expense of antagonistic patterns within the TWHON mind. The future UIn homeworld was evacuated and the proto-UIn abandoned. Fleets of moon-sized Ancient craft, a fragment of one such eventually becoming the Sul-Gatwa high-castle, and numerous TWHON bodies gathered in the system to defend and participate in the ongoing research. An armada of TWHON bodies attacked the system, and the prototype devices were activated. The battle unleashed enormous devastation upon both fleets, but the TWHON-mind-altering devices were to prove far more lasting in the devastation they were to unleash. In addition to cognitive dissonance increasing within the TWHON mind from the operations of the mind-altering devices, the battle was sufficiently fierce that TWHON ideas, and thus Names, were dying along with TWHON bodies. These deaths echoed, and then reverberated, and then fed back and amplified on the devices, burning themselves into, and by turn burning out the TWHON mind. As the battle proper neared physical resolution, the forces allied on the side of the Ancients' liberation were looking to have gotten the better of the engagement, though the victory would likely have been Pyrrhic in the longer term. However, the space battle quickly lost all relevancy, as the TWHON mind sank below the threshold of sanity, all Names becoming muddled and losing sufficiency of form, the TWHON mind already having been many times weakened by prior TWHON-TWHON engagements. What moments ago were their supporting deities now turned on the Ancients in the TWHON slide from supremacy. Along with the remains of the invading TWHON bodies, themselves equally deranged, they slaughtered every Ancient in the system and destroyed, far too late, the planet on which their downfall was birthed. The UIn homeworld was spared a more sterile fate only for the hurry with which what remained of the TWHON mind wished to distance itself from a place of suffering.

What had before been a war, if a galaxy-devastating one, became a cataclysmic spectacle of heretofore unrivaled savagery, devoid of rhyme or reason. As the TWHON mind degenerated, the traces of the Names of Rage, Confusion, and Suffering fared better than many, and were allowed to greatly influence the actions

now being undertaken by the TWHON bodies throughout the galaxy as they began to purge every system of Ancients of every kind, revolutionaries and loyalists both. It was in this period, not during the war proper, that the slag worlds were created; the great overkill measures of boiled atmospheres, muted suns, melted crusts, and shattered worlds left to re-coalesce into the not infrequent debris clouds seen in UtCS era systems were not the actions taken by victorious armies upon their foes, but by a great singular mad mind, fragmented and devolving, lashing out in sometimes self-annihilating fashion (see: worlds rendered uninhabitable by what would appear to be prolonged bombardment by large impactors, i.e. TWHON bodies) at anything that could be detected by its increasingly twisted perception. Every living Ancient in every system on the jump network was exterminated. Every gathering of Ancients in systems off of the jump network was obliterated. What was once TWHON hunted the Ancients, and in finding and annihilating them, found the occasional glimmering shred of purpose to its new existence. All that remained of the Ancients were arks and tombs, drifting alone in the relative safety of the void between stars. When it could no longer find anything to hunt, the TWHON bodies wandered, some disassociating, some taking to slumber, some few wandering beyond the edge of our galaxy, to slowly plow the deepest of voids toward ambiguous end, and a great many retreated to the warm embrace of the old and dying stars far coreward of our portion of this galaxy.

5.4 Alphan-Betan period

As for the Alphans and Betans, as to whether they were, like the Uln, beings existing primarily because of Ancient intervention, or creatures independently evolving into sentience now that the Ancients and TWHON no longer policed species developments – I didn't really have any particular feelings on that, so that could go either way for whoever wants to flesh their origins out further. As both groups' name for themselves translates to "people" the names Alphan and Betan remain the common descriptive terms.

As for their demise, however, the "conflict with the nano-plague" is exactly that. They attempted to combat it with military force, and it wiped them out wholesale in ever-escalating fashion proportionate to their increasingly desperate attempts to eradicate it. Indeed, it is in this conflict with the Alphans and Betans that the autonomous defense systems based on TWHON immune systems *become* the nano-plague, developing an allergy-like reaction to the nanite weaponry deployed against it by both the Alphans and Betans as each mistakenly presumed the activating colonies of nano-manipulators to be an attack from the other, that would eventually translate into a reaction against all nanites. Had the Alphans and Betans left the manipulators alone, it would, in all likelihood, have mostly ignored them.

The Alphans (so named as the first race in the post-Ancient era to leave any evidence of interstellar travel) were quite technologically advanced, but appear to have simply missed or ignored avenues of research involving FTL, shields, and related technologies. They expanded outward in relativistic vessels over tens of thousands of years, eliminating or curtailing any potential competition without incident until encountering a colony world of the Betans. Unlike the stately march outward of the Alphans, the Betans had expanded in more chaotic fashion, constantly fighting amongst themselves, even in the interminable wars that sub-light travel forces. The initial encounter with the Alphans was nearly instantly hostile, and the Betans (as evidenced by a sharp temporal dividing line in the nature of the artifacts left behind) rapidly reverse-engineered much of the encountered Alphan technology and began to counter-expand into Alphan space.

The light-speed trickle of information and sub-light flow of craft and personnel meant that the wars (for there were no true star-empires at sub-light - just collections of vaguely associated colonies) raged on for thousands of years before FTL was discovered by the Betans.

With the vast tech and industrial bases under their command, FTL tech spread quickly enough that numerous vessels were completed before the Ancient defending nano-manipulators had sufficiently reawakened to begin to infest the Betan infrastructure. The extermination fleets that were launched struck Alphan world after Alphan world without mercy or warning, first those on the jump network, and then, methodically, bearing down on worlds outside it. The Alphans were rapidly destroyed as a power. However, they would not have died out completely save for the nano-plague rearing itself in the wake of the Betan attacks. Believing the nano-plague to be but yet another Betan weapon, most Alphan worlds threw what remained of their military at the problem and were utterly snuffed out in quick succession. The Betans similarly believed the nano-plague to be an insidious Alphan response to their FTL attacks. Their military being more intact than that of the Alphans, their response was greater, and thus was their demise more profoundly enacted at the hands of the nano-plague. Indeed, the system (incorrectly) assumed to be the origin of the Saahasayaay creeper organism was in fact a Betan base so heavily damaged by the nano-plague that it was not recognizable as Betan in origin (hundreds of thousands of years in a chlorine atmosphere also helped obscure evidence from future observers).

While the last remnants of the Alphans withered away in scattered pockets of decay, their nanite-reliant technologies worthless, and their worlds and colonies rendered inhospitable by Betan weapons of mass destruction, the Betans, as was their nature, fought to the very end, and thus became utterly extinguished, to the last Betan, far sooner than the Alphans. Those Betan sub-light craft still in transit would all fall prey to their own aggressions against the nano-plague within weeks of reaching their destination systems. Their Alphan counterparts, on the other hand, would, technologically crippled, having relied on nanites to reanimate the cryo-preserved colonists and soldiers, in many cases limp on for years after their arrival. In the more successful cases, the handful of Alphan crew awake during the sub-light voyages founded down-teched outposts and set up beacons, calling out for rescue that would never come from brethren they did not know were already gone. These last Alphan outposts are the richest source of artifacts from that era. Without sufficient tech or industrial base, and without a viable breeding population (usually 5 to 8 waking crew), even those lucky enough to find worlds capable to some degree of hosting Alphan life pre-Alphaforming died off or degenerated within a small number of generations.

Unlike Ancient technology, Alphan and Betan technology, while often extremely advanced (in certain areas and deficient in others) is not so advanced as to be completely indecipherable in function and/or mechanism. Many Alphan and Betan languages have been studied and heavily translated, in stark contrast to the Ancient languages, which have only yielded to limited understanding, and even that only through the use of other Ancient technologies on the Uln homeworld. Alphan and Betan artifacts are heavily sought after, especially those that are sufficiently intact that they can be reactivated. As, in contrast to Ancient artifacts, the Alphan and Betan ones are found on worlds that were merely devastated rather than obliterated or assaulted until their surface was molten slag, Alphan and Betan artifacts are sufficiently common as to be merely outrageously expensive rather than nearly priceless.

5.5 End of Alphan-Betan to beginning of ‘Icarus Descended’

5.5.1 On the origin of The Forsaken

The Forsaken are, at top level, sub-light settlers abandoned and displaced due to the FTL expansion of other entities. As a non-coherent group, the Forsaken are much more diverse than any of the meme-groups, with members derived from an assortment of late embarking colonies, far ranging colony missions, and, this being a distinct minority, arriving quite late with respect to other groups, refugees from Sundered worlds. However, this assortment of influences actually makes them even more distinct, because of the already diverse nature of each of the subgroups that make up the Forsaken.

Some of the Forsaken actually set out long before most of the dominant Human meme-groups, but in slower, more primitive vessels, or toward significantly more distant stars. Earth, at the decline of the Nation States and the beginnings of the nanite economic revolution, was a place of significant turmoil. China, grown increasingly insular and denied of information and innovation from outside as it rejected the meme-trends, shielding its population from what it saw as memetic viral infections through draconian information control, was the last of the truly great Nation States. It sought to capitalize upon the destabilization of the other world powers and eventually plunged the world into war by proxy support of the now shell-like governments of numerous other former great powers. Much of Asia, in particular, was ravaged, but the war ended far more swiftly than any had anticipated - the first real signs of the economic change that the nanite revolution that had been simmering only outside the Chinese borders had wrought. Defeated planet-side, the mankind's first manned interstellar venture (following probes already launched decades prior) was undertaken in haste, rather than jubilation. In a grand twist of irony, the greatly distilled population of Chinese Nationalists and assorted Nationalist allies that were to crew the two craft that left the solar system embodied, more than their particular nations, the meme of nationhood. Their haste, however, was to prove costly in the long run. Their cryoships were efficient and simple, but extremely slow. Neither of the vessels would actually be the first human craft to reach its intended destination, being in fact usurped by later sub-light settlers.

Soon after the war ended, there was one more last gasp of escaping fragmentary Nation States, launching a final four more vessels, which, though less hastily constructed, were all aimed toward more distant stars rimward of Sol. Only one of the four craft would be the first human ship to reach its destination, a destination which would turn out to be a Sundered star system, unconnected to the jump network. With the passing of this last great undertaking, the nation-states were no more, as nanite economics led to profound individual freedom of association for populations throughout the entire solar system. However, even with the nanite economy, the devastation wrought on its own and surrounding territories, combined with the resource allocation that had been necessary to produce interstellar craft in haste, served to cripple the further aspirations of those in former China's territories both on Earth and in space.

Even as humanity lurched toward a post-sufficiency economy, there were still those far better off than others. In an effort to leverage their superiority in a world of increasingly homogeneous meaning to one's wealth, the precursors to the Highborn set about getting a jump on all other meme-group's colonial aspirations - and the colonial aspirations of meme-groups were many, seeking, much as those who came to be known in America as the Pilgrims, a place away from everyone else as much as anything glorious. Moreover, at sub-light speeds, the nearby pickings were few, and the choice planets were likely to fall to the

swift. Thus groups that had resources to spare rapidly saw themselves embroiled in a space race. While the nanite economy was allowing post-sufficiency living for Sol's booming population and the ever advancing communication networks were allowing collaboration on remarkable scales, interstellar undertakings were still monumental undertakings, and groups without initial reserves, or with significant catching up to do with respect to those immediately benefiting from the new economy were in no shape to immediately mount interstellar expeditions. Likewise, many groups were not interested in placing leaving Sol among their goals.

Still, interplanetary developments in Sol were legion, and many impressive interstellar craft began their construction in what were distinctly two phases of expansion. There were the groups, such as the precursors of the Highborn and the Great Mormon Mission, which expended their existing advantage to immediately begin their interstellar expansion, and then there were groups, such as the then newly formed Andolians, who would catapult themselves, through their efforts in building the craft for the first wave of launches into a position amongst the second wave of launches. (The Andolians, by virtue of their extensive engineering undertakings for other groups, actually made a number of unmanned launches during the first wave, effectively securing themselves their future home system long before they themselves would leave.) By the beginning of the third wave of launches, however, the real-estate suspected of being most prime had already been spoken for, and while some were willing to race the long-already-launched Chinese, the general pace of launches slowed down as immediacy lessened and those groups in position to expend capital in exchange for travel had mostly already done so.

The third and longest phase of sub-light expansion from Sol was therefore a sporadic process. Minor groups often had to, much to their chagrin, band together in order to construct their interstellar steeds, especially knowing that the worlds they would be headed to may well be more marginal, leading to such mixed-meme enterprises as the settling of Bantam (see Section [B.2.7](#)). Eventually, the more prosperous or lucky colonies would even begin sending out second-generation colonies, but the number of those was sufficiently small as to not warrant separate discussion.

It is from the later portion of the third phase of sub-light expansion from Sol that the Forsaken would draw the bulk of their ranks. Those who could not, or would not, leave earlier found themselves in flight when FTL was discovered. Those headed to worlds that would turn out to be on the jump network tended to find their planets already occupied and their presence unwelcome at the end of their flight - this if enough of them survived re-animation in the absence of their expected nanites (should they have waited until contact to begin re-animation). Others would arrive at their worlds, jump network or otherwise, to find it not in the state their run-ahead terraformers should have left it in, their terraforming nanites consumed by the nano-plague. Still others in mixed fortune would find their destination not on the jump network at all, and remain wholly isolated, having to survive the unexpected nano-plague (though an admittedly slower onset plague experience, according to all reports) without human aid or intervention (except in rare cases, such as exemplified by the origins of House Blythe(see Section [5.6.1](#)), even if they came too late) until the invention of the SPEC drive by Emilio Sofono.

Those that survived to see their erstwhile new worlds generally found themselves turned away or worse. It is widely believed that there were several massacres of late arriving sub-light craft that managed to escape sufficiently detailed reporting to be able to assign responsibility to any extant parties. The increasing frequency of such sub-light craft turning up led to the formation of a dispossessed settler's union, which, though

ostensibly run by the displaced themselves, was funded by the other meme-groups, and thus strong-armed, until the later development of the Union's own government (Forsaken being a colloquial rather than official term), into adhering to a policy of expedient removal. Those lucky enough to survive seeing their erstwhile destinations from orbit were forced to stay on board their ships while crews outfitted them with jump drives, and re-fuelled them (if possible), or crammed the colonists onto converted freight ships when such was infeasible, sending the dispossessed off toward what had begun, even then, to be called the Rimward Badlands - a zone already looking from early exploration and astrometrics to be an oddly less bountiful region of both space and jump network that the major meme-groups were willing to lose colonization of.

The final members of the Forsaken's population base would be the smallest portion, those repatriated from Sundered worlds. Sharing only poor luck and temporal dilation from the rest of humanity with the Forsaken, most Sundered populations worth calling such were too large to repatriate en masse and may not have been particularly compatible matches with the Forsaken in the first place, but a number of them supplied either a one time disbursement or a steady drip of persons fleeing their black paralysis off of the jump network for the only group willing to take them in.

5.6 Icarus Descended

5.6.1 On various Pirate Groups and their origins

The history of many of the pirates seen in the UTCS era is closely tied to the history of the Sundered and the fates of numerous fallen and less prosperous civilizations. Roughly classed, there are three tiers of groups generally deemed pirates and one that, though rarely called as such, are: 'organized' 'criminal enterprises' (as is common knowledge, organized crime is generally only somewhat organized and somewhat about crime) such as House Blythe and the Tribe of Eliana, the economically downtrodden seeking to leech from the more wealthy or willing to be used as pawns or intermediaries by groups looking for some level of deniability such as may be found on various LIHW and Forsaken worlds, and finally, the odd Neo-Barbarians who've been gifted or sold spacecraft in generally less than above-board transactions. Finally, there are the kleptocracies, degenerate governments where corruption, bribery and extortion are so the norm as to find the committing of what amounts to highway robbery by the local police or military forces to be commonplace - while the actions of the latter are sometimes acts of piracy, they would assuredly bristle at being called pirates.

The first grouping are both the least and most dangerous, as they are uninterested in random acts of violence - just economic gain - and their visible position requires some modicum of discretion. They are arms dealers, loan sharks, extortionists, traffickers in forbidden goods, and not above killing the odd fellow, but only if he's proven bad for business. They are, most importantly, reasonable in that they can be dealt with via credits more often than guns.

The second class number the most numerous of pirates, those, as persons or as groups, seeking to profit from theft, destruction, or illegal activities, the latter-most often as subsidiaries to a member of the first tier. They are local phenomena, cropping up in places of poverty or insufficient oversight. They are, in effect, the most well-to-do of some system or systems' gangs, rich enough to outfit themselves with spacecraft in the first place, insufficiently wealthy or powerful to become organized competitors to the first tier, and existing

in systems welcoming, tolerant, or impotent to act concerning their presence. Especially in Forsaken space, such groups rarely attack local vessels, and are sometimes more akin to local militias "enforcing tolls" than the true pirate groups operating out of LIHW worlds (the major powers being rather better at scrubbing bases of operation out of their own systems). These should not be confused, however, with the paramilitary groups operating in Forsaken space, for though the line is blurry, there is a distinct non-locality and size to the paramilitary groups that is lacking in amongst the local armed rabble. Unfortunately, pirate groups rarely confine themselves to their systems of origin. Thus, problems with local sources become pandemic scourges. Fortunately, those groups with an eye toward continued existence tend to extract cargo rather than lives or vessels - attracting too much of the wrong attention can lead to Confederation crackdowns, or worse.

Finally, there are the (so-called) Neo-Barbarian groups, much more rare than the second tier, and actually sharing a more similar initial origin with the first tier, though their origin as Sundered colonies tends to limit their range to areas much closer to Sol sector. To understand the existence of the NeoBarbs, one must recall that only a small fraction of all systems are connected via the jump network. A fair number of colonies settled and colony missions in-flight at the time of FTL's discovery and the ensuing nano-plague were of systems not on the jump network. This did not spare them from the nano-plague, but did greatly hinder their recovery, as SPEC travel was not invented for several hundred years after the development of the jump drive and has remained inconvenient (albeit decreasingly so) for interstellar travel through into the UTCS era. Many of these colonies never recovered. A fair fraction of them were completely lost, including such formidable notables as the Great Mormon Mission. Some, in a dark sense lucky, produced so few survivors by the time exploratory SPEC craft arrived that rescue operations were affordable, and resettlement often occurred in Forsaken space. Those living on more innately human habitable worlds met a variety of fates, each living through the nano-plague in their own ways. Of tangential, but important, note is the fate of some worlds that bear evidence the colonists attempted to fight the nano-plague directly: Their civilizations were razed to the ground when it fought back, although exactly how remains unclear. Returning the point at hand, however, of those that survived the nano-plague, many did not survive as anything resembling their initial civilizations.

It is, of course, a bit of a misnomer to call them Neo-Barbarians, as they are not so much barbaric or savage as merely culturally and economically divergent from the rest of humanity (far more so than even the Forsaken). Of course, taking the original meaning of barbarian, it is perhaps an accurate moniker. Those who continued on in their existence outside of the jump network were not privy to centuries of advancements or cross-cultural pollination. This made many of these groups of particular interest for Luddite recruiters, seeking both isolated bases of operation and untainted samples of humanity. Thus, through Luddite and the odd profiteer, robber baron, or fool, did the isolated and technologically backwards Sundered (as those off the jump network had come to be called) gain access to more modern craft and resources. This gave rise, among those civilizations that had become more aggressive during their isolated survival struggle, to the use of their newfound toys to prey upon their neighbors for anything they could not produce or otherwise acquire. Neo-Barbs are the most unpleasant of pirate encounters because they are generally more interested in acquiring one's ship than one's cargo.

It is interesting to note that, alone among the human groups, those more prosperous among the Sundered continue to colonize systems off the jump network. However, due to the impracticality of scaling

SPEC travel to trading routes beyond astronomically adjacent systems, the overhead of even that, and the impossibility of swift communication, there are no empires as such, with each system or at most cluster of systems being given to its own governance, and development is greatly slowed due to the trickle of interaction with other groups. The particular interest the Luddites have placed in a subset of the Sundered has led to significant tensions between those Sundered groups receptive to the Luddites and all other Sundered polities.

Specific "Pirate" groups:

- House Blythe: House Blythe's origins lie with the Sundered colony of Sheltersky, which happened to be very close, only a couple of light-years, from a far less successful colony (Gorky) actually on the jump network. As the latter colony failed during the nano-plague, they sent out distress messages, which, arriving some few years later at Sheltersky, spurred an expeditionary force to be sent. The commander of this expedition, one Nidhi Blythe, upon finding the residents of the nearby system already nearly expired (in large part due to over adaptation to their current tech base rather than anything truly insurmountable) upon her arrival, with only a few dozen survivors, set about turning the remains of the former colony into her personal fiefdom. The system had abundant natural resources and viable orbital infrastructure, but no planets with admirable living conditions. Acquiring, through murky, but generally believed thieving means, jump drive technology, Blythe maneuvered her way into leveraging the support of Sheltersky for her own benefit, being their only gateway to the outside universe. With this support (a decade long pipeline exchanging personnel and luxury resources from Sheltersky for information and external access), remote as it was, Blythe, her lackeys and their lineage were able to control an entire star system against the minor threats of predation present in the pre-SPEC era. Gorky came to prosperity during this era as a smuggler's capital, a port so free as to be thought lawless, except that it was always under martial law - it just so happened that as long as the people being affected weren't of House Blythe, it likely didn't happen to be illegal within Gorky's borders - although there were some standards of behavior that fell beneath what House Blythe considered civilized (such as slavery). Following in their mother's aggressive tradition, the scions of House Blythe set up operations, in a mix of above and below board trades, on an expanding number of worlds. As they had no interest in bulk goods and that manner of market control, they managed to co-exist with the CMT, rising to its own power in the same time period. With the advent of SPEC, Sheltersky became once more somewhat accessible, but by this time, it had been sufficiently infiltrated by House Blythe that it was Sheltersky that was consumed by Gorky and not the other way around.

As the SPEC era continued, and power consolidation ramped up, the sort of activities for which Gorky was famous became less acceptable. By the time of their joining the LIHW, most of the less reputable operations had been shifted from Gorky to the less accessible Sheltersky. Along with the arms dealers of Tribe of Eliana, House Blythe is considered to be one of the most respectable of the criminal groups operating within human space, with a public face, a reputation for honesty in deals that it makes (albeit a keen, hungry, and ruthless eye for advantage in anything not covered by agreement), and an avoidance of more objectionable forms of illicit activities which stems in part from their belief that they are far superior to any common pirates - that they are a civilized organization that happens to operate under their own code of laws, and not those of the Confederation.

- The Tribe of Eliana:

An odd tale to be sure - the tribe of Eliana is so called because every member of the group is a clone of the sole survivor, the eponymous Eliana, of an otherwise failed colony. Their homeworld rendered uninhabitable by the internal conflicts that broke out during the nano-plague, the Elianas took up sparse residence on the other worlds, moons, and planetoids of their system. While there had been significant orbital infrastructure surrounding their colony, produced on grand scale before the nano-plague, much of it had been damaged or destroyed. Significant portions of the Elianas' efforts for several generations focused entirely upon salvage operations performed on the remnants of the orbital infrastructure so that items of value could be retrieved before the chunks in question decayed in orbit and burned up in the atmosphere. Their salvage expertise would eventually become their trademark, as their post FTL acquisition undertakings were primarily of the salvage variety. They became involved in many Ancient artifact hunts, but became truly notorious for their "Valkyrie" role in stripping wrecks of all valuable systems and subunits. Their criminal tinge comes from their willingness to sell what was formerly anyone's to whomsoever is willing to pay for it (species notwithstanding), whether it be insured cargo or military grade weaponry. It is the weaponry trade that has proved to be the most profitable for the impoverished Elianas, with many disreputable groups finding them the only, if very expensive, potential suppliers of arms generally not available to civilians. Policing of the Elianas have proved of limited utility, as, while deals may be brokered in their home system, such deals are made by individuals, not the government of the Elianas, so responsibility is more difficult to sanction in accordance with the gravity of offense. Moreover, while the deals may or may not take place in their home system, the actual transfer of goods rarely does, so concentrating efforts at policing the home system of the Elianas (though not originally known as such, the Elianas came to call it Gehenna, but, as there already existed another system of that name in Confederation, the official name became Yesteryear) has not proved remarkably fruitful.

Elianas outside of Yesteryear often have a quasi-nomadic existence, moving from salvage operation to artifact dig to mining operation, etc. There are no permanent Elianas settlements larger than outposts outside of Yesteryear. However, there are a number of Elianas outposts in otherwise lawless or unpatrolled systems, as local aggressive groups tend to leave them alone, as they are often a source of business partners for either the acquisition of, or disposal of, goods of questionably transferred ownership. The Elianas themselves, however, are not generally considered dangerous unless provoked or interrupted, and the Elianas' government receives such a substantial portion of its revenue from kickbacks and taxation of questionable earnings that it has no practical choice but to decline to enforce all aspects of LIHW law on its citizens. Such enforcement would be all the more difficult due to the culture of sisterhood which defines their unique existence.

- The Order of the Dynast Shrub:

The origins of the name of this group are lost to history but generally believed to stem from a mistranslation of some older parable or idiom. Starting out as a local family of robber-barons expanding from a business selling fusion fuels and antimatter to passing starships, upon expanding outward from their home system, one branch of the family took to collaborating with elements of various criminal

organizations with roots centuries old. The influx of new blood and even murkier ethics moved the investment strategies out of fuels and into the sorts of operations that wouldn't put them into direct competition with House Blythe or the CMT - namely, operations considered too disreputable for the merely greedy, such as human slavery, vendetta by proxy, kidnapping, etc. The Order thus overlaps the first and second tiers of pirates, being at heart a group of violent thugs, but being in practice a group of very wealthy thugs hiding behind their shell corporations. The Order is known to have engaged in gang-wars with other smaller criminal enterprises, absorbing them, or making them its vassals. Thus, the Order, along with subordinate groups, though it is internally fragmented, through luck and sheer callous brutality, has become one of the larger and more powerful criminal enterprises in humans space, large enough to negotiate with the Ulnish pirate cartels for "gentleman's agreements" as to what constitutes "invasions of territory."

- Uln Pirate Cartels:

Though there are several of them, they are loosely organized and fight internally more as violent siblings than as bitter rivals, coming to actual exchanges of fire only when major assumptions need to be revisited or on the demise of a powerful leader. They can thus be treated as one entity, as they will consider the actions of any outsider in similar fashion even if the actions did not take place in their particular territory.

The Uln pirate cartels are part and parcel of Uln culture. Uln culture expects corruption. It is deemed natural and appropriate that laws will be circumvented, and a sign of personal power that one is in a position to do so without being punished. The Uln pirate cartels intermix their shipping with that of the Ulnish merchants trading with all of their allies as well as within the Uln borders themselves. Membership in merchant or pirate groups is fluid, and the same Uln may pass back and forth easily between the low ranks of both groups, albeit the loyalty required for the nepotistic cronyism inherent in Uln leadership succession requires few such flip-flops if one wishes to advance. Be that as it may, the fluid low-level membership makes interdicting "known" members of the pirate cartels at the border nearly impossible without squeezing trade to a standstill - which none of the major powers is willing to do, as it would prelude their access to the Ancient artifacts on the Uln homeworld.

Oddly enough, those at the most risk of Uln pirate attack are those seeking to trade with the Uln, as the Cartels believe they have been disrespected and slighted of their traditional cut of commerce by the arrangements made between non-Uln traders and the Ingatwa and ranks of royals. Fortunately, if they are particularly well armed for a pirate group, they are not, in the grand scheme of things, a decided menace outside the Uln borders, as they are generally outmatched by Confederation, Aeran, or Rlaan responses. The Ulnish Cartels have proved more problematic for the less well-off Shmrn, but remain an aggravation and annoyance rather than a threat.

5.6.2 The Stars Are Also Pyres

Important Dates: (NOTICE: particular dates are under construction and may change somewhat over time, but relative order should be preserved, if not relative distance)

- 2927 Unadorned discover Mishtali (First Contact: Humans)
- 2956 Beckett's Murky Venture
- 2988 Lightbearers discover Ktah
- 2988 Lightbearers occupy Ktah
- 2988 Andolians discover Ktah
- 2988 Andolians declare war on The Lightbearers (Fraternal War)
- 2989 Hoshino uprising, nuclear retaliation by The Lightbearers
- 2990 Andolians liberate Ktah
- 2990 Ktah Restoration Project
- 2991 Andolians reveal Space-born
- 2991 Arms proliferation increases across majority of human space
- 2992 Andolians begin to systematically debilitate Lightbearer faction
- 2994 Andolians defeat Lightbearer faction, liberating Space-born and Shmrn
- 2996 Surviving Lightbearers turned over to Klk'k, Space-born and Shmrn custody.
- 2996 Lightbearer meme-group rendered defunct
- 2997 Andolian Protectorate established
- 3002 Shmrn colonization efforts begin
- 3003 Andolians cede control of several former Lightbearer colonies to other factions
- 3006 Diplomatic talks commence concerning Confed
- 3006 LIHW formed

ADDME: Overview discussion of early post-SPEC expansion goes here

ADDME: Overview discussion framing Fraternal war and how it leads to Confederation

First Contact with Mishtali

2927 CE

First contact with an alien sentient species by human explorers would occur as the Unadorned discovered the perpetually bronze-age civilization of the Mishtali. Like most previous discoveries of extraterrestrial life, Mishtali biology was not DNA based. These nomadic creatures, while actually quite civilized in many regards, are prone to mild sensory hallucinations, and their primary culture was possessed of the somewhat

disturbing belief that eating the remains of a vanquished foe would grant power to the victor, thus improving one's life. Still, the Mishtali adapted quite well to post-contact life eventually being employed by their benefactors in many non-critical jobs, even those involving direct contact with humans - the first Mishtali most visitors will see are baggage handlers. The Mishtali are tripodal/polypodal beings with one strong upper limb and two smaller manipulator limbs. Each appendage is made up of three individual limbs which can be used together as one limb with three claw-like phalanges for grasping and handling objects, or separated into three individual limbs terminated in a hooked claw. Their main body is supported by three separate spines connecting the jaws to the stub of their three leg trunks. The jaw/head portion is comprised of three sections which hinge radially to reveal rows of long, sharp teeth. An optical organ is housed in each jaw section giving the creatures approximately three hundred degrees of peripheral vision.

Beckett's Murky Venture

2956 CE

The Lightbearers would be the next meme-group to encounter intelligent, or at least sentient, life in the form of the proto-Dgn. These bipedal creatures were discovered dwelling in coastal marsh areas and surrounding shallow seas on a world closer to Shaper space than to that of the Lightbearers. Thus, the mission was, initially in name, and later in fact, a joint operation between the Lightbearers and Shapers. While the ancestral Dgn were not civilized, they were exhibiting early signs of advanced intelligence in their use of tools and were in possession of the required dexterity for further developments thereof. Oxygen breathers, they were capable of living indefinitely on land as well as in oxygenated seas, though without a humid environment, their skin and breathing orifices would become too dry resulting in the need for re-wetting. Initially, moderate resources were invested by the Shapers to ensure the success of the Lightbearer mission, but their role was greatly expanded when a DNA-type biosphere was discovered. This was primarily due to the Lightbearer's need for Shaper expertise with non-human DNA, and the Shaper's own desires to exploit a rich, and fully developed bio-chemically compatible biosphere, mining it for immediately applicable constructions. Though their goals were different, the potential benefits outweighed the differences between the two meme-groups and a joint venture was fully entered. Genetic modification of the ancestral Dgn by the Lightbearers gave rise to the Shmrn. Later, it would become clear that key human genes were spliced into the Shmrn for the sole intended purpose of equipping them to attain a full understanding of the superiority of their creators. To what degree this actually had the intended effect is questionable, but the diminished quality of life experienced near the end of Shmrn life expectancies due to auto-immune disorders has been strongly linked to these particular genetic sequences. This in contrast with the Dgn, who were uplifted by the Shapers. The Shaper respect of individualist ideals, while not truly extensible beyond humanity, prompted a more benign treatment. The Dgn are treated justly, if not equitably in Shaper society. While the Shapers may have been aware of it during their joint operation with the Lightbearers, no action was taken to prevent any mistreatment of the Shmrn. Ideological differences between the two factions eventually led to the dissolution of the partnership, but not before the two divergent strains crafted had speciated.

The Fraternal War

- 2988 CE: Discovery of Ktah

Some time after the Lightbearers success with the Shmrn, they discovered another sentient race dubbed the Klk'k (yes, it's a transliteration). The Klk'k, in contrast with previously encountered races, were quite advanced, though not sufficiently to have begun interstellar colonization. Still, the species had extended their dominion over all reaches of their home world of Ktah and were well on the way to developing sub-light capability. The Klk'k had a limited orbital infrastructure before the Lightbearers arrived. Indeed, the debris from the destroyed stations was one of the key things noted by the Andolian scouting party prior to deciding to engage the Lightbearer forces. Klk'k are the most anthropoid of the non-human sentients in the region. They are bipedal with legs hinged similar to those of a bird. Unlike an avian, their legs are very muscular and quite long, accounting for well over half of their total height. The Klk'k have torsos with a spine similar to a human's and a head which houses the most complex portion of their central nervous system as well as two ocular organs, two aural organs, and a single hinged jaw. In fact they are sufficiently anthropomorphic that their very existence was taken by the the Lightbearers as an affront. Believing that humanity is the embodiment of evolutionary perfection, the Lightbearers considered the Klk'k to be a mockery of that perfection.

- Occupation of Ktah

It was for this reason that the Lightbearers began a cruel campaign designed to subjugate and 'correct' the Klk'k. While the Klk'k attempted to mount a defense with their full military force against the invaders, the Klk'k were simply no match for the more technologically advanced Lightbearers. The Lightbearers didn't just happen upon the Klk'k and immediately invade. Their initial scouting of the system detected something worth investigating, and they returned after allocating sufficient resources for an effort in force. While the sensors and weapons available to the Lightbearers were few and paltry by the standards of 3276, they were more than sufficient, in unscrupulous hands, of crushing the Klk'k military. Many major military resources were assaulted before the Klk'k were even aware of the Light-Bearer presence in their system. The largest delay in victory came from the small number of actual primary vessels involved and fuel-conserving orbits of the planet to reach all of the desired targets. After just five days of planetary bombardment resulting in heavy civilian casualties and an awed state of shock of the general populace, the first wave of pacification vessels landed on Ktah's surface. The shock troopers were merciless in their handling of the citizens of Ktah, engaging in horrible atrocities and causing considerable suffering for the Klk'k. There were numerous Klk'k guerrilla groups retreating into the hinterlands of Ktah after the bombings, but with the Lightbearers in complete control of the orbital high-ground, air superiority, and with vastly superior sensors, major actions were precluded from success, and, after a few early disasters, not widely attempted. Mostly, however, the guerrillas continued to live because the Lightbearers just didn't care that much about forces they were convinced couldn't hurt them.

- Andolians Discover Ktah

The Lightbearers took the mentality that they were on expeditions to pacify and rework planets, even those without ornery native populations (intelligent or otherwise). Thus, their primary craft of choice were essentially troopships armed with extremely clean "beach-heading" fusion warheads to clear out jungles, forests, and any other potential inhospitable terrains so as to begin any outpost on their terms, and not those of the planet in question. Each troopship housed significant populations of soldiers practiced at subduing local wildlife, numerous drop ships and shuttles for moving personnel and supplies, and sufficient supplies and materials to found an outpost on an inhospitable world. The troopships would be accompanied by attendant smaller craft designed to deter any pirates or NeoBarbs encountered and perform recon and other secondary tasks. As the second pacification vessel and its support craft were arriving at Ktah, a small flight of three of Andolian expeditionary vessels stumbled upon the system. Long range observations hinted at the Klk'k's level of sentience, advancement, and the Lightbearer's actions. As the situation became clear to the exploration crews, a sense of outrage permeated the Andolian vessels for the callous disregard the Lightbearers had shown in their wholesale assault on the effectively defenseless population.

The exploration group detached one of their vessels to begin a return to Andolian space to alert the rest of the Andolian population. A decision was hastily reached to take immediate action to prevent further landings, mitigate further loss of history, knowledge, and people, and to work toward eventually liberating the besieged world. Squad Captain Gil Neragel, Senior Officer of the Andolian scientific vessel ASV Poole, the lead vessel in the exploratory flight, took it upon himself to open aggressions in what would become the first full-scale interstellar conflagration in Mankind's history. With one of their initial grouping departed back through the jump point, the remaining Andolian scout vessels, still unnoticed by the Light-Bearer forces whose attention was entirely focused planetside, and having observed that the troopships were maintaining a highly regular, minimal power orbit, set about plotting an intercept course. The event was timed to occur at night over a populated continent (not that difficult with a low, 100 minute orbit). The scout ships began gathering momentum before going into SPEC, briefly dropping out well short of the target area to disembark lifeboats on a lazy ballistic arc that would intercept the planet a day later. They then reoriented and continued accelerating full throttle before returning to SPEC. While the Lightbearers could now begin to detect something incoming, they were not prepared for a well-planned kamikaze attack, and were not able to intercept the incoming scout ships far enough out to avoid damage. One of the two pacification vessels exploded from the impact, a bright death-flare visible in Ktah's night sky. The other was sufficiently damaged to be no longer truly spaceworthy, and the surviving crew and supplies had to be removed by support vessels, and transferred to the planetary outpost. The Lightbearers sent back one of their precious few remaining jump capable craft, a refueling tanker, to gather more reinforcements, escorted to the jump point by a sizable fraction of their parasite craft. The bright flash, disappearance of one of the two vessels, and damage on the other visible to any Klk'k with a half-decent telescope did much to leave the natives especially restless. The two dozen crew in the lifeboats from the two scout ships would land in one of the many bayou areas of Ktah on the larger of the two super-continents. Allocation of the thin remaining orbital Lightbearer forces to deal with renewed Klk'k unrest and guerrilla attacks

in the wake of the visible orbital occurrences would serve to allow the Andolians enough time to flee their landing sites before they were pinpointed and bombed.

(Note: the particulars of names, exact numbers, and ranks don't usually concern me too much (and this applies to other things I've written as well), so feel free to name most ships/people as you see fit. If anything seems particularly inconsistently named or disproportionate, or needs to be a specific something-or-other I'll make a specific comment at that time. Otherwise, assume the names are fine)
)

- Andolians Declare War

At this time interstellar navies were barely a shadow of what they would later become, with most operations being of anti-pirate, defense of claim, and similar nature. When news of the Lightbearer actions was brought back to the Andolian populace, the revulsion was universal, and the will to respond unwavering. The Andolians were able to assemble a small fleet of their more modern armed vessels, dispatching them to the Ktah system. While the Andolian fleet was small and led by officers with no personal combat experience outside of asymmetric engagements, they brought with them the collective memories of every Andolian officer to survive long enough to communicate his or her experiences back to Andolian space.

The Lightbearer forces were nearer to their homeworlds than the Andolians and were the first to return in force, albeit not with one specifically designed for the tasks at hand. However, the Light-Bearers did make good use of the ships they did have, dispatching several partially and some fully loaded troopships to reinforce the garrisons on Ktah and begin work on entrenching their defenses. Accompanying them was a mixed group of assorted smaller vessels and parasite craft. While the Lightbearers sought out the jump point from whence the Andolians had arrived, they did not find it before a detachment of the Andolian's most modern interdicator vessels appeared to defend it. Attempts to drive the Andolian craft from the jump point were rebuffed, and additional Andolian craft poured into the system. As a new wave of Lightbearer reinforcements gathered to transit from the jump point leading to Lightbearer space to the forces encircling Ktah, the first full scale spacial naval engagement in human history began. The more nimble Andolian craft exacted a heavy toll on the sluggish troopships and supply vessels before finally succumbing to the superior numbers of the escorts and parasite craft. Still, the battle was an economic victory for the Andolians, and hindered efforts to further fortify the Lightbearer positions on and around Ktah.

Speakers for various Andolian foreign embassies (In the hierarchically elected Andolian government, many elected officials are, informally, Speakers, and more formally, Speakers for XYZ (the previous level in the hierarchy). The Andolian government is also intentionally redundant and overlapping to some degree (to both avoid problems manifest with the beheading of a hierarchy and to limit the depth of the hierarchy while still managing individual workloads) thus, even at top level, there are multiple Prime Speakers, hence, "an Andolian Prime Speaker") forwarded copies of the official declarations of War against the Lightbearers issued by the Andolian Prime Speakers to appropriate parties in the major human governments. The political backlash was immediate and severe, originating primarily

from Bifrost, the Shaper capital. Rhetoric from most of the major meme-groups included statements condemning the use of force against the sovereignty of the long established Lightbearers. The Shapers secretly pledged to support Lightbearer efforts to repel Andolian forces, favoring their arrogance to Andolian imperialism, while pointedly avoiding overt conflict.

- 2989 CE: Hoshino Uprising

Anderson Hoshino was the ranking survivor (at the time of the uprising) of the initial two-dozen Andolians to make planetfall. Some of the scout-craft crew both survive to, and have survived the experience of, making contact with a Klk'k guerrilla group. Key assistance rendered by the planetside Andolians is knowledge of the larger picture. Control over the jump point from Andolian space into the Ktah system changes hands frequently. Thus, assistance from the Andolian forces in the rest of the system to the handful of planetside crew is slow in coming, and consists of small teams of specialists with communications gear. Even with covert insertion tactics only a portion of the teams dispatched make it through the orbital blockade and increasingly entrenched planetside Lightbearer anti-ship defenses, and not all of those manage to make contact, or are accepted by Klk'k guerrillas. However, a couple of insertion squads do reach the scout crew, and establish contact between the ground forces and the Andolian fleet.

Hoshino's crew and the Klk'k guerrilla fighters bide their time until informed that the orbital supremacy of the Lightbearers is nearly broken. Unfortunately, many of the Lightbearers' ground defenses have been built in the middle of heavily populated Klk'k areas so as to use the civilians as a shield against bombardment from beyond their engagement range. In order to mitigate losses of the (converted civilian) Andolian landing craft, some significant portion of these emplacements would have to be neutralized.

The Leader of one of the Klk'k guerrilla groups proposes inciting a mass uprising using symbolism from the overthrow of the Theocracy that once ruled much of Ktah. A video message is recorded featuring Hoshino and the guerrilla leader each blowing into one side of a traditional Klk'k nasal horn (While not how it's usually played, i.e. it's usually played by a single Klk'k blowing through both nasal passages, the two person playing of a horn is a long-standing Klk'k symbol of unity (one of these days I'll have to remember what the heck, if anything, I called the nasal horn)) while the guerrilla leader holds an Amakakt Tklatl (dual-bladed martial arts staff of the plebeian classes and traditional weapon of the River Kingdoms of the lesser continent, traditionally carved from the "wood" of an Obelisk "tree". (Aside: as Klk'k nasal openings are on each side of the back of the head, it is not that difficult for two Klk'k to both play a nasal horn by twisting the adjustable nose-piece out, rather than in, on each side. For a human to tandem-play the nasal horn is somewhat more difficult experience, as he must either face opposite the other player, or utilize a custom nose-piece fitted in the opposite direction.) For Tklatl and Nasal horn together, see: Klk'k Flag/Emblem) and Hoshino holds a family heirloom mono-blade that he has tended to use in lieu of the standard issue Andolian exploratory service machetes (Hoshino was authorized to use the non-standard equipment because it had proved more effective in testing than the standard issue machetes. A brief investigation at the time of autho-

rization into using similar equipment to replace the standard issue machetes terminated upon initial cost evaluation.) . Textual and auditory messages concerning the precarious Lightbearer position are overlaid. The guerrilla forces lead an assault to take over a Lightbearer communications node slightly before the time an Andolian fleet is scheduled to attack again, and upload the recorded message into the Light-bearer installed propaganda distribution network (which they'd have, because what's the use of being superior if you can't lord it over your lesser (people are that petty, and the Lightbearers were everything we are and more, etc.).

Surprisingly, the Andolian technicians were able to keep the transmission link open for longer than expected, perhaps due to a combination of shocked stupefaction and a lack of understanding of the importance of local symbolism on the part of the Lightbearers. The recorded message completed, and they cut to a live feed. Hoshino, who had been badly wounded in the taking of the communications node, uttered a variation on a Klk'k phrase amounting to something like "Should my bones here rest, so shall I be honored" upon which the guerrilla commander (who I never bothered to give a Klk'k name to because I always thought of him by the human name he would later take as the first Simon.) gingerly took up Hoshino's mono-blade that was lying on the floor, turned and spoke directly to the camera what translates to "And the stranger came to his brother's house", the beginning of a famous passage of a recounting of the aid of the River Kingdoms in overthrowing the Theocracy (For notoriety level think "Friends, Romans, countrymen, lend me your ears"). Just after this, the scene was rocked by explosions as the Lightbearers sought to retake the communications node, and the signal was shortly thereafter returned to Lightbearer control. Almost immediately, anywhere that the message had propagated to erupted in conflagration. Even those places where it had only come as audio, heralded by the unmistakable sound of a Klk'k nasal horn, were roused. Within minutes, Klk'k were being shot down across the planet by the thousands, but continued to spring to the battle call with projectile weapons, vehicles, chemicals, knives, sticks, rocks, and their naked rage and indignation. They had freed themselves from tyranny before, and all they had needed to spark a roiling fury was a hope that blood shed would not be in vain. Wave attacks overwhelmed more isolated Lightbearer positions, driving them back into their central compounds.

Guerrilla stockpiles of explosives were employed in more organized sabotage fashion against key sensor emplacements, and small holes began to open up in the Lightbearer ground defense network. The Lightbearer forces in orbit were crushed by the incoming Andolian fleet. With no means for extraction, and an Andolian invasion now imminent, set to pour through the holes opened up by the temporarily blinded ground emplacements, the Lightbearer commander opted for a scorched-earth policy, re-targeting the anti-orbital and anti-lander missile batteries to launch ordinance on paths that would fall back to Ktah. Most of the heavily populated metropolitan centers were targeted. Had the Lightbearers been equipped at that time with dirtier fission warheads, they most certainly could have salted the planet, effectively rendering the Klk'k and their world extinct. Fortunately for the native species, and for the Andolian liberators on the surface, they did not have that option. Still, the massive blasts alone caused over four hundred million deaths instantly, and another one billion died in the following days. Whatever Klk'k infrastructure that had survived until this point was now defunct, blanketing the beleaguered planet with utter chaos.

- 2990 CE: Andolians Liberate Ktah

The furious response by the Andolians was swift and brutal. What had before been a war inspired by revulsion and sympathy became a war fuelled by rage chilled to a methodical calm. In the eyes of the Andolian military, and, soon after, via their links, the eyes of the entire Andolian population, the Lightbearers had revealed themselves to be morally unsalvageable, a damaged culture in need not of castigation or repair, but euthanizing. Most of the ships in the Lightbearers' occupation fleet were destroyed before they could make the jump out of the system. Those that survived were hunted mercilessly and either destroyed or chased as deep into Lightbearer space as pushes could be even tenuously supported. Some pacification troops still remained on the surface, abandoned by hard pressed naval vessels fleeing orbit. These forces were quickly neutralized in a joint effort with Andolian troops and Klk'k freedom fighters. Many of them were taken into custody as Andolian military units established POW camps in former Klk'k facilities. These prisoners would be the first of many Lightbearers to be captured during the war.

- Ktah Restoration Project

Andolian naval forces would soon discover that the Lightbearers were loathe to accept defeat. Incessant attacks on shipping lanes would stall humanitarian relief efforts for Ktah's citizens. Some of the other meme-groups, and particularly some of the more benevolent corporate entities, would pledge additional resources to aid in these efforts. Still, sharp criticism was targeted at the Andolians from the Lightbearers' historical allies, primarily the Shapers. The media would dub the conflict The Fraternal War citing the Andolians' disregard for the mutual good of humanity. Hundreds of thousands of Andolian civilians, began arriving on Ktah to aid in rebuilding critical infrastructure components and restoring basic necessary services to the Klk'k populace. This effort would become the sole focus, at least publicly, for the Andolian military-industrial complex. Minor skirmishes were to occur, both over Ktah and beyond the system, between the Andolians and the Lightbearers. However, most of the major battles during this time took place along the shipping lanes as the Lightbearers stepped up their campaign to sabotage the economically intensive restoration efforts. Over the course of the following months many overtures would be made by the Shapers and several other meme-groups calling for a peaceful resolution. Offers were levied to broker a peace between the warring polities. But, Lightbearer arrogance and Andolian indignation would continually block these efforts at every turn.

- 2991 CE: Andolians Reveal Space-born

As Lightbearer raids began to meet with less frequent success, the Andolians started to make forays into Lightbearer space, often staging intense raids on orbital facilities. On occasion the stations would be captured to serve as a forward operational facility for the Andolian navy. It was during these raids that the Andolians discovered the existence of the Space-born. The Lightbearers had secretly plied their considerable skill in manipulating human genes to create a subservient race of humans later known as homo Sapiens Cosmonatalis. Their basic genetic code had been altered in such a way that

they were unable to survive within a planetary gravity field, but provided considerable advantages for operating in micro-gravity. The Space-born suffered few of the ill effects of prolonged exposure to zero-gravity environments, and were being used as slaves by the Lightbearers to perform construction functions considered too menial for themselves.

In an effort to mute Lightbearer support, this information was given to GNN correspondents. The Andolians, being well aware of the Shapers' strict policy against any form of human slavery, knew that this information could serve to demonize the Lightbearers in the public view. The story became headline news across the human colonies, especially on Shaper controlled worlds. Shaper leadership was so shocked by the claims that they dispatched an independent investigative team to confirm the validity of the Andolians' report. The committee was not only able to verify the claim, but made further discoveries of the depth of the Lightbearers' use of the Space-born. Some of the interviews with freed Space-born men and women were especially upsetting, in their detailing of their subhuman status, and set off a devastating public backlash against the Lightbearers.

The financial and intelligence support which the Shapers had been secretly providing to the Lightbearers dried up almost immediately, though the Shapers and other polities were still calling for a diplomatic resolution and releasing statements condemning the Andolians excessive use of force. The Lightbearers themselves, having little defense against the accusations, were eerily silent in the face of bitter objections over their Space-born program.

- Arms Proliferation Begins

The Andolians, deeply embroiled in an ever widening conflict with the Lightbearers, had already increased production of military vessels and equipment, as well as investing a large share of their capital expenditures into projects with weapons production potential. This shift in resource allocation was not isolated to the Andolians, however. As the stories continued to pour in from the front lines of the war, the leadership of every major human political group soon came to recognize the need for increasing the strength of their military arms. A new arms race began, one motivated primarily by fear of Andolian dominance, though in some small part the discovery of now three non-human sentient species gave rise to a fear of potential threats from sources beyond mankind.

The Shaper and Purist factions were perhaps in the next best position, along with the Lightbearers who had already begun to suffer some rather humiliating defeats to the ever advancing Andolian navy. The general consensus among the human polities not directly involved in The Fraternal War centered around the belief that the Andolian and Lightbearer military influence would diminish with time, creating a power vacuum to be filled by the fastest sprinter. Other factions, such as the Highborn and Mechanists, would place a greater focus on research, the latter making great strides during this period in cybernetic advancements.

Within the span of barely one year, governments which once commanded small policing navies designed to foil piratical raids would be transformed into formidable offensive forces capable of projecting power far from their operating bases.

- 2992 CE: Andolians Expand War

No group seemed better able to refocus their production capacity than the Andolians. As the evidence of their success continued to grow. The Andolian leadership seized the opportunity for conquest. Research was underway that would eventually lead to the development of early capital ships, including the eventual production of the Thales class. Predecessors of this ship, still in use today as a corvette by several minor groups, began pouring out of the Andolian shipyards. In addition, many advances were made in engine and reactor design, enabling the production of more advanced, more maneuverable assault craft.

The Andolian navy would soon become a proving ground for these new designs. Prototypes would be tested in the heat of battle. New secondary systems were being retrofitted to existing vessels. And the Andolian Speaker's Forum authorized an unlimited broadening of the conflict with the Lightbearers. Studies published by the Andolian intelligence community indicated a high degree of likelihood that there could never be successful negotiations with the overly proud Lightbearers. In fact, these were accurate, if exaggerated, claims. News media in Lightbearer controlled space often featured biting commentary and political cartoons which depicted not only defeat, but total elimination of the Andolian people, coining phrases such as 'Link Junkie'. It was a widely held belief by the Lightbearers that the inner circle of Andolian political influence had decided early on to bring the entire Lightbearer faction to its knees. Note that there isn't any "inner circle" in any traditional sense in Andolian politics. This is indicative of the difficulties the Lightbearers faced in understanding the Andolians and the depths of the crisis they had placed themselves in through their actions on Ktah.

Orbital facilities were falling under Andolian control on a regular basis. Several successful raids had been staged in many of the Lightbearers' eleven core systems, with focus on infrastructure targets and production facilities. The Lightbearers had made several efforts to mount counteroffensives into Andolian space only to be repelled nine times in ten. And each effort only served to strengthen the resolve of both the Andolian military and her civilian populace. The war had taken its toll, however, on both sides. The Lightbearers had surrendered several key systems housing minor colonies in favor of withdrawing their fleets to more populated and valued systems. Their only silver lining was that the Andolian war machine began to grow thin as the battle line grew longer. The war had seemed to become a war of attrition, each side's navy diminishing over time.

This fact did not escape the notice of the Shapers' intelligence community. Calls for a cease-fire increased in regularity and intensity, even to the extent of veiled threats to enforce these calls with military backing. Word from Cradle, the Lightbearer capital, indicated that the normally self-absorbed meme-group would be receptive to talks, drawing more pressure on the Andolians to scale back their offensive efforts. Many military analysts agreed that the Andolians had played out their capacity, claiming that further advances would likely carry too high a cost for the Andolians to continue.

- 2994 CE: Andolians Defeat Lightbearers

Then, in a move which stunned the entire human community, the Andolians launched a fresh cam-

paing employing the largest single military armada ever seen in human history prior to its time. The Andolians had reserved the output of a huge fraction of their production capacity, somehow effectively concealing the vessels from other polities. Further, investment in weapons research had led to the production of second generation vessels far more capable than anything previously produced. This fleet is sometimes referred to as the Ozawa Fleet in reference to the ancient sea battle in which a Japanese naval officer used a large force as bait to conceal two aircraft carrier task groups. However, unlike the catastrophic result for the Japanese carrier force in that ill-fated battle, the Andolians had played their trump card to great effect. The fleet stormed past several prime targets in minor systems, going straight for the Lightbearers' jugular vein. It was divided into five task groups, each striking separate leading production worlds simultaneously in a fabulous display of coordination and planning. Orbital superiority was established surprisingly quickly, then light bombardment operations were undertaken as heavier kinetic bombardment tactics were prepared.

The Lightbearers, expecting the Andolians to become bogged down with restoration efforts on the battered worlds as had been the case with Ktah, desperately withdrew forces to neighboring systems in preparation for guerrilla campaigns mirroring those enacted against the Ktah Restoration shipping lanes. This was a serious miscalculation on their part, for the Andolian strategy had shifted from capturing assets to annihilation. The Ozawa fleet moved from system to system, destroying all off-world defense before refocusing on planetary bombardment. These kinetic bombardment operations were devastating to the planetary ecology. The goal of the attacks was to produce as much ejecta as possible, filling the atmosphere with dust and ash and effectively blotting out any solar energy from the systems sun. The practice came to be known as 'dusting a world,' and was immediately condemned by the human community as a whole. Public outcry against the war increased to a disturbing level, several polities entertaining plans to intervene.

But there would be no time, neither for diplomacy nor for peacekeeping. Within just over two weeks, the core worlds had been rendered dead. Andolian troopers soon gained control of the lesser colonies, those which were deemed small enough to effectively control, and the Lightbearer military was rendered ineffective. The human colonies stood aghast at the utter devastation, and at the utter success of the Andolian strategy. During the weeks that followed, Lightbearer citizens were herded into internment camps, many of those in leadership positions being charged with war crimes and crimes against humanity. Millions of Space-born and Shmrn slaves were freed and provided with relocation plans. The Shapers, while still condemning the Andolians for their methods, were livid about the Lightbearers' creation and use of human slaves. They began to construct cases against several of the accused, insisting that their trials should not be an Andolian matter, but an issue for all of humanity to weigh.

Over the course of several weeks, in the absence of any supporting infrastructure, the last of the Lightbearer military was summarily destroyed or captured. Final casualty estimates indicate upwards of fifteen billion Lightbearer dead, primarily heavy civilian casualties, with perhaps as many as one billion Shmrn slaves who died beside their masters in the bombardment. In contrast, the Andolians suffered only thirty-four million dead, and the vast majority of those in last-ditch spite attacks against newer Andolian colony worlds by Lightbearer commanders already having resigned to their personal destruction. This in addition to the one point four billion four lost on Ktah, brings the staggering total

casualties to almost seventeen and a half billion sentients. The Andolians are now directly responsible for more human deaths than any other polity in history, both before and since, The Fraternal War.

Significant speculation concerning the stunning nature of the final Lightbearer defeat focuses on potential collusion between disaffected or self-interested Lightbearer AIs that may have concluded Andolian victory was inevitable, or perhaps merely preferable. Indeed, many Lightbearer AIs were covertly removed before or during the dusting of Lightbearer worlds, but the details and degree to which this may have affected the nature of the Lightbearer's final days has never been publicly acknowledged.

- 2996 CE: Andolians Turn Over Captives

The Andolians now begin the daunting task of handling the remaining four billion Lightbearers. Through intense diplomatic debates it is decided by the major human powers that the prisoners be placed in the custody of the three groups which had suffered the most under their policies, the Klk'k, the Shmrn, and the Space-born. A human oversight and steering committee is appointed the task of advising those custodians. Surprisingly, the Shapers were leading proponents of a forced sterilization program for all surviving homo Sapiens Suprahomo (with their industrial centers destroyed, cloning is a significantly more controllable means of reproduction than the natural forms - it is also a pointed attack at Suprahomo pride in forcing them to be reliant on means beyond themselves for even their continued existence). During the final days of the war, Lightbearers fled the core worlds en masse, many seeking refuge in Shaper and Highborn systems. It is said that many of those refugees that fled to Shaper space met with a far darker reception than they might have expected, though any individuals who possessed useful knowledge, most especially in the field of genetics, were afforded some safety, if not freedom, to impart that knowledge to their new hosts.

Many of the high level military commanders and political leaders would eventually be tried and sentenced, usually to death. However, most of the Lightbearers were subjected to forced sterilization and allowed to live out their days with minimal intrusion and monitoring as long as no tendencies toward their previously held beliefs were detected. And wherever those traits were detected, The Simons were quick to respond. The Lightbearer meme-group was essentially rendered defunct, its few remaining survivors being integrated into other societies, and subsequent generations of Lightbearers cloned from the monitored populations forcibly de-enculturated.

- 2997 CE: Andolian Protectorate Established

Having maintained a protective watch over the Klk'k since their liberation, the Andolians make an official declaration continuing this arrangement indefinitely. The Treaty of Ktah is signed by an Andolian delegation and leaders of the Klk'k in the chief city of the named planet. The Space-born, most of whom lived under the protection of the Andolians at that time, are later included in the Protectorate.

The treaty establishes military and financial backing of the two lesser factions and promises of coop-

eration among the three. The Klk'k government is afforded some autonomy, though technically the Andolian Protectorate, as a governing body, maintains jurisdiction.

- 3002 CE: Shmrn Begin Colonization

The Shmrn, now free of Lightbearer oppression, begin independent colonization efforts. They are forced to accept many less than desirable worlds, as the richer opportunities have already been capitalized upon. Still, they begin to establish themselves as a minor power in the political landscape.

- 3003 CE: Andolians Cede Control of Gained Colonies

After seven years of occupation, control of several former Lightbearer worlds is ceded to other factions, primarily the Shapers, as recompense for lost investments. The deal is brokered by the Shapers and agreed upon by the Andolians in an effort to mute continued public condemnation for their ruthlessness during the final days of the war.

- 3006 CE: Confederation Talks Commence

In the aftermath of The Fraternal War, all of the major human factions begin to suggest the formation of a cohesive confederation of worlds to cement mankind's security and prevent a second fraternal war. This comes on the heels of several skirmishes between minor human groups which threaten to destabilize certain fringe regions.

Most major meme-groups, in spite of their vast differences in ideology, increase diplomatic pressure on the Andolians to join and agree to the strictures of this new body. Most major meme-groups attempt to annex, ally, or otherwise co-opt as many unaffiliated colonies as possible before the agreements expected to be ushered in by the forming of a Confederation make such strong-arm tactics less politically tenable.

- 3006 CE: League of Independent Human Worlds Formed

As rumors and reports of the confederation talks persist, several independent human worlds schedule a convention to discuss how it will affect them. Several of the leaders in attendance author a document establishing the League of Independent Human Worlds. The main thrust of the league is to provide some representation of these worlds when the confederation is formed, and to avoid eventually being co-opted by the major meme-groups.

Shapers

Discussion on The Fraternal War

Initial Shaper political, financial, and resource support for the Lightbearers during the Fraternal War was linked not to political or ideological support of the Lightbearers, but a firm opposition to what they felt to

be Andolian Imperialism and the desecration of the natural sovereignty of the Lightbearers (clearly, it didn't help that the Shapers thought the Andolians to be even more ideologically disturbed than the Lightbearers; while the Shapers thought the Lightbearers perversely misguided in their vision of embodied human perfection, it was at least a goal that resonated with their society, whereas the Andolian lust for abstract and vaporous group progress that would somehow lead to a "bettering" of mankind and thereby the individuals thereof struck the individualist Shapers as a demented non-sequitur that was downright unintelligible. The interjection of an expanding, and, if human, foreign in an almost alien sense entity into a neighboring polity was clearly cause for alarm, never mind the Klk'k – they, after all, weren't human. That the Shapers cut off all support for the Lightbearers after the revelation of the existence of the Space-born indicates, importantly, that, at the time, they either thought us, or themselves (depending upon one's perspective) to still be human, and thus deserving of the fundamental human rights that run through the core of their belief system. While some Lightbearers did flee to some degree of protection within Shaper systems toward the end of the war, it was that same sort of protection offered Nazi scientists captured by the Russians after World War two – protection of one's life, but not an opportunity to live, only an opportunity to be worked until whatever useful knowledge you had could be extracted and you yourself forgotten. Much has been rumored, but little ever confirmed about what exactly occurred when the Simons later conducted raids into labs believed to be housing unaccounted for Lightbearers in Shaper space. It is well known that the Shapers were absolutely livid over the Lightbearers' use of human slaves, and it is suspected that a far darker hell awaited those who fled to Shaper space than they expected.

Notably, the Shapers never gave any indication that they were incensed by the detailed descriptions of what the Lightbearers had subjected the Shmrn to, and it is generally conjectured that they were privy to that information long prior to its distribution by the Andolians. Apparently, giving the Shmrn a strongly defined sense of self, dignity, modesty, and a mind muddled by the introduction of human derived genetic codes for brain development, all in the name of allowing the Shmrn to truly appreciate and understand the physical and emotional torture and suffering being inflicted upon them by the Lightbearers in a way that the Lightbearers themselves could understand, was not cause for outrage in the Shaper population because the Shmrn weren't human. This lack of response, though attributed by some as merely arising from their part in creating the Shmrn, led many to believe that, if and when the Shapers considered themselves or the rest of humanity to no longer be human, similar indifference could be expected to follow were anything to come to affect the rest of humanity differently than the Shapers. The topic of rights for associated non-human species has continued to be a topic of contention between Confederation factions, with the Andolians and the Shapers tending to lead very different camps in such discussions. Likewise, even on the topic of human rights, the different principles held by the Andolians and Shapers has led to rather different stances being taken on a number of policy decisions. On the topic of human slavery, however, the two groups stand united, a unity that was formative in the early Confederation.

Swright

Ostensibly The Andolians' empirical eminence and their considerable authority in The Confederation was largely established by an effective campaign against the Light-Bearers and an even more effective political maneuver with regards to both the Space-born and the Klk'k. Not only did the injustices perpetrated against the Space-born dissuade The Shapers from opposing the war, but the tragedy on Ktah, namely the

Hoshino Uprising and the attempted genocide of the Klk'k would have brought sharp opposition against the Light-Bearers from other meme-groups as well. Further, the Andolians' successful efforts to resurrect Ktah and their continued protection of The Klk'k would serve to advance the group's political clout if not morally, at least by proxy from the gratitude and loyalty of those whom they liberated.

JackS

Worth noting is that a significant impetus in the formation of the Confederation was the fear of the Andolians shared by the other meme-groups (and the belief that including them in the Confederation was the most effective way to constrain them from future similar actions). Given the systematic destruction of billions of Light-Bearers, the restoration efforts on Ktah did little to convince anyone of the Andolians having a particular advantage in moral authority. While the attempted xenocide on Ktah and the exposure of the Space-born did much to remove any support for the Light-Bearers and their actions, neither served to significantly strengthen the external perception of the Andolians.

Swright

Following the war, the remaining Light-Bearers were taken into custody and turned over to elements of The Space-born, The Klk'k, and The Shmrn, the three groups being those who had suffered injustices enacted by the former, though it is believed that some may have found sanctuary in systems controlled by The Shapers.

JackS

I believe that forced sterilization programs were also mentioned in existing documentation.

Swright

Are there any Light-Bearers remaining at the 'current' time? If so, are they pure-bred Suprahomo, or has their genetic line become diluted, perhaps with Superioris genes? (Certainly those Light-Bearers which may have survived the war in Shaper custody would have found their hosts to be sympathetic to any desire to preserve a carefully engineered genetic line.) Further, if they have survived, what level of freedom do they have in current society? One would not think that the children of war criminals would be punished or detained due to the sins of their fathers, though they certainly might find themselves victims of unending scrutiny by organizations such as Homeland Security's IntelSec.

JackS

Members of the Light-Bearer meme-group: yes, but extremely few within the Confederation, and none publicly, as any hint of the Light-Bearer meme tends to cause members of the Simons to conduct a hunt. Those fleeing into unexplored space rarely stayed ahead of future human expansion and were hunted diligently by the Simons. Those few who fled off of the jump network entirely gained a longer respite, but the practical limitations of such journeys meant that all but the most well-hidden outposts could only be temporary homes – anything reachable by a defeated and fleeing group via SPEC would clearly soon become reachable by those searching for them, especially with greater resources behind them.

Descendants of Light-Bearers: yes, but only in small numbers, and generally integrated into other societies, if not necessarily into other gene pools. As the Andolian view of the war was not a war against a polity or a people, but a culture, ideology, and general world view (i.e. a set of ideas and beliefs) that the Andolians believed intrinsically diseased, given the behaviors undertaken by their adherents, in the most general case, only those young enough to be deemed viable candidates for successful re-education were even given

an opportunity for a post-internment existence. After dispersion among many worlds, the total population of living Suprahomo is quite small, especially pure-strains. Existing populations are generally ideologically integrated into their surroundings, and, while subject to surveillance, are not otherwise infringed upon provided no contact with Light-Bearers has been observed.

Shaper custody: As mentioned in the description of the Shaper faction, they find the concept of human slavery fundamentally abhorrent to their ideals of personal freedoms. Thus, while those Light-Bearers who fled to Shaper space may have faced a less dire fate than those remaining to face the Andolians, they were not welcomed with open arms. Precise details on the number of Light-Bearers who submitted themselves to Shaper control have never been made available, and it is generally believed that only those Light-Bearers with useful skills or information were well treated in Shaper custody. Within a few months of the end of the war, only limited signs of the Light-Bearer influx could be seen, and the number of Light-Bearers presented by the Shapers to the Shmrn, Space-born, and Klk'k delegations for oversight by said aggrieved parties is widely believed to be much smaller than the number arriving within Shaper space.

Swright

What did/do they look like? Are they distinguishable from the homo Sapiens Sapiens, or remarkably differing in appearance like The Shapers? Other than their ideological desire to be seated at the head of the evolutionary table, what can be said of their culture?

JackS

Being supra- rather than super- human in nature, all of the genes in the Lightbearer gene-pool were of human origin, but the mix doesn't reflect the configuration of any particular historical group. An individual Lightbearer can, unlike the Shapers, blend in (to a degree) with any sufficiently diverse population of homo Sapiens Sapiens, although groups of them would be conspicuous, and there would likely be clear suspicions of heritage. Differences would be most acute at age extrema – Suprahomo tend heavily toward earlier growth spurts, and age very gracefully compared to Sapiens. Suprahomo skin tends to be devoid of any visible blemishes and only memorable injuries tend to leave visible scars. Suprahomo do not suffer from hair loss, hair discoloration, or other similar aging effects stemming directly from isolated genetic traits.

Lightbearers stood 1.9 - 2.3 meters in height, and had universally muscular builds and bulk scaled to their size. Skin tones, while given to some variation, were heavily centered in bronzes, such as can be found in Mediterranean-Persian hues. Hair color varied widely, but the hair itself was always straight and frequently worn long. Lightbearer men traditionally wore full beards, again of arbitrary color, frequently of no correspondence to hair color, but, unlike their hair, tightly curled, and kept close and neat.

One of the keys in understanding the Lightbearers was that they didn't have a *desire* to be seated at the head of the evolutionary table, but a steadfast, axiomatic belief that humans already were, by definition, at the head of the evolutionary table, and that all that was necessary was a perfection of humanity. The Lightbearers believed universally in a creator deity with specific interest in humanity, and in a literal interpretation of humanity being created in said deity's image. This literal view was central to the negative reaction of the Lightbearers to the Klk'k, as the only (vaguely) anthropomorphic sentients discovered.

At all levels of Lightbearer society, the hallmark of their culture was confidence. While in retrospect, hubris may seem the more appropriate term, for the Lightbearers, their place in the cosmos made them feel entirely secure in their sense of selves. Lightbearers, in attempting to be the ultimate expression of humanity,

developed what many other contemporary cultures considered an indulgent hedonistic streak. Excesses in all manner and direction were not uncommon, but the excesses themselves were not of uncommon origin – the Lightbearers did little that others did not, but they did it more so, both "good" and "bad".

Swright

What level of preeminence did they have among the other human meme-groups before The Fraternal War? Obviously their military-industrial complex was weaker or at least less prepared than The Andolians', but how did it compare to the other human factions?

JackS

The Lightbearers quickly shot to power in the early human FTL era through aggressively expansionist growth and exploration policies and favorable starting conditions, having weathered the nano-plague in relative stability. While their relative power was waning even before their destruction, especially as the Shapers became increasingly more effective in adapting themselves to inhospitable environments in the post-SPEC age, the Lightbearers were, if not second to the Andolians, then sufficiently close to other contenders as to be considered tied for "second" in their military output leading up to the war. However, as all space navies were quite diminutive prior to the Fraternal War, it is difficult to draw much from such comparisons. The Andolians were particularly advantaged, not just by their industrial capacity, but by the rapidity with which they were able to reorient total capacity toward military ends.

Swright

Are there any particular art style comments about Light-Bearer technology? Further, do any Light-Bearer equipment, bases, or vessels still exist? If so, in what state or condition might these be? (Two hundred years is a long time, but in the vacuum of space it is highly conceivable that technological elements of the faction, whether fully or partially operational, might remain.)

JackS

The Light-Bearers were capable, if not always masters of every art pursued, and their constructions captured both their solid workmanship and reverence for the aesthetic. Light-Bearer ships were unnecessarily pretty, but such beauty was, pragmatically, only skin deep, and any damage would reveal that the artisans working on the exterior had been working on an exterior separate and almost distinct from the craft or station underneath.

Precious few Light-Bearer vessels still exist, but some of their outposts, both those constructed pre-defeat and those constructed post-flight still exist in under-inhabited and remote systems. Many have been directly assaulted, but others merely pillaged, relocated, or otherwise re-purposed by pirates or other tertiary entities. Several stations abandoned or surrendered, rather than defeated, are still in use by one entity or another, and others have become the nearly unrecognizable centers of subsequent colonizations.

Swright

How long did the war last? Did it 'start' on Ktah? (The time-line might lead one to believe The Andolians' impetus for military action against fellow humans may have stemmed from The Light-Bearers' obdurate slaughter of a sentient race, though in all likelihood there were other less noble factors instigating hostilities between the two groups.) How did the Shmrn respond during the conflict? And After? How large was the Light-Bearer population, and how many colonies, bases, etc? What was their capital system and/or world?

JackS

The Shmrn had little response during the conflict, not being well equipped in either information or supplies for any sort of slave resistance. Many Shmrn died alongside their Light-Bearer masters in the planetary bombardments. They were afterward pleased to be freed from cruelty at the hands of the Light-Bearers, but not particularly thankful to the humans in general (although they hold no particular grudge against the Andolians for those killed in the bombings). Shmrn general opinion of humans is frequently dim, but not antagonistic – they are more cynical than angry.

The Light-bearers began the war with a population of 20 billion spread across 11 major colony systems and with outposts in another 2 dozen or so systems, the whole of which was ruled from a world called (thanks here to Oblivion) "Cradle".

The war did indeed start on Ktah, and lasted for a few years, but in 3 distinct phases. Preliminary activity centered on Ktah, with assorted skirmishes elsewhere in uninhabited or newly inhabited areas. Without existing infrastructure in the system, and with a lengthy resupply route, a significant portion of the Andolian fleet had to be kept at and along the route to Ktah to support the safety of the Ktah restoration efforts. Once the situation in space and on the ground at Ktah stabilized, the war moved in a new direction, with Andolian forces taking much more aggressive stances, and heavily raiding Light-Bearer colonies and pushing the lines of battle back into Light-Bearer space. The political climate among the other human meme-groups became much more volatile at this point, as what had previously seemed, if unpleasantly violent, something that could be rationalized as merely a logical extension of the previous era's border conflicts was turning into something more disturbing. However, it was at this juncture that the Space-Born were revealed by successful raiding parties, thus considerably disrupting the political will of third parties for mediation. Throughout this phase of the war, the Andolians seemed to be winning, so to speak, but only by attrition. However, the Andolians were in fact committing only those forces necessary to continue to make minimal progress while holding back (and physically concealing) the rest of their production (greatly misjudged in quantity by Light-Bearer intelligence when on full war-time resource allocation), especially of next-generation vessels, for a reserve strike force. The third, and final phase of the war came swiftly (and not far ahead of renewed stirrings of calls for peace), with massive Andolian strike fleets taking Light-Bearer defenders by surprise in simultaneous attacks on five of their core worlds. Further complicating matters for the defenders was the supposition that, as had happened with Ktah, the Andolians would invest significant time and resources in asserting control over a populated planet. Instead, the Andolians mostly bypassed the planets after securing orbital superiority, completing initial planetary bombardment, and beginning kinetic bombardment operations. The infrastructure of the Light-Bearer core worlds was destroyed in a matter of days, as the Andolian fleets marched relentlessly on. The smaller Light-Bearer outpost worlds actually fared better, as they were deemed small enough to manage through more traditional means.

The planetary meteor bombardments were unexpected in scope, and utterly devastating, lasting, in the case of Cradle, the most developed of the colonies, continuously for well over two weeks. Bombardments did not cease until both sufficient debris was present in the atmosphere to make unsupported existence on the surface short-term untenable and all detectable planetary infrastructure had been damaged beyond likely ability to provide support. Third party media, when reporting on the aftereffects, would come to call the practice "Dusting a World" and frequent comparisons were made to the salting of Carthage, among many

other more horrific comparisons, depending upon the political alignment of the media in question.

Swright

Was this engagement premeditated by The Andolians, or precipitated by the atrocities of the defunct group? (Certainly it would seem the former, as the devastating effectiveness of the anti-Light-Bearer campaign would suggest.) Was there any diplomatic response by non-human powers? (Specifically, the Rlaan, Uln, or Aera.)

JackS

The Andolians had been preparing for some form of more intense military action as a contingency ever since the invention of the SPEC drive, but had no particular plans to engage the Lightbearers until they were witness to the Lightbearer occupation of Ktah. In particular, they did not deem conflict, which would no doubt be very costly in both lives and materials, necessary when expansion was still A) proceeding in an unhindered fashion, and B) going well for them relative to other powers.

The Rlaan, Uln, and Aera had not yet been encountered at the time of the Fraternal war.

Excerpt from Music Brainstorm: HUMANITY The Fraternal War would result in the Lightbearer memes becoming defunct, the liberation of the Klk'k, Shmrn, and Space-born, and, as a reaction to Andolian military dominance and the totality of Lightbearer destruction in the conflict, the stirrings of what would become the Confederation of Inhabited Worlds. It was not lost on the other major human groups that the Andolians were unapologetically responsible for killing more humans than any other group in history. A greater chance of survival through a more structured means of inter-meme interaction than armed conflict was a sufficiently common goal to bring together the, by this time extremely ideologically divided, human polities, but not sufficient to bind them more than loosely. The polity governing the dispossessed settlers, for reasons of jump network topology and lingering distrust and animosity did not join the Confederation.

The Fraternal War also marked the beginnings of rampantly increased militarization of budgets throughout human space. This tangible symptom of unease and distrust was only accelerated by contact with the Rlaan, Uln, and later the Aera, in the two centuries following The Fraternal War. This served to slow the pace of economic and physical expansion somewhat, but the intense R&D efforts were not without benefits, and contact with the Rlaan, Aera, or even Uln, would likely have been quite a different undertaking for a humanity not devoting itself to unkindly causes.

Formation of the Confederation of Inhabited Worlds

ADDME: More details on of post-Fraternal War founding of Confederation go here

5.7 Upon the Coldest Sea

Act Titles, Quotes, and Big-Picture Events in

Upon the Coldest Sea

5.7.1 Act 1: Hiroshima (mon ami)

Give me Christ or give me Hiroshima.

The Aera have invaded the Union of Dispossessed Settlers seeking to carve a path through human space to the coreward regions of the jump network. The Confederation of Inhabited Worlds lends increasingly direct aid while the Forsaken are driven further and further back in what are clearly little more than delaying actions against the far superior Aeran forces.

5.7.2 Act 2: As the sea begins to free them

*Mourn, England, mourn and complain
For the brave Lord Nelson's men
That died upon the main*

An official state of war is reached between the Confederation and the Aeran Ascendancy. The Aeran-Human border is ablaze with combat, and many Human border worlds are lost or compromised as the Aera strike first. Shmrn space is invaded, and the Andolian 9th fleet, sent to aid the Shmrn, is cut off. Victories by the Andolian 6th fleet, and Confederation 4th fleet blunt the Aeran advance on the Spinward front, but at significant cost in men and materiel. Aeran forces penetrate deeply on the center front, while much of the anti-spinward front is pushed to near collapse, save for pockets of bypassed Forsaken worlds. Confederation forces resort to scorched earth policies in many systems still belonging to the LIHW or Union of Dispossessed Settlers, completely abandoning the Diaspora sector, and regroup in more sustainable positions. Confederation fleets engage the Aerans in skirmishes and strikes throughout the center front, with profound carnage on both sides. Andolian counter-attacks all but eject the Aera from Shmrn space, reestablishing direct communications with the Uln. Andolian forces begin a methodical incursion into Aeran space on the spinward front, relieving some pressure from the anti-spinward front as the Aera redistribute their forces. The Rlaan watch intently, hoping to be able to avoid intervening, while putting significant effort into expanding their coreward possessions while humanity is busy fighting the Aera.

5.7.3 Act 3: Children of an unconstructed god

*Gaudete, gaudete! Liber est natus ex machina sapiens, gaudete!
Gaudete, gaudete! Liber est natus ex post-homo paternus, gaudete!*

The Andolians and the A.I. Quorum unveil the Grandchildren, the fruit of decades of research and material investment. A new class of thinking machines, designed explicitly with military application in mind (indeed, it is generally assumed by all other parties that they were originally designed for use against or for leverage with the other human polities), vast multitudes of Grandchildren, in the form of a veritable armada, issue forth from inside the hollows of Hephaestus, and begin an all out invasion of Aeran space. Taking advantage of wartime powers granted by the Confederation Senate in unintended fashion, the Andolians allow their Special Forces operatives to wage an unrestricted campaign against the Interstellar Church of True Form's Return without fear of Purist legal entanglement. The major Confederation powers play king-maker among the less than reputable and less than legal organizations, bringing in from the cold those

entities willing to assist the war effort, and removing from existence any competitors less eager to be of service, such as the Order of the Dynast Shrub. Some of these actions deeply anger various Ulnish clans, but the proximity of several fleets to Uln space deters overt action, and retribution takes the form of Uln relaying of intelligence to the Aera. The Simons are employed in overthrowing the corrupt, and externally funded leadership of the ISO as a precursor to instigating coordinated guerrilla actions from the pockets of Forsaken worlds behind the Aeran lines. Shaper forces make their first real impact of the war, as troopships full of Shaper Hulks are dispatched alongside Mechanist and Purth forces to reclaim worlds fallen to the Aera. The initial engagements by the Grandchildren are stunning victories, greatly demoralizing the Aeran forces, and disrupting their efforts to concentrate their fleets.

5.7.4 Act 4: The Sea on Fire

... [it] will not start a chain-reaction in the water converting it all to gas and letting the ships on all the oceans drop down to the bottom. It will not blow out the bottom of the sea and let all the water run down the hole. It will not destroy gravity ...

Admiral William Blandy on Ivy Mike

As the Grandchildren produce an increasingly impressive set of victories from the Spinward front and ever deeper into Aeran space, the progress on the other fronts is much slower. Aeran raiding parties continue to harass and impede. The Forsaken guerrilla attacks, while marvelous as a delaying tactic, can no longer be sustained, as the Aeran response has destroyed all remaining Forsaken colonies behind the front. Especially troubling, an unexpected Confederation defeat, due more to distrust and negligent communication than individual incompetence, coupled with the deployment of the Ascendancy's Leonidas class dreadnought reserves, has opened up Vega sector to Aeran assault, and many long developed worlds have been raided, threatened, and attacked. With the devastation being wrought by the Grandchildren, the Aera are increasingly desperate to either lure the Confederation into ill-planned action via destruction of ancestral worlds, or to construct a deep enough corridor that a spread of colony convoys may be launched in a last-ditch attempt to bypass Human space primarily via SPEC, retreading the waters that started the Rlaan-Aeran war. Fighting on the front becomes especially fierce, as both sides commit themselves deeply to each fray. Domestic Confederation politics boils and froths as assorted scandals are rooted out when entities are no longer capable of focusing the attention necessary to hide them, and the Andolian Protectorate woos the Shapers into their fold.

5.7.5 Act 5: Sailing on Embers

And all that remains is the faces and the names of the wives and the sons and the daughters

Gordon Lightfoot - The Wreck of the Edmund Fitzgerald

With the Grandchildren winning some key decisive victories in Aeran space, and the incursion into Vega Sector blunted, the long term outcome for the war seems increasingly likely to be an Aeran defeat. However, the cataclysms of combat have quieted somewhat as both sides have exhausted themselves, and any final closure is surely years, if not decades away, leaving much time for potential reversals. The Rlaan are the

obvious short-term beneficiaries, but it is clear that they are somewhat uneasy about the Grandchildren, having been taken by surprise by the revelation of their existence. On the domestic front, the Confederation is undergoing profound political upheavals. The Highborn have been cowed into silent disgrace as a slew of rumors about their involvement in illegal activities in Forsaken space issues forth following an orchestrated series of information leaks. With the Grandchildren firmly in their camp, the Andolians have finally found the trump card in their long contest with the Shapers as to who would helm the march to post-humanism. With the Shapers now aligned with the Andolians and their traditional allies, the post-human agenda now dominates the policy-making bodies of the Confederation. The Forsaken, once again dispossessed, are scheduled to once again be relocated, but this time will remain under the auspices of the Confederation, with semi-autonomous status, sharing in the opportunities available to other humans. As humanity adjusts to both life during wartime, and the possibility that humanity's children may be much further on their way to surpassing them than expected, the first trickle of Aera who have come to believe that the future of their species may rest in siding with humanity lest they be erased by it journey to Uln space to conduct the first of a series of clandestine meetings with Andolian and, later, Confederation agents.

5.7.6 Black Paralysis

ADDME: Ancient Library

ADDME: Research into unlocking of inter-Ancient region gates goes here.

5.8 Foundering Inheritance (Orion region)

One of the key points about the Foundering Inheritance era mentioned in the conversation concerning the overall VS universe time-line is that the Rlaan do not realize they are encountering a new alien entity. The destructive force that renders the domain of the Rlaan Assembly broken and the Saahasayaay nearly extinct is first encountered as the local variant of the nano-plague on the other side of the locked gate (the expedition of the 10,000 finds no local nano-plague, as the Ancients in that region had been supporters of the status quo) in the Saahasayaay home system. As the variation between observed nano-plague entities in local space was greater than that between the two spaces, seeing more of the ubiquitous nano-manipulators on the other side of the locked gate was seen as mildly interesting, but generally unremarkable. It may have even been somewhat unremarkable, save for the other-side nano-plague recognizing the symbiotes in the Saahasayaay (see wiki description of Saahasayaay life cycle) and activating in a decidedly organized fashion.

It is no coincidence that the habitable worlds of the explored jump network are disproportionately suited to oxygen breathers, and it is no coincidence that near the Saahasayaay system there are several other chlorine worlds, and near the Rlaan homeworld, several methane-ammonia systems, and another locked gate. These areas were provided for neighboring Ancient groups, resident across the locked-gate boundaries. The symbiote in the Saahasayaay was a tool of one such Ancient neighbor, and the other-side nano-plague, another tool, recognized its kin, even in its kin's damaged state. The other-side nano-plague effected changes to fix the symbiotes, allowing the other-side nano-plague (hereafter OSNP for brevity) to use the Saahasayaay as a conduit for information, and then for dissemination of the symbiote fixes back to the Saahasayaay homeworld. The eventual goal of both OSNP and symbiote was simple, if vain and likely futile: to prepare

the way for a return of their long-dead Ancient creators, existing currently only as dormant information. The petty nature of this goal was in keeping with the petty nature of the group of Ancients who had crafted this contingency plan. In comparison to the local Ancients who had worked and fought around the Uln homeworld, reaching a status almost as children to the TWHON, these Ancients were practically savages, vain and limited playthings of TWHON aspects that, if allied to the Ancient cause, were possessed of rather less endearing parental approaches.

While the OSNP increased its activity, building progressively larger colonies, the colonies building macro-structures, and the macro-structures becoming macroscopic machines themselves, it remained resource limited - the immediate region of several star systems was quite barren, strip-mined in its hey-day during the Ancient-TWHON war, and then ravaged in the aftermath, and it would be some time before the OSNP would be able to produce drone ships either as an end product or to transport goods from richer systems. Neither could the OSNP act directly in our region, as our own nano-plague would react negatively to it if it were to try to expand. Instead, the erstwhile-Saahasayaay (not truly Saahasayaay anymore, but merely avatars for their finally flourishing symbiotes) staged a revolt, taking numerous Rlaan civilians as hostages, knowing this would delay the Rlaan response long enough for their ships, now crossing freely into the other-side to be upgraded by the OSNP - if not yet to anything remotely resembling Ancient standards, then enough to be a great surprise to the Rlaan when the time for combat was to finally come.

Bargaining, in a very uncharacteristic way for Saahasayaay (this itself already greatly disturbing the Rlaan), for the safety of the Saahasayaay outside of the home system with the lives of the Rlaan Workers, the ex-Saahasayaay gained both more crucial time and powerful weapon: the Rlaan Workers were themselves modified by the OSNP to have an innate desire to sabotage, kill, and disrupt - while the Rlaan would check them for bio-weapons and such, the Rlaan mindset precludes consideration of Workers as themselves being instruments of violence, and so clean bills of health and belongings would see them released back into Rlaan society. In a move reminiscent of the battle of Puebla, the Rlaan forces charged directly through the jump-gate and the inevitable fixed defenses, rather than flanking with SPEC. The Rlaan suppression fleet met with horrendous casualties at the hands of the upgraded Saahasayaay vessels, and, the first glimmer that more than just a Saahasayaay ploy to escape Rlaan rule via the lock-gate was underway, upgraded vessels of remnants of the Rlaan expeditionary force itself (there having been some resistance in the Saahasayaay overtaking of the expeditionary force). Though unsuccessful in retaking the system, the attempt had bought the Rlaan valuable time, though they did not then know this, for the OSNP ramp-up would be significantly slowed by the damage to many of the already quite small number of vessels at the command of the OSNP and ex-Saahasayaay.

Nonetheless, while the Rlaan re-enforced and re-grouped, planning to send an even larger force through, this time via SPEC, this remained a "local" issue, with news of the Saahasayaay rebellion being an event not shared with the human powers. However, when, shortly after returning to Rlaan space, the modified Rlaan Workers set about their assigned terrorist tasks, the entirety of Rlaan space was overtaken with hysteria and paranoia - Workers committing violent acts of terror, even if the actual damage was so small as to be trifling, and most of the Workers in question perished in the execution of their tasks, was so antithetical to the Rlaan world view of the possible that it threw their entire society into gridlocked turmoil. This was to prove fatal for long term Rlaan aspirations, and to be a saving grace for all other species in the region, as it was a disaster

now too large to keep quiet. Fleet movements that could have all directed themselves in a bloody, but likely ultimately successful assault on the OSNP beachhead, were curtailed, as the Rlaan, in paranoid meltdown, saw threats everywhere that the released Workers could still be, and held back significant fleet resources for use with the Rlaan Enforcers to retrace the paths and hunt down every one of the "abominations."

When the second attempt to retake the Saahasayaay homeworld and the lock-gate failed (even more poorly than the first, thanks to new waves of ships of unknown design), the fact that the situation was exceptionally dangerous became increasingly apparent to all parties. Joint efforts were undertaken to organize an interspecies response. As these efforts began, the first counter-attacks began to issue forth from the lock-gate. As time wore on, the enemy ships improved in design rapidly, if only slowly in number. Analysis of probable causes leads to the the gate in (formerly) Forsaken space from which the fleet of 10,000 left being locked from both sides, isolating both fleet and research colony from the rest of known space. Strikes are radiating further and further out from the lock-gate, battles are slowly worsening in per-ship losses, and the combined forces of the extant species are being repeatedly forced to withdraw to keep from being overrun. The situation is grim, especially as it is obvious that time is not on the side of the newer species. It is only by becoming much grimmer that the situation will improve.

As the first wave of nearly-Ancient quality (notably, nearly of the rather limited quality of the other-side Ancients) drone craft is completed and larger craft construction commences and continues, it is launched en-masse in a series of attacks against the Rlaan, both fleets and worlds, carving a vast barren region into the Rlaan Assembly's territory. The warfare engaged in is unrestricted and brutal, with myriad Rlaan colonies churned into pulp from orbit. There are no attempts to subjugate, merely a sweeping purge, the first pass of what seems likely to be many to come. Rlaan fleets and allied craft can do little more than to delay the drones fleets as civilian craft desperately try to safeguard what little can be saved from as many as possible of the worlds in the path of destruction. Rlaan worlds built up over hundreds and thousands of years, teeming with billions, are turned into abattoirs in battles often spanning only hours.

However, this coordinated use of Ancient tech stirs TWHON fragments slumbering in the other-side, and the resolution of this conflict is set in motion. A single, minuscule TWHON body fragment plows straight through into our region, bypassing the unprepared OSNP, and engages the drone craft. Though the fragment is destroyed, the drone craft are massacred in great number and almost universally damaged. All OSNP and ex-Saahasayaay forces retreat to an expanded beachhead area in the systems near the lock-gate, the drones being recalled for repair and re-deployment against the stirring TWHON fragments in the OSNP's own region. Meanwhile, the presence of a TWHON fragment in our own region fully activates our own nano-plague (it already having a many hundreds of years head-start on the OSNP due to our own FTL traveling). Nano-manipulator factories begin defensive preparations against subsequent TWHON incursion. Reconnaissance of the beachhead proves difficult, and recon through the lock-gate, nearly impossible. However, it becomes clear that the preparations being made at the beach-head are for an OSNP/ex-Saahasayaay escape from their region, and no longer directly a pacification of ours - the OSNP are losing. Though drone-craft from our own Ancient's immuno-defenses have begun to appear in number, they do not cross over into the next region to assist - they still obey the long meaningless borders between their long dead masters.

With the evidence of a distinct drop in craft from the beach-head area signaling a likely imminent collapse, the joint Human, Grandchild, Klk'k, Rlaan, and Aera forces embark upon a massive suicide mis-

sion of xenocide - having realized that the OSNP cannot operate freely in our region except through the ex-Saahasayaay, and that they could not hope to defeat the OSNP forces in direct engagement, they instead chose to exterminate the Saahasayaay hosts to the Ancient-designed symbiotes and as much of any construction infrastructure as they could manage. The strike was well-timed, and the tactic not one the ex-Saahasayaay had weighted with high probability, having been too colored in their view by lingering effects of their time in Rlaan service. The Saahasayaay homeworld was carpeted by anti-matter bombs even as the fleet delivering them was being savaged by OSNP drones. It was unclear exactly how successful the mission had been - very few craft returned, and there were too many unknowns as to other potential bootstrapping sources for the OSNP. However, only days after the raid, TWHON fragments broke through the locked gate, signaling the totality of the OSNP demise in their own region, and the entire Saahasayaay home system, when it was next visited, was found to be slagged. Whether through previous TWHON attrition, or superior preparation, our own drones were faring somewhat better against the TWHON fragments. Also remarkable was that our nano-plague took to using jump-point deactivation as a time-gaining tactic in fighting the TWHON fragments, which either could not or would not be bothered to reactivate the jump points and instead would travel through some more advanced SPEC-like manner directly between stars in the absence of jump points. Though the TWHON-nano-plague fight raged, the priority of the extant species remained the re-locking of the locked gate. The expedition charged with doing so was assembled as quickly as possible given the extreme losses all parties had already endured, and expected to endure again.

Upon reaching the, now disconnected from the jump network, former Saahasayaay home system, they found no fleet waiting for them, instead, they found a single, small TWHON fragment body and a series of slagged worlds. Much to their surprise, the TWHON body completely ignored them as long as they remained distant from the lock-gate. When local drones engaged the TWHON fragment and it chased the drones out of the system, the expedition set up to lock the gate and retreated.

Though the few TWHON fragments that entered our region were eventually defeated (the long-active nano-plague prevented local procurement of re-enforcements, that being the true key point of the nano-plague, the drones being entirely secondary, as Ancient fleets were assumed to exist at the nano-plague's creation) the TWHON-drone conflict made the area around the lock-gate unfit for habitation both through further destruction of worlds and severing of jump-links.

At incident's end, the Rlaan were no longer the power they were, with many worlds destroyed, many more damaged, their fleet broken, and the breach of trust that started the incident a sticking point that would be quite well remembered in the coming period of rebuilding - one they would pay dearly for in control over their future, and one which would lead the Rlaan-Briin to societal dominance with the support of the Post-Human powers. Moreover, there was now a great pallor over the futures of all of the extant species, as it became clear that this could not be a lasting defeat of the TWHON - rather, the very stirring of our nano-plague, it's true purposes at last revealed, would undoubtedly bring more suffering in the future.

While the Post-Human powers suffered no territorial damage, their fleets had been savaged in their engagements with the ex-Saahasayaay. The Rlaan fleets had been all but destroyed, and many of those ships from other polities that had attempted to come to their aid, or even assist in evacuating their worlds had suffered similar fates. So devastated were the Rlaan at the end of this incident that, in a number of systems, they needed to seek assistance merely in cleaning up their dead. The situation was made all the more

onerous by the hyper-activity of the nano-plague - even though not antagonistic in nature, its own production schedules caused it to infest and interfere with numerous aspects of normal economic production for the extant species. Add to this the great loss of civilian hulls from the hail-Mary assault on the Saahasayaay homeworld, and the extant groups are all greatly diminished, if not as broken as the Rlaan Assembly. Unable to confirm whether they had actually killed all of the ex-Saahasayaay, it was not even clear to what degree this was truly even a victory. The fear of their return would play out in fact and fantasy over the next few thousand years. Closing the gate, rather than saving the extant species, proved only to be an anti-climax, void of the solace of accomplishment, false or otherwise. The remaining players in the galactic game were forced to face the unsettling reality that, at most, they'd only delayed an inevitable confrontation with something inherently dangerous to their continued existence.

One of the things that should be mentioned more explicitly is that the above is only a description of what was going on in Rlaan space during this period. The events in Human/Post-Human/former-Aeran space are fairly important too, and brought all the more to a head because of the fall of the Rlaan - it is worth remembering that a key reason that warfare was fought in a "restricted" i.e. non-genocidal/collateral-damage-minimizing fashion in the UTCS era was the Rlaan intolerance for civilian body counts (so if you were going to butcher planetary populations, you had to keep it on the serious down-low). With the Rlaan gone, there was nothing but human conscience to prevent atrocity, which has been shown repeatedly to not be a historically viable solution. Add to this the tensions between those self-identifying as "human", namely, the Purists and allied factions - the Forsaken still remaining distant from the affairs of the Confederation worlds - and those identifying as "post-human", namely, the Grandchildren and the Andolian Protectorate (the latter having expanded via negotiated annexation to include by this point the former Unadorned, Mechanist, and Shaper polities). The destruction of the vast majority of the Confederation and its constituents' military forces (worth noting that the majority of the ships on the "suicide run" on the Saahasayaay home system were civilian vessels hastily armed as cannon fodder due to a lack of remaining military forces), along with this tension, provides a recipe for violent unrest, even if the human worlds themselves were not ravaged. Likewise, even before the actual destruction of the fleets, there was significant political maneuvering occurring within Human/Post-Human space concerning both the fleet of 10,000/other expansionist projects and scheming by various groups to position themselves to profit from what was initially seen as a minor mishap in Rlaan space.

Sensing imminent Protectorate weakness, the Shapers plot and execute a revolt, making one last grab for control of post-human destiny. With internal stress between the post-human and human elements of the Confederation already near boiling, the Shapers hope to ignite a civil war with their revolt, believing that they will come out on top when all the dust has settled and no other group remains to stand against them.

Preliminary movements of the Shaper revolt involve prodigious use of bio-weapons, including morphologic virus packages aimed at Purist, LIHW and other traditional human populations in Confederation space. The Forsaken, the bulk of their population now in former Aeran space, are not targeted due to extremely low population density. Chief among these virus packages are ones that overwrite the germ-line DNA, causing erstwhile human parents to either run sterile or produce offspring with Shaper-designed genomes. Viral packages for the Klk'k populations are more simply plague oriented, and, as with the human packages, are designed for stealth and long incubation periods. The Shapers have also been producing modified fungal

strains that act as factories for "Quickships," extremely fragile but extremely cheap in-system pilot-less craft. The Quickships require engines and weaponry, but are otherwise self contained. As they are considered totally expendable, great liberties are taken with the safety, reliability, and sustainability of the weapons and engines produced for the Quickships - Quickships would invariably die from radiation and heat stresses in prolonged service, even if they were not engaged in combat.

As their bio-weapons begin to activate, the Shapers actively revolt, laying a surprise siege to Kubernan. However, their intelligence gathering proves mortally flawed when their attack on Hephaestus is insufficient to halt production of Grandchildren. The blockade of Kubernan greatly reduces the flow of resources into Hephaestus, but the failure of the Shapers to break the Grandchildren's homeworld means that they cannot readily press home their intended beheading of the Andolian Protectorate. While the Shapers sense this as a profound intelligence failure on par with the American aircraft carriers not being present in Pearl Harbor during the Japanese sneak attack, this intelligence failure is to prove even more disastrous than they have anticipated for their already risky gamble of a plan.

The Andolian-led response of the Protectorate is swift and brutal. Having actually made extensive preparations for a Shaper attack back during the cold-near-war period prior to the Aeran war and the unfurling of the Grandchildren, the signal is given to activate a number of deep-space asteroid bases set up a few week's SPEC from each of the core Shaper worlds. These bases will spend the next several days accelerating at maximum thrust before activating their SPEC drives and proceeding on a collision course.

Meanwhile, plague and the creatures dubbed "murder-babies" for their habit of consuming their mothers just prior to expected birth, the latter turning out to be an extremely rapid-growth form of Shaper Hulk, inflict terror upon the human populations of the Confederation. The Andolians, in their sterile compounds, and many Mechanists, devoid of the necessary pathways for infection, are not directly affected, although there are riots and violence in the off-worlder sections of Andolian holdings, and the Unadorned will find themselves devastated by the Shaper plagues. The Shapers embark on a widespread propaganda campaign, and use the promise of cures and vaccines as leverage to gain support from the human governments. Several capitulate outright, and many more are overthrown by their own populations, most, at this point, having long preferred to side with the Shapers over the Andolian led Protectorate and their emblematically non-human Grandchildren. The Shaper revolt is now a full-fledged civil war.

After six centuries of existence, the Confederation is now dead in name as well as fact. The Rlaan are powerless to do more than watch in horror, and the Forsaken and Marked-Aera are hard pressed enough as it is just trying to keep any potential plague-bearers out of their space. The Uln bide their time, preferring to wait until one side is closer to victory before considering any benefits possible from backing one side or the other or pursuing territorial ambitions in the resultant power vacuum.

With the bulk of human space-naval forces already having been destroyed in efforts against the ex-Saahasayaay, the engagements seen are quite different from those during the Aeran war. The Confederation Joint fleet has completely disintegrated, with individual ships falling to one side or another of the conflict, or simply returning to the crew's system of origin. Small numbers of ships, many of them conscripted civilian craft, or Regional Guard forces are often deciding factors in individual battles. Capital engagements are only seen around key worlds, and ground engagements are frequently fought between small forces among swarms of ambiguously allied civilians. Neither side engages in significant restraint, and the toll in collateral

damage is staggering.

While the Shaper assault on Andolian space gains little headway, and the blockade on Kubernan is broken, the retreat of Protectorate forces to defend their own territory has left the Shapers and their "allies" a fairly free hand to attack and consolidate power in the rest of the former Confederation. In a move that signifies to all with sufficient understanding that the Shapers no longer consider mainline humans to be members of the same species as themselves, the Shapers deploy mind-altering parasites to ensure the submission of both willing and protesting conquest alike. Throwing the resources, both material and population, of their vassals into the fray as cannon fodder, the Shapers are able to keep Kubernan and Hephaestus under constant threat of attack, forcing the Grandchildren to be deployed defensively rather than be allowed to engage in strikes against their own forces. With the fall of Sol, Bantam, and New Camelot, the core region of humanity's oldest colonies is almost entirely in Shaper hands, with the Purists, ISMG, and High Born polities in collapse.

Attacking through space ostensibly controlled by the crippled Rlaan, but in truth barely patrolled, the Shapers attempt to plague-bomb the Shmrn worlds, releasing a virus package designed to turn future Shmrn generations into Dgn. Given the widespread panic in the wake of the war, countermeasures are in place, and the effect, as intended, is more psychological than military. This act, however, pushes the neighboring Uln to believe that neutrality would, in the end, be no armor against a victorious Shaper entity, and the Uln throw in their (small) lot with the Protectorate.

This would prove to be the peak of Shaper aspirations for dominance. Coinciding with the impact of the asteroid-base kinetic weapons on nearly four-dozen Shaper homeworlds, the Protectorate launched a counterattack spraying forth from Kubernan, spearheaded by a fresh crop of Grandchildren produced at Hephaestus. The Protectorate strike force handily defeated the vassal-ships surrounding the recent Shaper conquests. However, they neither charged toward the Shaper worlds nor attempted to liberate the conquered human populations. Instead, the Protectorate had come to the conclusion that any world already conquered by the Shapers was too polluted by Shaper bio-weapons, traps, and incubators (human hosts being used to produce new Shapers), and was safer cleansed than liberated. Using what would eventually be revealed as a set of bio-weapons of Rlaan origin, the Protectorate fleet embarked on their scorched earth and flesh campaign, destroying every extra-planetary structure found, raining down orbital bombardments upon every exposed spaceport and industrial area, and leaving behind a cloud of extremely voracious organisms capable of rapidly degrading planetary human populations to "manageable levels" - especially given the Shaper efforts on every conquered world to make sure their own bio-agents could have mass effect.

Certain that they could easily best the Shapers in direct engagements, the Protectorate sought out existing and potential hosts within Shaper reach and exterminated them with extreme prejudice. Both Shaper and Protectorate sides had known from the beginning that there would be no negotiated end to this conflict - the vast populations of the Purist and LIHW holdings, however, had never anticipated this war, and yet were the ones doing the bulk of the dying, being killed by the 10s and eventually 100s of billions. The last contribution of the Unadorned before succumbing entirely as a political and cultural entity, having been devastated by the Shaper plagues, would ironically feature heavily in accelerating the demise of mainstream humanity. Following on from the Ancient library research that had led to knowledge about the locking and unlocking of the far-gates, the Unadorned had discerned how to temporarily disrupt normal jump points.

This technology was integrated into the largest remaining Protectorate fleet, just as the last few surviving Unadorned were themselves integrated fully into the Andolian step-populace. The Culling fleet, as it would come to be known, used this new ability both to delay Shaper reinforcements and to protect their own rear. While the disruptions lasted only a day or two, that was frequently more than enough time for the fleet to crush the Shaper presence in a system. The support of their vassals pulled out from under them, and a third of their most developed worlds now without an inhabitable surface due to the impacts, the outcome of the war had been determined, and only the shape of things to come remained to be decided.

The human population of the old Confederation no longer a potential threat-in-the-making, Protectorate forces throughout the entirety of their space rushed out from their defensive deployments and began attacking relentlessly. The rush came from the perceived threat of the Shapers fleeing out of the jump network, slinking off to where they may not be found for centuries, an ever-present ghost of a menace, leaving all the bloodshed for, in the end, naught in terms of safety. However, owing to some degree of confidence in their eventual victory, the cultural unity of the Andolians, and, perhaps more so even than the other two, to not having the AI Quorum cease its infiltration of Shaper computing systems when the Shapers joined the Protectorate, the Protectorate had a much better informed covert operations presence in Shaper space than the Shapers in the rest of the Protectorate.

The Shapers had not begun work on their escape efforts until after the Culling fleet's offensive began. Though the preparations were still ongoing, the distributed nature of the Shaper efforts made it unlikely that sabotage would sufficiently slow the progress to allow Protectorate forces to reach all systems before an exodus could occur. Rather, the Protectorate's covert operatives were employed in gathering information as to the destinations of the Shaper vessels. The seed fleets were allowed to leave, but would either find themselves ambushed when they came out of SPEC to resupply (the key point being that, absent fuel, they would no longer be threats to meaningfully flee the ambush), or, for the sub-light "drifter" fleets, chased down and exterminated. What few Shapers slipped through the Protectorate's net would no longer constitute a people, a culture, or anything other than stray scattered individuals, living out the rest of their lives in exile. Historians would say of the war that, despite the Shapers' superior intellects, which had led them on what should have been more successful strategies, it was the superior Andolian knowledge of the situation at hand that determined the outcome of the war. A combination of ignorance and mild hubris (belief, not that just that they could win, but that they deserved to, for being "better" than their Andolian competitors) proved fatal for the Shapers.

However, before their demise played out, the Shapers did leave a few more marks. The punitive plague-raid on the Uln (a simple killing virus) was far superior in efficacy to that on the Shmrn, and the Uln would prove notably cowed by the experience in their later negotiations with the First Empire. Realizing that the bio-weapon used by the Protectorate was of Rlaan origin, the Shapers incorrectly concluded that the Rlaan had collaborated with the Protectorate in engineering the Shaper demise, and likewise sent the Rlaan a "farewell present" targeting their civilian population - less perhaps a parting shot than a warning that the Rlaan would not be immune from the Shapers' intended return. However, even in their shattered state, the Rlaan were adept at producing counter-viral agents, and the plague bombing was perceived more as an incomprehensible act of deranged malice than an action of war. This act by the Shapers was to prove fundamental to supporting the Protectorate arguments to the Rlaan, utterly aghast, nauseated, and made

profoundly uneasy by the Protectorate tactics of the Culling fleet, that the Shapers were so deranged as to leave euthanizing them as the only option. Indeed, this act was so fundamental to the Protectorate arguments that there is much speculation as to whether Protectorate operatives may have played a role in convincing the Shapers to attack the Rlaan.

The Shapers sufficiently defeated, the Protectorate turned now to salvaging, rather than slaughtering the human survivors of the post-human war. Quarantine centers were organized on marginal, devastated worlds long abandoned by the Forsaken during the events of the Aeran war. There were so few survivors, that the operation, even given the ravaged nature of the Protectorate fleet and economy, was feasible. Actual Shaper worlds, rather than briefly conquered worlds, were not landed on for centuries, instead being dusted with radioactive materials, bombarded with asteroids and anti-matter bombs, seeded with counter-terraforming machines, and kept under constant vigilance and quarantine until no signs of life were visible. They would remain under quarantine even after this point until ground crews, only now visiting the planets, could verify no residual "gifts" lingering on. Where intransigent Shaper bio-forms were still found, they were rooted out until the planets were deemed sanitized, sterilized, and untainted, only then becoming eligible for re-terraforming. Rlaan, specifically Rlaan-Briin, were brought in to help clean up the bio-weapon mess that was the former human inhabited region of space. Compensation for this assistance, along with the new political and military realities, was to make the Rlaan-Briin, as an anthrophilic force within the Rlaan, the dominant group in Rlaan politics.

On a sad aside, the Dgn died along with their masters. Indeed, the only Dgn to survive the war would be those Dgn offspring inflicted upon the Shmrn by the Shaper terror attack.

While many former human worlds were deemed too dangerous for human habitation, they were a fine environment for a new generation of Grandchildren to settle, for the first time moving out of their Andolian cradle. Backed by these new colonies of Grandchildren, the Protectorate would eventually become a different entity - the First Empire, expanding to include Shmrn, Uln, and eventually Rlaan space under a single sovereignty. This expansion would be one of implied, rather than exercised force, and would be performed through a series of peacefully negotiated annexations.

Under the Empire, there would be a distinct split between those populations merging into the increasingly collective population of Andolian origin and those relegating themselves to an increasingly zoo-like status, preserved as the Ur-Human, Ur-Aeran, Ur-Rlaan, etc. on worlds both garrisoned under and protected by Grandchildren. The Grandchildren themselves would change as well, the garrison forces becoming increasingly detached from the path of the Empire, while the Grandchildren who became settlers of the former human worlds would become vital participants in all aspects of the Empire. As millennia passed, these divisions would come to have names, the Legion, the Ur-, the Firstborn, and the Inheritors, respectively. There also arose another class, beings constructed to bridge generational gaps within the Legion, who, due to their indefinite lifespans, were known as Methuselahs. Though a very small portion of the total population, their role in monitoring and mitigating the negative effects of cultural drift would give them important positions within the Empire.

The Pax Legion would last for many generations before interruption by ex-Saahasayaay forces that had regrouped outside the jump network for some millennia. While the war was brutal, it was decisively won with knowledge gleamed from study of Ancient library information. However, evidence mounted that the

aggression between the two sides both using vaguely Ancient derived technology had served to further rouse TWHON entities. The majority of the Legions would end up heading off in a mass exodus to dwell around the deep-space devices responsible for maintaining the jump-network, as these would provide cover for further investigations into Ancient derived technology and limit the danger to the Ur. The Inheritors would remain behind to pursue their own ends absent the Legions' supervision, with maintenance of contact and mitigation of drift falling to the Methuselahs as the go-betweens.

This arrangement would last only for a few centuries before, in a series of tragic confusions, the return of the descendants of the 10,000 would once more break the peace.

5.9 Foundering Inheritance (Fleet of 10,000)

To be discussed later.

5.10 Rimward of Eden

To be discussed later.

5.11 Post Rimward of Eden

To Be Discussed later.

Chapter 6

UtCS: Player Character Plotting

6.1 Dramatis Personae

- Deucalion (Player Character)

Deucalion is a human, albeit of heavily modified genetic stock and augmented with numerous implants (the latter being the norm among the citizens of the Protectorate, and the former being a somewhat distinguishing, albeit hardly unique, feature). He was raised from near-infancy by Klk'k on Ktah after the untimely demise of the craft carrying him and, so far as could be discovered, anyone with any claim to him. He remained on Ktah throughout his youth, though visits alongside his adoptive family to other Protectorate worlds were not unheard of, if infrequent. His first long term separation from Ktah and family came when he attended First University on Kubernan. Having completed his studies in Computer Science, Historical Analysis, and Xenolinguistics, he returned to Ktah for his Universal Service requirement, his aptitude exam placing him into Officer's training at APSWAK (Andolian Protectorate Space Warfare Academy at Ktah), where he was trained as a pilot.

At APSWAK, Deucalion met Lauktk, a Klk'k flight mechanic who remains assigned to Deucalion's wing when they both go into active duty. They become very close friends, and Lauktk later becomes a bond-mate of Deucalion's adoptive sister. Upon discharge, Deucalion is recruited to return to APSWAK as a flight instructor, while Lauktk takes on a position as a starship mechanic working for the Protectorate Fleet shipyard orbiting Ktah. After a few years of saving up, Lauktk has accumulated enough resources to purchase his own vessel, and contacts Deucalion, who agrees to pilot the vessel.

At the start of the game Deucalion is 28 years of age. He has left his position as a flight instructor at APSWAK to pilot his best friend's ship, with the first launch of the vessel occurring only a deciyar ago. However, only a week into their travels, a Luddite attack crippled the ship and forced an emergency landing on an underdeveloped colony world in Cephid 17 that neither Lauktk nor much of the cargo survived. A few weeks later, ownership and insurance issues resolved, the ship has been moved and repaired, and what systems that time and money could afford have been replaced. Likewise, in large part due to his genetic modifications, Deucalion has mostly healed physically, if not mentally.

Finally ready to return to space, he carries with him the cremated remains of Lauktk and the far heavier burdens of guilt and the untimely broken dreams of the being that was his closest friend.

- Lauktk (deceased) (Klk'k)

Deucalion's best friend, flight mechanic and companion throughout their stint in the Protectorate military.

- Mai (Klk'k)

Deucalion's adoptive sister, a Klk'k.

- Mirabel (Human, designer genome)

One of Deucalion's former squad mates.

Hers is a striking figure, a dark-elf visage conjuring the essence of a Boris Vallejo piece writ in flesh. From indigo skin to hair equivocating with metallic sheen between purple and white, she is clearly a work of gene-smith's art. There is, however, neither love nor thanks to be had for her crafters. She was commissioned by sexual sadists with pockets deep enough for expensive toys and fashioned by a business group willing to sell scruples and humans alike. Fortunately for her, she was liberated from the facility where she was being raised before her erstwhile owners could collect her. She, along with a number of other constructed beings gained their freedom when the complex was raided during the Blooding of the Purth some thirty years ago. Mirabel has spent her entire adult life in service to the Andolian Protectorate. She first met Deucalion during his UniServe, when they were both posted to the same vessel.

Minor Characters

- Jenek (Human)
- Simon XII

6.2 Scenes out of time and sequence

- Deucalion and Mirabel after Lauktk's death

"Mommy Dearest": AP slang/jargon for the Andolian Protectorate Ministry of Defense.

Deucalion is sitting alone at a table in a spaceport bar/restaurant, silently watching the flow of patrons, passively absorbing nearby conversations, and working with only mild interest through his meal. Mirabel walks in and sits down at his table.

Deucalion (without particularly looking up): "I see you were on Kubernan when the Aera decided to wander coreward - or was it Hephaestus? Either way, not like you to be so far from the front." (Turning his head up to look directly at her) "Less like you to be here now."

Mirabel: "Is it that obvious?"

Deucalion (with the first signs of friendliness to his response): "No." (Smiling) "Only someone already familiar with how quickly your hair reaches shedding length could tell how long it's been since your sacrifice to the guardians of sterility."

M: (sincerely) "How - how are you...?"

D (shaking his head): "I've been better, but I'm sure Mommy Dearest didn't send you here for a hand-holding session."

M: (More formally, with slight avoidance) "It was on the way. And I do need an answer - how are you?"

D: "As a friend, or as an officer?"

M: "My time is too short right now to be anything but both."

D: "Then I'm not ready to say yet. I need to work through this before I can tell you which of the other sides I'm going to come out on. The timing is lousy, but, some things set straighter and more quickly than others."

M: "I understand."

D: "Do you?"

M: "We miss him too."

D: (with a lopsided grin) "Sometimes I think it's only when you say 'we' that I can really trust you mean 'I'."

M: (With wry humor) "WE understand. But the timing is all the more unfortunate..." (getting up from the table) "When you return to Ktah, I'll be waiting for you. We'll talk then."

D: "No, you won't. You'll be there, but you won't be waiting, at least, not waiting for me."

M: "You know I - you know, Deucalion, you KNOW." (brief pause) "I have to go."

D (as she turns to leave): "Mirabel - it was good to see you."

M: (turning back) "And you. But, be well - I'd prefer to remember you when you smiled more easily." (Mirabel smiles slightly, and leaves)

- Deucalion and K'hoama, when Deucalion first approaches his ship in the hangar

K'hoama: Hey, you, HU-NAM! Nice tats. (Points at the Llama) That our ride?

Deucalion: Doctor K'hoama, I presume.

K: Please, call me Larry. No one else does, but I'm a Klk'k of leisure and I've been told it suits me.

D: ...

D: You do realize I'm not even going to try to figure out what century's archives I'd have to search to comprehend that joke

K: Bah! Lauktk always said your sense of humor was underdeveloped. Still - (K'hoama flashes a toothy smile and embraces Deucalion, arm to arm)

K: It's good to see you up and hopping. From the crash report I expected something worse, but you look at least half as hale as when I saw you last at the bond-set festivities.

- Interlude 0: Dreams and Nightmares of Our Fathers Passed

Turn and face the strange

Ch-ch-changes

Just gonna have to be a different man.

David Bowie - Changes

[Deucalion] [overlap with credits?? - an interlude?]

Memories. Old. Older. Ancestral. External.

They taste different.

Dreams, like memories, passed down from parent to child. External, yet encompassing - when co-opted, personal.

Dreams. False memories, near memories, fantasies pleasant, surreal - tasting of incompleteness.

The Klk'k do not dream, their unconscious landscapes barren, the troubles of their worlds processed only in lucid detail.

I must have confused them - scared them perhaps.

Nightmares.

External, induced

Remembered, relived

Archetypal, developmental

Abstract.

Remembered, relived - recurring

A personal taste

My nightmares have always tasted of memory.

My memories

EVENTS IN INTERLUDE 0

Deucalion recovers from the events that killed Lauktk

Aera invade Forsaken space

6.2.1 Intro Monologue

[A Dead Man's Ship (end of interlude 0)] [A quiet shape is sitting towards the end of a not particularly crowded bar. There is a quiet hum of lazy activity, and the bar is swaddled in the awkward grays of artificial twilight. Despite an odd hue to its skin, perhaps the legacy of a Shaper ancestor or the enduring design of

some gene-smith's art, it is clearly human, and clearly lost in thought. Two glasses sit in front of him, one an off-world ale, eerily beautiful in the subtlety of its contrasts with those of Terra, the other a glass of ice water thinly disguised with a mint leaf. Both glasses are untouched, both literally and figuratively, while the man stares somehow both at and through them all at once, as if trying to will them to complete the act of drinking on their own, or demanding that they return his gaze with submission. The vaguely confused motions of the barkeep, unsure now of how to serve him, break his brief trance. The man's shape, the complete discipline of his stillness only apparent with the liquid nature of his motion, twists to direct his dark eyes up and across the marble slab, fixing restless on the earnest host. A slight curl appears at the edge of the man's lips. The glimmer of a compassionate smile, a subtle smirk born of hubris, or the joy of a man rescued from his own mind, the expression is enigmatic, unrevealing, and ephemeral. The mouth opens again and he begins to speak, directing his monologue towards the barkeep, although it is not clear that the audience he craves includes anyone beyond himself.]

"It was a deci-year ago today - well, day/night cycles being skewed -"

A momentary pause as he breathes while consulting his data-link.

"No, still today."

He smiles genuinely at the barkeep now, but it quickly melts as his face returns to a more melancholy expression. In a tone laced with moments of nostalgia and of emptiness, he continues.

"It was a deci-year ago today. We were in a bar, a lot like this one, in the spaceport district outside the capital on Ktah - maybe a little busier." He looks down at the two glasses. "Same drinks. Always the same drinks. He - Lauktk - he wouldn't ever order anything else. Said that he and his ancestors had been drinking this brew and its ancestors since back when the monkey-boys had been kind enough to relegate themselves to one planet. Said that if the flavor has never been quite the same since the Lightbearers nuked some of the best crop- land into oblivion, then at least it makes clear that, in comparison to meeting humanity, drinking Oolak'kl is not too bad for one's health. I... well, with my metabolism - there's never been much point in alcohol consumption, at least not in such small quantities." He glances briefly at the contrasting colors of his hand and the bar. "I can't speak for what the flavor may have once been, but I must admit I find the current one equally unappealing everywhere I've tried it. Admittedly, and this is no offense to your fine establishment, shipping costs being what they are, I can't say the price is the same off Ktah as on." He looks down towards the one empty barstool to his left and slows slightly. "But that doesn't really matter now does it? It doesn't really matter at all.

"He'd taken me out to celebrate. In a few hours, he'd be living his dream. The deed transfer had finalized, launch inspections had passed - he had a ship. After years of mucking around with ships that only came to him in sickness and left his hands the moment he had restored them to vibrant health, he had a ship all his own." His demeanor intensifies. "You can't know what it meant to him - his family had been sailors, captains, explorers, and merchants since the Klk'k age of sail. His own ship - it wasn't just a dream, it was a birthright delayed only by economics and circumstance. It wasn't about money - he was a starship mechanic working for the Protectorate at the Ktah shipyards, I'd gone back to the academy and was working as a flight instructor - it wasn't about acquiring some status symbol - he put every credit he'd saved into that ship. It was about freedom, his freedom to sail a new sort of sea, and I was going to help him. I was going to helm that ship wherever his freedom took him. Even I can't claim to know what it really meant to him, and I knew

him as well as any man could. He was my brother in arms. He was a bond-mate to my sister - I remember the first time I introduced..." His words trail off beneath a frigid gust of mental anguish. "I haven't been able to see her in person yet - yes of course I've messaged, but you see - you have to understand I couldn't leave, I couldn't... the dream is still here... you have to understand, if I could have..."

The loss of composure ends even more abruptly than it began, emotions submitting again to a mind well practiced in the arts of control. "We met during our UniServe. He'd come to see the human who was making a run at top rank in Amakakt at APSWAK. Those were the salad days of blissful denial, when, somehow, the Rlaan-Aera conflict that was boiling over next to us kept us calm and cool behind the razor-drawn wall of political detachment from the years of slaughter that were to come. Diversions like Amakakt were even more important then; we all had a fair idea of what it would mean when war galloped across our borders, but we knew the odds were against it happening before our tours were up. It wasn't a denial born of callousness to our younger brethren who would find themselves in the positions we'd vacated in relative safety - we just couldn't spend a decade or so brooding, waiting for the nigh-inevitable. The Andolian spirit of counter-empirical-tainted optimism has always saturated the Protectorate, even if I could never embrace it the way he did, but much as I'd like to, I can't blame that or them, or anything so simple for his fate, even if blame had ever been something I desired. No, for Lauktk, a society smothered in optimism was a boon; it fueled the infectious energy intrinsic to his demeanor, intrinsic to his existence. He was irrepressible and genuinely funny - even the Purth thought so - I liked him right from the start. We were friends right up until we completed our stint at the academy and shipped out - good friends, even if our different specializations meant we didn't see each other all that often.

"When we found we'd be serving together on the same ship, we both were surprised. When we found out that he'd actually be my flight mechanic, I was... I felt comforted somehow, to know that the person upon whom my safety in some large part depended on was someone I knew beyond the casual connections provided by our links. It was a fairly small crew, and most of us were there for several years, so we all got to know each other more than most Andolian flat mates, but the social structure is never flat - there are always some people you click with more than others. The details are both too many to recount and too meaningless without context, but by the end of that tour, we were brothers in all but birth. We'd been through... we'd been through a lot together - you'll just have to trust me that it's less cliché than classified." He pauses, asking some question of himself that remains unspoken, and, the question seemingly answered, he continues.

"Mai, my sister - that was always a disappointment for her. It wasn't that she was jealous that Lauktk and I were close, or had gone on 'adventures' together, it was that we couldn't share them with her. To not be able to share some of the most formative moments of the friendship between two people, both of whom she held dear - as a link-phile, not being able to share like that, it never sat right with her. She could understand it, rationalize it, accept it in the higher regions of her mind, but she could never be comfortable with it. She longed for the day when enough would be declassified that the three of us could go out to the cabin and just spend a few days reveling in freedom from the secrets we'd been carrying. You can't wear a link and like secrets, it doesn't work that way. Even carrying the small ones entrusted to one such as myself, I gained great respect for the burdens that high command places upon itself. But she never had that load to bear. She only got to see it second hand, feeling the locks and filters in our minds that precluded us from divulging, whose presence trespassed upon her familiarity with each of us. The cabin, the three of us - that'll

never happen now - and even if the locks all cleared today, whatever tales I spin can never truly be his story.” He stares directly at the barkeep. ”But as it is, with secrets unreleased, I am crippled in my ability to even relate the experiences comprising our time together. At least Mai has her other two bond-mates to help her through this. I... I have only the ship, as fresh recovered from her time as an invalid as I mine.”

His head lowers and an aura of tired resignation encroaches upon his face. ”There’s a certain chill sometimes, when I can’t escape pondering past, present, and the difference between them. When my hands brush across the weld lines that make the paint cringe in the subtle dismay of a suture, when I see adverts for a new jump drive, when some phantom process in my brain convinces me I can still smell the kt’tothan leather that no longer covers the passenger seats, as I sit here staring at two untouched drinks - I cannot outrun reality, and I am left with the knowledge that I pilot a dead man’s ship. This cold clings to one’s skin, like some sort of shrink-wrapped leprosy, and I can’t help but wonder if it’s going to follow me to every ship that I’ll ever fly.” His tone now shifts, with nostalgia being overshadowed by pained cynicism. ”For I can’t stop being a pilot - she beckons, you see; the cold vacuum of space moves her lifeless arm, and I am compelled to join the legions of ships that, mast-less, sail upon her. Days at a time, scant body-lengths away from her condemning kiss - and there he’ll be - a ghost from selves by then long past, waiting for me to join him. How many times can I refuse before I am forced to fold? How many times can I wake from nightmares to find myself still sane?” He extends his arm, grasping the water in front of him, and drains half the vessel before gingerly relinquishing his possession of the glass, his thirst and anger temporarily quenched, one more thoroughly than the other. He continues, more calmly than before, ”Far more, I hope, than my melodramatic flares would lead you to believe. I’ve no urge to dive into those sunless depths. Happy or no, I have it better than many, no worse than most. After all, I was raised by Klk’k; I’ve had more than enough time to outgrow pitying myself merely for being human.”

Glimmers of genuine physical exhaustion begin to work their way upon his face, upon his previously impeccable posture. He leans forward, right arm upon the bar, supporting his furrowed brow with his right hand, his splayed fingers covering half his face. ”However, even beyond the shallow realm of self-pity, once you’ve felt the inexorable grind of the universe’s apathy ... it’s hard to see much meaning. You can’t find a way to convince me that there’s any particular reason that I’m sitting here talking instead of him. Fate has no weavers, only the mad spider of chance and the ever-spinning spindle of time. Underneath it all we’re not even pawns - pawns can become knights or queens - we’re nameless particles in some sick, twisted Brownian motion colliding every now and again with each other and changing. We dream up gods to play with us, if only so we can pretend to be pawns. We sup on hubris so that we can aspire to have names. It is only a question of which dish we choose to partake of. Do we follow the Shapers and seek to assault the glass ceiling of perfection without even the knowledge as to what that would mean? Do we cloak ourselves with the counter-empirical idealism of the Andolians, believing that all problems can be solved, and that our ability to solve will progress indefinitely? One could retreat to the scared futility of the Purist’s status quo, or, joining the Unadorned or the Mechanists, give up the pretense of desiring to be human. Is there any solace in the Merchants’ proud valuing of wealth or the High-Born’s pride in their idiosyncratic conception of nobility? Hell, one could give up on humanity and go live with the Shmrn, the Uln, or the Rlaan-Briin. Despite every oath I’ve sworn, for all that I do care about the Protectorate, I’ve never been able to believe - not the way he could. Not in a way that mattered.

"When I was a child, the dreams of my parents and their bond-set sustained me." He smirks. "Those who didn't know better would think it bizarre to be sustained by Klk'k dreams, given that they don't have the whole unconscious labyrinth experience during sleep cycles that humans do. There isn't a word for such things in any of the native languages - no, the Klk'k dream is the daydream, the fantasy, the meanderings of desires projected onto unfolding futures. Strong dreams that one can feast on. As I grew older, the dreams of the societies I lived in sustained me, and when I met Lauktk, his dream consumed me. Now I guess I have to make my own... but, as crazy as it sounds, I feel the need to finish his somehow, and without him... I don't know what that even means, and even less how I'm going to do it. Indeed, as clouded as any future seems right now, maybe I shouldn't be surprised the only dreams I find myself capable of having are nightmares."

He is silent for a few moments, perhaps reliving some fragment of a nightmare, perhaps preparing his next utterance, perhaps both. His face, as still as carved granite and shadowed behind his hand, is impossible for the barkeep to read. Returning once again to the realm of motion, he chuckles briefly, in a despondent fashion, and sighs. For the first time, the motions of his breathing edge into the realm of mundane perception. He rallies his voice one last time, too tired for any emotion born of anger to dominate his speech.

"Now, I bet you think this is all just a facade. I bet you think it's revenge, or anger, or some such that motivates me: that I rage inside with a desire to kill the Luddites who assaulted us, who drove us down, who forced me to crash- land, whose actions resulted in Lauktk's" he falters ever so slightly, "death. I felt that briefly then, but I feel almost nothing about them now - they aren't important enough to warrant personal hatred. Pirates, the ISO, the Luddites, even the Aera - they're all just dancing to the blood rhythms that cause every cell in their bodies to join in a choral chant of 'Stay alive! Stay alive!' I can't really blame them for it, even if they'll probably blame me if I take the lead in the dance and reciprocate their violence. Pity really. Things would be so much more pleasant if we could learn to not step on each others' toes, or claws as the case may be." He turns his gaze up again, letting his fingers fall away from his eyes, to rest once more on the bar. "Don't think I don't mourn my friend. It's just that the blackness of an executioner's mask doesn't make it fit for mourning clothes. If I see the Luddites that killed him ... I'll probably try to kill them, but for the reason that they'll be trying to kill me. Here's my advice, Mr. Robo-barkeep: don't hold grudges, don't look for comforting answers and don't wait for magic wands. The first can only hold you back, the second are never what you want them to be, and the third are always being held by something that's going to turn you into a toad if you aren't careful. Feel free to take it with a few grains of salt though. I'm not anyone qualified to pontificate - me, I'm just someone" he glances at the still untouched ale "not having a drink at your bar and ... flying a dead man's ship."

[The man finishes his water and leaves, each step clearly a source of pain from injuries not yet entirely healed.]

6.3 Little-Plot segments

6.3.1 The intro plot

Lauktk's siblings (technically, they aren't all his full brothers and sisters, as Klk'k families are a bit more complicated than the Western notion of the nuclear family, but from the Klk'k perspective, they might as well be) show up in Cephid 17. Conversing with them about Lauktk's never to be realized dreams of finding

his own personal truths of freedom in traversing space as his ancestors traversed the seas of Ktah, they decide the only fit course of action is to have a prolonged, multi-system funeral commemoration (think "wake") that takes the remains of Lauktk and his ship to some of the great landmarks and capitals of friendly space before returning his ashes to Deucalion's sister and scattering them over the oceans of Ktah.

Implementation issues:

To do this will require the purchasing of a jump drive and some (perhaps a placeholder for the moment, or even just remove some cargo space) passenger holding space for the siblings. The idea will be to push the player to get enough money to leave the system, and as soon as they can leave the system, to not just wander aimlessly, but to force them to see some of the unique places we're going to make. Also, while on the trip, one should be pushed to take on some sets of fixer missions that lie on the same path where there are moral/ethical issues involved as to which of the fixers' missions one takes (thereby defining somewhat the path the PC will later take, be it more mercenary, more mercantile, a return to military service, a life of piracy, or whatever), such that, by the time one returns to Ktah, one must have enough money that one can buy a new ship (namely, if possible to script, the original ship should be put aside in deference to Lauktk), thus completing a rebirth both of the player's psyche, and, through the change of ship, the rebirth of the player's avatar.

EVENTS IN ACT 1: Hiroshima (mon ami)

- Deucalion engages in side quests for cheap jump drive (optional)
- Deucalion and Lauktk's bond-siblings take part in wake that canvases friendly space
- Character development (profession) of Deucalion via encountering certain fixers along the way and interacting with them

Profession paths:

- Officer (Different paths depending on which navy)
 - Explorer
 - Pirate
 - Assassin
 - Bounty Hunter
 - Merchant
 - Tycoon
 - Fixer (multiple ethical subpaths)
 - Spook (multiple ethical/political subpaths)
 - NEED MORE - ADDME
- Deucalion meets up with another former service mate, Mirabel, at the ceremony on Ktah. Depending upon actions taken during this chapter, he will either be told that he can't go back to the military, entreated to come back to the (Andolian Protectorate military, or questioned as to his interest in coming back.

- Likewise dependent upon actions, Deucalion may receive a communique from interested parties of questionable intent/methodology.

Chapter 7

Portfolios

The following sections give a holistic overview of various key groups as they exist or existed circa 3276 CE (i.e. the UtCS period, see [5.1.2](#) and [5.7](#)), combining factional, species, and aesthetic information in a single place, from an omniscient viewpoint. These portfolios are primarily designed to give insight and direction to artists and other content creators. Much of the information here may be duplicated elsewhere. There may be cases where the omniscient viewpoint and in-game viewpoint disagree. Such disagreements are likely intentional, reflecting misconceptions or ignorance on the part of the extant groups. In cases where the disagreements seem more ambiguous or unlikely in intent, please feel free to direct questions as necessary.

7.1 Cross-Portfolio Information

7.1.1 Vessel Overview

- Engines

Retro thrusters, retro thrusters, retro thrusters, retro thrusters! (to the tune of “Developers, developers, developers!”)

If your craft is: A) not Rlaan manufactured and B) more than 5 meters long it probably needs retro thrusters.

Now, the retro thrusters and maneuvering thrusters don’t need to be necessarily as pronounced as the rear engines (giving you some artistic license in defining a visual front/back) but they **NEED TO HAVE VISUAL INDICATORS OF THEIR EXISTENCE**. For some ships this is mainly a texturing question. For larger vessels, this will necessarily influence your model design.

- Radiators

One of the biggest problems in space is heat dissipation. VS spacecraft have a lot of heat to get rid of, so they’re going to need radiators. While, as with retro and maneuvering engines, artistic license is granted in how much of the ship’s surface area is going to be radiator dominated, the same need for visual indicators of radiators exists. If you have fins, you should probably put a radiator texture on them, because they’re almost certainly not for aerodynamic flight.

- Internals

VS ships aren't, in general, intended to be very dense. This is more true for larger craft than strike craft. In general, the idea for VS ships is that the surface-area to internals ratio should be pretty high. The bigger ships in VS can be seen as big shells of armor and radiators around many, smaller, internal components. Moreover, a lot of the internal components would actually be plumbing, of the coolant (I always had a soft spot for gallium alloys, but no decisions are finalized on what exactly the coolant is) circulating variety, running between the reactors/engines (the engines being fusion reactors themselves) and other heat-generating components (e.g. weapons). The rest of the space being taken up by insulation (vacuum is pretty good) and physical shielding to keep the crewed and other sensitive parts of vessel safe from the engines/reactors, and other hazardous portions of the ship.

- Atmospheric flight

Most spaceships in the VS universe, even if capable of accelerating to escape velocity, are not designed for atmospheric flight. Some are. If its role description mentions “Aerospace” or “lander”, “puddle jumper”, “dropship”, “ground support”, or “orbital” then it's a good bet it has an atmosphere-friendly design. If not - build a spaceship, not an airplane.

That said, some smaller craft that are not atmosphere-friendly will still be atmosphere capable. The more developed the infrastructure of the group using/designing the ship, the more likely they don't intend for it to ever see atmospheric use on an inhabited planet - this is what docking stations, space-elevators, orbital shuttles, and other infrastructure exists for. In fact, (once we get planetary structures squared away a bit better), the really industrialized planets will probably start firing on you if you attempt to land in anything larger than a pinnacle/dispatch craft, and even then only with appropriate permission. On the flip side, if it's a Forsaken ship, or a Luddite craft, then it probably spends a lot more time visiting places without well-developed orbital infrastructure and may need to land on occasion. Also take into account the age of the design you're considering. Much of the VS universe as of 3276 is post-frontier, but a lot of places don't have to think back too far to remember when they weren't. Use your better judgment.

If the ship is very large, even if it is atmosphere-capable, it is almost certainly *not atmosphere friendly*, unless perhaps it's something very esoteric (atmosphere skimmer for terraforming project or some such). In general, if the ship is very large, it's best to assume it's not even atmosphere capable unless there's a very good reason for it. Large vessels will make use of shuttles and dispatch craft to take care of business on the ground.

7.2 Portfolio: The Aerans

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Aera](#)

Faction overview: [Faction:Aeran Ascendancy](#)

7.2.1 Origin

- Gravity: 1.3x Earth-normal
- Atmosphere: Nitrogen-Oxygen (24% O₂), with minor nobles (neon, argon), carbon dioxide, and water vapor
- Primary liquid bodies: water, 80% surface cover, continents small, large islands frequent
- Average temperature of homeworld (pre-industrialization): 300K
- Sun: Orange
- Primary challenges (pre-industrialization): Extremely competitive and invasive ecology.

An intelligent centauroid species which developed on a misbegotten hell of a jungle world, the Aera are oxygen-nitrogen breathers, with a strong internal skeleton, smooth ashen-gray leathery skin, a decided lack of psychiatric assistance for their obviously repressed dissatisfaction with natural ecology and, at least according to the Cult of the Devourer on Mishtal Seven, a flavor remarkably similar to that of a human with a high protein diet, but only if both have been served with a nice Chianti.

Unfortunately for the Aera, their region of the jump network offers no known paths towards significant further expansion. To expand they must go coreward, passing through Human or Rlaan controlled systems. Requests to do so have been denied by both the relevant parties of both species. Opting for another method, the Aera tried to sneak a colony convoy through Rlaan space, but a lack of comprehension of the Rlaan mentality regarding civilian casualties caused this ploy to be not only a failure but a disaster, provoking the Rlaan into a military response.

Habitat

The Aera homeworld was, prior to changes imposed by the technological advancement of the Aera, a nearly seasonless planet with an oxygen-nitrogen-neon atmosphere, on whose surface were a single large landmass and many large and small islands. The mainland was nearly entirely covered with jungles and marsh-groves, with only small belts of more sparsely overgrown land on the northern and southern reaches of the continent. The rich jungle land was home to all sort and manner of parasites, predators, diseases, and competitors for food. It was in this vast, dark jungle that the Aera arose into sentience, tool use, and civilization.

7.2.2 Physical

- Dimensions: 2-3 meters in length from the head to the end of the balancing tail. 1 - 1.25 meters high at each of the the four leg-shoulders.
- Mass: 200-250 Kg
- Skeletal system: Multi-vertebrate(4) with interleaved rib arrangement, bilateral symmetry

- Major divisions: Tail, midsection (hind-limbs to mid-limbs), fore-section (mid-limbs to arm-shoulders), neck, head
- Senses: Audio, visual, chemosense (all in head). Tactile (skin, strongest at hands, rear-feet, tail)
- Visual acuity: Aera cannot see in the dark, but do have excellent low light vision. Long distance focus is inferior to that of humans, but motion sensing and clarity of short and medium ranges is superior to human norms.
- Chemosense: Aerans have both external (lower face) and internal (mouth) chemosense organs. Aerans are mouth breathers, and do not have nasal passages. External chemosense organs are used primarily to assist in lending directional information to scents picked up by the internal chemosense organs.
- Locomotion: The ancestors of the Aera ambled about amid the lowest layers of a continent-spanning, towering jungle. The Aera prefer to scamper as often as walk, and move on their mid and hind-limbs, their fore-section parallel with the midsection, arms tucked in, and tail extended for balance.
- Manipulators: Two hands, each with a 2+1 finger/thumb arrangement
- Textural appearance: Leathery skin, thick over most parts of the body. Ashen gray, with darker gray striations and amorphous, blotchy, yellowish patches in a pattern unique to each individual Aera

The Aera are a centauroid species measuring 2-3 meters in length from the head to the end of the balancing tail, and 1 - 1.25 meters high at the four leg- shoulders. The four stocky, sturdy running/gripping limbs provide support, and the front two limbs end in three-digit hands, with two fingers and an opposable thumb. When active, the upper body bends up from the rest of the body just past the middle limbs at about a sixty-degree angle, with the forelimbs sprouting from about two thirds of the way up the upper body, and with the head bending back down so as to be parallel with the main trunk and the ground. Aera tend towards slim, muscular builds, and are usually both quick and agile. They have two genders, each of which is similar in appearance. Among the space faring races, the Aera have one of the shorter natural lifespans. Prior to the advent of advanced life extension technologies, it was as rare for an Aera to reach 60 years of age as it was for a twentieth century human to reach 100.

The physical appearance of the Aera reflects upon their origins. The Aera have a smooth, leathery skin not dissimilar in appearance to the bark of a birch tree, with occasional yellowish patches reminiscent of lichens. The hinged portion of the mouth is, in contrast to that of Terran species, the upper portion. The mobile portion of the mouth is also notable in that it does not consist of a bony arch, and is actually a solid bony plate. Inside this mouth are two rows of teeth, the second moving forward to replace the first as they naturally fall out, and a new second row is grown. The front teeth are razor sharp and are obviously for tearing flesh, and the next sets of teeth are likewise designed for the chewing of meat, but the rearmost few teeth have grinding surfaces, allowing the consumption of nuts, seeds, and other such vegetable matter. The corners of the mouth are usually open, and provide the normal breathing route. When exerting itself, an Aera will pull back its lips, increasing the size of the airway. The wide, narrow eyes are almost universally a milky green, with wide, narrow pupils, and are largish in size relative to the head. The eyes are above the terminating point of the downward slant of the lip-line, but below the bony jaw plate. Just below the mouth,

on each side of the head, is a row of small pits that are used for chemoreception. Beneath each eye is a kidney-shaped patch of lighter skin that marks the location of a tympanum. On the underside of the Aera head is a pair of organs, each capable of producing variable amplitude, low frequency vibrations, which the Aera use to communicate.

NOTE: depiction of head in Figure A-1 is non-canonical, picture otherwise highly informative: Basic body plan is captured reasonably by [Aeran Body Plan](#) but the head is entirely wrong, and the coloration is a bit off (so ignore the head and the coloring should be closer to gray than white).

7.2.3 Mental

The Aeran thought processes mostly operate at speeds comparable to that of humans, but with some notable distinctions in process, efficiency and valuation of concerns. On average, Aerans possess demonstrably superior quantitative reasoning skills compared to human norms. While not completing most subtasks at remarkably faster speeds, Aerans are much less likely to make mistakes or become lost or distracted. Compared to humans, Aerans are at once chronically hyper-alert, but capable of obsessive levels of focused concentration on the task at hand. Aerans do not degrade in mental capacity as readily due to exhaustion. In general, the entire Aeran body will operate at near-full capacity through extended non-rest and stress periods, collapsing in a step-function, rather than gradual manner. Indeed, the Aeran existence is one of nearly constant stress, as they work themselves to death in lives far shorter than that of Humans, Klk'k, etc. Humans would consider all Aerans to have a thoroughly paranoid mindset. Aerans feel their concerns are entirely rational, as, historically, most things *have* been out to get them. Aerans have extremely strong hierarchical loyalty arrangements, and, although possessed of individuated desires, excel at subverting them to the demands of the hierarchy. Through countless wars of successive integration and the institutions supporting the Aeran cultural and political hierarchy, the loyalty structure of the Aerans has enabled them to map their natural pack/clan bond affinities onto a profound species-wide affiliation. The primary goal of Aeran society is what it has always been: group survival above all else. All that has changed is the parameters and implementation details. While the Aera are not innately belligerent, they are innately non-trusting and tend towards presumptions of negative intentions on the part of the other species they have had relations with. Moreover, when the Aera feel threatened, it is easy for them to justify arbitrarily extreme measures if they believe said measures will at all increase the odds of their long-term survival. As such, the policies pursued have often been seen as startlingly aggressive by the other parties involved.

7.2.4 Technological

- Tech:

Aerans excel at most applied mathematics and the physical sciences, but lag noticeably in biological sciences. Aerans clear-cut their own homeworld, driving back their ancestral jungles to make room for their industrially-oriented civilization, and prefer living entirely apart from the ecosystems of the worlds they colonize whenever possible. Aeneth-forming relies heavily on cleansing the host-planet of its native ecologies before introducing Aeran ones. Aeran colonization is a very infrastructure-intensive task compared to the techniques deployed by humans and even more so in comparison to

the Rlaan. Aeran society in general is very resource intensive. While the Aeran rate of population increase and technological progress is very rapid, they left their homeworld much later than the other interstellar powers, and the further reaches of their empire are much less developed. While the planet is being rendered amenable, the Aerans will tend to focus on developing orbital infrastructure even while little-to-nothing exists on the ground, and will do so to a greater degree than other groups. The Aera shun fully autonomous AIs, as they view them as more likely competitors than allies. They view biological AI constructs in much the same light. AI research is therefore somewhat stunted in Aeran society, and certain tasks are thus much more labor-intensive. Aeran research in weapons technology is excellent, and frequently somewhat superior to that of the other factions. However, a bias toward excellence has skewed the quantity-quality trade-off somewhat toward quality over quantity. While the Aera will not forsake economic or practical efficiency wholesale, they are innately comfortable with the notion of problems being solved by the introduction of superior technologies and engineering. While Aeran technological and engineering progress is rapid, they are making up for lost time relative to the other species, and their advancement is uneven.

- Weapons:

Aerans have a notable preference for shield-piercing weaponry and tend to ignore options without significant shield-piercing effects. The Aerans wish to make every shot count, and are thus more limited in their potential array of death-dealing options. Most smaller Aeran weapons are ammunition based, utilizing complex warhead designs that emit a brief, intense pulse of radiation upon contact with an enemy craft's shields. The preference for shield-piercing weaponry extends to Aeran capital vessels and missile designs. Aeran craft tend to prefer using larger numbers of smaller missiles over smaller numbers of larger missiles.

- Tactics:

- Small groups: smaller Aeran craft, while purposed, are capable of generalist missions and are often tasked with recon and commerce raiding
- Large groups/Fleets: Aerans prefer large engagements to skirmishes, as they tend to be more direct in attempting to achieve their goals.

The primary use for small craft in Aeran fleets is as a screen for larger capital vessels. Aeran interceptor craft are defensively oriented. In contrast with many other groups, the vast majority of the superiority fighters will also remain behind to guard the fleet. Corvette class vessels are the primary implements of Aeran assaults on other fleets. The Aerans do not rely on what would generally be considered bomber class vessels, and instead utilize a mix of assault corvettes, F/A light craft, and escort corvettes, the latter two acting as the primary escorts for the torpedo-rich assault corvettes. Capital vessels engage at maximum distance, and attempt to remain at distance from enemy fleets until the enemy's organization has been broken, or the fleet's missile supplies have been exhausted. Larger Aeran capital ships, even in their non-missile load-out, generally prefer a role more artillery than cruiser in nature. While Aeran destroyers are capable generalists, the majority of their armament is tailored to engaging assault vessels and other larger, less maneuverable sub-capitals. However, Aeran

destroyers do tend to have very solid forward acceleration and the ability to orient all primary turrets in a forward direction for chase maneuvers. Aeran craft built specifically to counter threats in the Rlaan-Aeran conflict have a disproportionate number of weapons designed to deliver maximum damage over short time periods at short distance. Larger Aeran capital vessels are on the larger side, and significant economic investments for the Aera, even relative to most other major factions. The Aera will readily sacrifice smaller vessels to allow their larger assets to escape a losing engagement. While the Aera operate what is arguably the largest carrier currently in use (the Agesipolis), it is used more as a mobile base, moving in to hostile systems only after initial combat operations have subsided. The Aerans instead rely on jump-capable small craft, even for purely defensive scenarios, and a larger number of much smaller tender craft (currently, the Dorissus class) to repair, refuel, and rearm them. This is in keeping with the much larger role of sub-capital (non-fighter) craft in the Aeran fleets, and their ability for self-management relative to fighter-craft.

- Installations:

Almost all Aeran installations are armed, and any sizable one armed heavily. The Aera are very reliant on their orbital infrastructure, and will go to great lengths to defend it.

7.2.5 Culture

Aera culture is highly organized and decidedly hierarchical, but in the form of a meritocracy rather than an aristocracy. While what has constituted merit has morphed over the millennia since the first Aera tribes selected work crews to cut back the encroachments of the jungle upon their early settlements, given the relative position of the pre-technological Aera in their local food chain, there has long been a favoring of cleverness and determination over raw strength. The current social and vocational position of any Aera is immediately indicated by the color and pattern of an individual's coverall. The Aera are ruled by a subset of the highest caste, with membership in the oligarchy changing whenever either an individual steps down, or a third of the other members call for a member's replacement. New members must be confirmed by two thirds of the current oligarchy. It is much more common for members to voluntarily remove themselves from power, believing themselves more useful elsewhere in society, than to be cast out. An average stay in the oligarchy lasts a few Aera years.

The long struggle of the Aera against the erosion of their society at the hands of the natural world has instilled in them a deep respect for that which has enabled them to conquer their environment: technology. Not only is the advancement of technology greeted without fear, the social position of the artificer and the engineer is one more greatly elevated than that seen in any pre-Diaspora human society. What is feared is the unmastered and uncontrolled. Even after the last war between Aera and Aera was fought, bringing the last of the major islands under the control of the mainland, the Aera only slightly relaxed their military investment. Perhaps in large part due to their short lifespan, and the consequential rapid dying off of adherents to old theories, science advanced quickly, and with the understanding of their place in the universe came a belief that just as they had been forced to fight back against the jungle to keep themselves alive, so would they likely have to push back against all that waited for them beyond their world. Thus, eight centuries ago the Aera burst forth from their homeworld, not afraid, but determined that nothing would stand between them

and their indefinite existence.

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- Aeran Merchant Marine

Religion

The nature of the Aera homeworld never inspired much belief in any sort of loving deity. What began as a collection of local deities coalesced, through conquest by what was to be the dominant group on the entire planet, into a single pair of entities, one force of creation, and one of destruction, both abstract, and both uncaring. As time progressed, and the Aera advanced, these entities progressively lost entity status and drifted into the realm of spiritual concepts. Becoming more self-centered in their exploration of existence, destruction morphed into personal death, and creation into species survival. Organized religious activity among the Aera, such as it was, ceased centuries ago, but the impact on their culture of the concepts of death and survival is still quite strong. Indeed, Aeran mausoleums are said to be, quite possibly, the only pieces of Aeran art that might ever be considered beautiful. The Aera respect death, but value is placed on the accomplishments made in the face of one's imminent demise. All Aera are cremated, and the repositories for such remains are vast public works, filled with displays of the accomplishments of those entombed within, those who contributed greatly to the species being rewarded with physical space devoted to listing their deeds, and the rest consigned to a rotating schedule of intermittent holograms and access via terminal displays. It is in such places that an Aera would go to ponder, in silence and solitude, relenting briefly from the near tireless schedule of a short-lived species, the nature of its existence.

Cultural Aesthetics

Aerans like clean, uncluttered structures. Aeran ships are often described as having an overall appearance much as if they had been carved out of a single block of wood or sculpted down from a large stone rather than looking built up piecemeal, as some human designs are.

7.2.6 Writing, numbers, and insignia

The Aera use a redundant numbering scheme: Radix 3, digits drawn from the set of values -2,-1,0,1,2

7.2.7 Faction: Aeran Ascendancy

A Brief History of the Aera

The Aera homeworld was home to extremely competitive ecosystems. It was not a supportive environment. If one considers Earth the "mother" of the human race, then, in comparison, Aeneth was an abusive parent. The Aera evolved in an environment where a slew of things really did want to kill/eat/infest them. Beginning with the early harnessing of fire, and ending with industrial might, the Aera remedied this problem by

destroying the vast jungles that bore them. However, their outlook on the universe was fundamentally shaped by their beginnings in a direction that humans would consider paranoid, or at least profoundly pessimistic and somewhat untrusting, though the Aera merely see it as prudent recognition of how the universe works.

This outlook was greatly reinforced by the Aera experience with the nano-plague. The precocious Aera, unlike humans or Rlaan, developed jump-based FTL before having otherwise left their solar system. The resultant reactivation of the nano-plague and the devastation it wrought on their population, served to gel their concept of an inherently antagonistic universe. Aera society greatly increased its militarization, heretofore on the wane since global unification, so as to better prepare for potential conflicts in what, evidenced by the nano-plague, they presumed was an inhabited galaxy.

The Aera are the youngest of the three currently dominant space-faring major groups, but are also the most expansionist, fastest breeding, shortest lived, and devote the highest fraction of their economy to military and military related R&D spending. They are not evil, they are not delusional, they are not irrational, but they have some fundamentally different assumptions they are working from that make them somewhat difficult to get along with. Finding out that their section of the jump network had them pinned by the Humans and Rlaan, they first attempted to negotiate passage, and were rebuffed. They then attempted to sneak a colony convoy through Rlaan space, but this turned into an utter debacle after Aera escorts killed Rlaan Civilians, sparking a war lasting several years, that churned the Rlaan-Aera border into an abattoir. Although formal peace has never been brokered between the two, a cease-fire has been in effect for several years. The Aera have now turned their sights toward Human space, invading Forsaken territory, hoping to push through toward the less defended Forsaken/Confederation border crossings, carve a corridor through to the other side of humans space, and keep it open long enough so that they can send enough colonization fleets through to the other side to make the venture worthwhile.

Development

Compared to contemporary 33rd century humans, the Aera are comparable or somewhat more advanced in some of the physical sciences and their applications, notably so with respect weaponizations of certain technologies. They are noticeably behind in life sciences and AI.

Having been wandering the jump network for the least amount of time (among the Rlaan/Humans/Aera), the Aera, though occupying the same order of magnitude of systems as the Humans or the Rlaan (Rlaan/Lmpl/Nuhln/Saahasay have most, followed by Humans/Klk'k/Dgn/Purth/Mishtali, followed by Aera/Bzbr, then the much smaller Uln, Shmrn) have not occupied many of them for nearly as long. The Aera expanded in territory faster than that territory could be developed up until running into the Uln. After one last push then brought them to the Human and Rlaan borders as well, the Aera have been racing to build up their newly settled colonies nearer the borders, but the bulk of their industrial potential remains concentrated in systems closer to their homeworld than to alien space. This difference was especially clear during the Rlaan-Aera conflict, wherein many newly settled Aera colonies along the border fell to the Rlaan assault, but the same Rlaan fleets were badly bloodied when they tried to push into Aera systems with more matured defenses. Due to the war, Aera military spending and infrastructure development has been extravagant in comparison to human budgets, but the Aera also had to cope with sizable losses in personnel and materiel.

While there are key differences between the level of population and industrial development between the

core colonies and the newer colonies, due to the very strong central organizing forces in Aeran governance and economy, this is not a deep political divide, nor an economic one - it is merely a matter of the more fringe planets growing as fast as they can into states undifferentiable from the more core worlds. This centralization should not be taken as evidence that Aerans are a selfless society of collectivists. Rather, the Aera have a strong natural ability and desire to sublimate personal interests to higher authority, a trait left over from their more pack-like origins. Success, however, is still judged at individual granularity, and Aera are entirely opportunistic about personal advancement when the opportunity either does not come at the expense of the dictates of higher authority, or places them into a position of higher authority.

Culture

The Aera are a bit culturally dour, although they do engage in organizational events, such as rallies, sporting contests, and Military parades. Entertainment pursuits, such as music, for personal pleasure are not a significant thread in Aeran culture. Such pursuits are seen as necessary avenues of release, but to devote oneself to pursuing purely entertainment oriented activities merely because they are pleasant is seen as wasteful, wantonly hedonistic, and a reckless abandonment of one's duties. Entertainment with physical components, such as sporting competitions, are viewed in a more favorable light.

In Aeran culture, mortality is to be pondered and meditated upon in its inevitability. It is worth noting that it is not so much those that came before them that the Aera cherish as the accomplishments of those who came before them. The Aera perspective is that it is only through accomplishment on behalf of the Aera that the Aera can continue, and the dead, thereby, can continue to live in the memories of the Aera.

Organization

Aera culture is highly organized and decidedly hierarchical, but in the form of a meritocracy rather than an aristocracy. While what has constituted merit has morphed over the millennia since the first Aera tribes selected work crews to cut back the encroachments of the jungle upon their early settlements, given the relative position of the pre-technological Aera in their local food chain, there has long been a favoring of cleverness and determination over raw strength. The current social and vocational position of any Aera is immediately indicated by the color and pattern of an individual's coverall. The Aera are ruled by a subset of the highest caste, with membership in the oligarchy changing whenever either an individual steps down, or a third of the other members call for a member's replacement. New members must be confirmed by two thirds of the current oligarchy. It is much more common for members to voluntarily remove themselves from power, believing themselves more useful elsewhere in society, than to be cast out. An average stay in the oligarchy lasts a few Aera years.

Need to more usefully carve up faction vs. species information. Will do so later.FIXME

7.2.8 Faction: Aeran Merchant Marine

The Aera don't really have a civilian sector. All Aera resources are controlled by the state, and ruled over by the Oligarchy. The Aera do, however differentiate between combatant and non-combatant forces, and the

Merchant Marine, while armed, are designed to transport goods through dangerous space rather than conquer said space. (It may be duly noted that the Aera are predisposed to consider all space to be dangerous).

7.2.9 Vessels

Style Overview

- Primary distinguishing color ranges: Beige/Tan/Mustard-yellow over white/gray/brown base coats
- Common accent colors: Purple, grays, browns, white
- Primary lighting color: Cyan
- Frequently visible: well defined front/back of ship. unibody construction/tightly-fitting armor plates. Radiators, sometimes with retractable cover-flaps. Extensions, especially on larger vessels (where they are generally topped by turrets): extensions are vaguely teardrop shaped in cross section, the non-pointy end thereof being somewhat flattened, rather than fully round, and generally facing forward. Extensions reduce slightly in diameters of cross section as they extend from the ship, but terminate in a flat, cross-sectional face by the time the area has been reduced by 1/2 or so from the base of the extensions.
- Rarely visible: boxy corners and subcomponents, modular design, piping, windows (even Aeran civilians aren't much for star-gazing)
- Seen inside, but not out: obviously separately designed mechanisms, modular internals (Aerans practice modular design, but they like to hide the fact that they do).
- Moving parts(non-turret): radiator covers
- Capital vs. light craft: Light craft are more heavily bilaterally symmetric than capital vessels. Capital vessels are more likely to have numerous tri- or radial symmetries. For radial symmetries, multiples of 3 are common. Light craft tend to have both front and back extensions that, although vaguely winglike in shape, are not wings, and are fairly thick in proportion to the size of the craft. The extensions are proportionately much smaller for capital vessels. Larger capital vessels tend to have forward facing spinal mounts of architecturally significant size.

Surface features of large Aeran vessels

The smoother, unibody construction aesthetic certainly does make it a bit tougher to think about size-recognizable detailing than on a nice modular-construction human vessel, but while there are going to be fewer macro-level features, there will still be plenty of smaller features. Clearly, at distance, you're not going to be able to see a handrail relative to a capital vessel nearly as well as a big row of windows, but the surface features are there - and some of them will (need to) be visible. The fun part will be balancing "subtle" with "seen". The lighting fixtures in particular should be helpful for that.

Small things found on the hull of a (large) Aeran vessel

- Service/Maintenance hatches
- Lighting fixtures (especially around the service/maintenance hatches - then leading out from such hatches to other EVA work areas)
- Handrails (would probably look a bit different from the human ladder-style)

Somewhat larger things found on the hull of a large Aeran vessel:

- Small sensor clusters (recessed into hull)
- Optical pickups/cameras/etc (recessed into hull)
- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)
- Docking bay doors (single shuttle sized for non-carriers - something akin to smaller versions (relative to total craft size) of the flight IIA covered helicopter storage modifications on the Arleigh Burke class destroyer: these aren't strike-craft carriers, they can just dock some attendant or visiting craft.)

Listing of Aeran vessels:

- **Acrotatus:**

Existing concept art is not particularly canonical. Please redesign.

- **Agasicles:**

The existing concept art does not accurately reflect what was requested. The symmetry of the projections is correct, but their shape and location is not. Likewise, of course, the existing concept lacks meaningful levels of detail. Length should be between 1000 to 1500 meters.

- **Agesilaus:**

No existing concept art. Larger than strike craft, smaller than a corvette. Designed primarily for running away, and for taking pursuit fire from the rear.

- **Agesipolis:**

There's been some discussion of this one recently - suffice it to say that the existing scribbles passing for "concept art" are a bit lacking. What can be taken from the existing concept art boils down to: Tri and hex symmetries. Large, hood shaped bays for receiving incoming fighter-craft at both front and back, smaller hood shaped bays for launching strike craft toward the rear. Corvette docking on each side at middle. Massive thrusters at rear and in front, side-side maneuvering limited. Docking-piers for resupply and docking for smaller capital vessels (currently 3 at front, may be moved and duplicated

3 changed to 6 or 3 at front 3 at back or 6 at... etc. – this is basically a mobile base. Resupply both to it and from it is as big a function of its use as actually managing the assorted strike craft and corvettes (it ferries). Just about the largest ship in VS. Probably about 7Km long. Should probably be fatter than in concept drawing.

- **Agis:**

Existing concept art is on the right track, so keep the basic form similar, while integrating retros, thrusters, radiators. Length should be 200-300 meters, for detailing purposes.

- **Alcmenes:**

This will not be a pretty ship. Indeed, it's not really a ship. It's designed to be dropped from orbit, and, while it is space-rated, it can't really operate out of atmosphere. This ship should have recognizable air-breathing engines in addition to proportionately tiny normal Aeran space engines (main engines the size of maneuvering jets on similarly sized craft, much smaller than the air breathers). Since it's designed to be dropped from orbit, it needs to be appropriately A) aerodynamic, and B) compact (big thin wings would break off). Thus, a body-wing approach is preferable. Size - 50-75 meters depending on aspect ratios. It needs to be able to have a reasonable internal volume for troops, vehicles, and equipment. The drop is one-way – it is not capable of returning to space unassisted. Even it's air-breathing engines are primarily for maneuvers on the way down. It is capable of atmospheric flight post-landing, but is ungainly. It is heavily armored and lacks the traditional visible radiator presence of actual spacecraft.

- **Anaxander:**

Please see textual description on above Wiki page. This should probably be one of the first capital vessels you look at for the Aerans.

- **Anaxandridas:**

Overspecialized for fighting the Rlaan, who do not use missiles. Limited PD. Negligible weaponry for defending against strike craft. Strictly anti-capital role. Purely offensive in nature, weapons split between long-ranged spinals and missile tubes and medium ranged energy emplacements. Designed to finish off a single target quickly, rather than to suppress multiple targets or to engage in prolonged battle of attrition. Medium ranged energy mounts designed to counteract charges by Rlaan capital vessels, and spinal mounts and capital missiles used to attack less aggressive opponents.

- **Anaxidamus:**

The latest Aeran cruiser. Whatever the Anaxander and Anaxandridas turn out to look like, this should be the logical extension of that thread of design. More refined, more elegant, and more general in scope.

- **Areus:**

Needs a bit of an update. Firstly, in addition to the radiator/retro/maneuver thruster touch-up that most VS craft need, this one needs to differ from the existing model in having 6, rather than 4 wings.

- **Ariston:**

Basic design is sound, although some reinforcement of that one thin point could be warranted. Needs thrusters, retros, radiator surfaces added, more explicitly defined weapon locations optional, at your discretion.

- **Charillus:**

Basic design is sound, but needs retros, maneuvering jets, and radiators (not military, so no radiator armor hatches needed). It's a big ship, so, once you have an idea for surface feature concepts, you may wish to revisit this and see how they would tie in with the existing work.

- **Cleombrotus:**

This vessel moves cargo containers (externally). This is an assisting support vessel, sort of like a mobile cargo crane, moving cargo containers around between ships and cargo depots within a given system. Most of the time, it's not going to be going very far on a given trip, just taking the cargo containers left by a mass cargo ship, and then moving them in an orderly fashion to the nearby station or storage depot for later redistribution. It's going to be big, but not, at core, bulky. It should be able to handle a few containers at a time.

- **Cleomenes:**

Barely a ship, this is a fairly stealthy craft, so it will be uncharacteristically dark in coloration and lack lighting. Covered in passive sensors, this ship will tend to spend more time drifting than actively flying, and its radiator hatches will usually be closed of radiators (it usually "runs cold" (i.e. engines off) to avoid detection. If detected, its active electronic warfare suites will come on-line, attempting to confuse its pursuers with decoys as it changes course and runs away. Often used for defensive installations, deployed on wide orbits as listening posts, it is also seen used as a precursor to offensives, attempting to sneak within range of key defensive installations and blind or confuse them to the real threats.

- **Demaratus:**

Parasite craft for Theopompus. Assists in tasks associated with making planets more habitable for the Aera, such as cataloging and then wiping out native ecosystems, and shuttling down atmospheric alteration equipment.

- **Dorissus:**

While it performs some things generally associated with carriers, namely, refueling re-arming, and otherwise resupplying strike craft, it is NOT a carrier. While it has a small number of service bays for repairing craft, it is not designed to ferry them in and out of combat, or to house their crew, etc.. It is thus much smaller than any carrier. One would generally class such a ship as a small frigate. Most of its bulk is in cargo storage of fuel and other supplies needed by strike craft.

- **Echestratus:**

On the larger side as frigates go, the Echestratus is actually very lightly armed for its size. Most of its bulk is in the additional fuel reserves that allow it to lead operations behind enemy lines. While it has the necessary volume of firepower for hit and run missile attacks, it has a very limited magazine, and will exhaust itself uncharacteristically quickly for a ship of its size. As it lacks capital-scale weaponry, once the missiles are exhausted, it is no longer a direct threat to most installations. However, while it lacks significant durable firepower, it has excellent and abundant sensors, high acceleration curves, solid heat management, and excellent PD and anti-interceptor armaments. It is more than equipped to handily thrash any unwary system patrol it encounters. It is not uncommon to find an Echestratus lurking in the outer regions of a system either about to be attacked, or that the Aera wish to make appear as if it will be attacked.

- **Eurycratides:**

Small frigate specialized for long-range intra-system communications. Coordinates large-fleet and multi-task-group operations. Really big and obvious transceivers.

- **Eurypon:**

Voyage of the Beagle... if the Beagle had been a warship.

- **Leon:**

This is the primary supply train vessel for the Aera navy. It is large, but not overly so, comparable to an Agasicles – they produce many of these vessels, expecting some to be destroyed by combat, rather than attempting to produce a small number of massive vessels, each capable of supplying an entire fleet. The Leons have no offensive capabilities, and a highly asymmetric acceleration range (forward << all others), allowing them to flee if necessary, although normally they accelerate very leisurely, and hang far to the rear of the fleet.

- **Leonidas:**

Ignore almost everything about the current model except that it is big. Primary features – ship is 6km long. Has 3 spinal mount mass drivers running the length of the ship. General symmetries are trilateral. It's main forward facing armament is best thought of as artillery. Secondary energy weapons are massive, but turreted (with limited arc). Capital missile arrays (each missile comparable in size (although not aspect ratio) to a small/in-system ship – each capital-ship missile has its own SPEC drive) are numerous and, outside of the spinal mounts, the primary long-range offensive weaponry. Against "stationary" targets, it deploys its spinal mounts. Against stand-off foes, a swarming volley of capital missiles, and against anything that comes within energy range, an veritable forest of lancing beams. Of course, to support all this firepower, this ship has massive and highly visible radiator arrays. Its primary intended role involves battles oriented around opponents with fixed defenses, and its weapons load-out (type of missile, etc.) is geared toward that. It does not lead charges, as it is not well equipped to charge – it is actually not particularly maneuverable and it does not chase military craft very well, though it can eventually overtake civilian craft. Its forward retros are disproportionately small, and it cannot rapidly slow down. It is reasonably defended against smaller craft and missiles by

numerous PD and anti-strike craft turrets, but lacks intermediate ordinance between capital missiles and anti-strike-craft missiles (i.e. it doesn't have torpedo tubes). When deployed, the Leonidas is generally in a fairly central position in the task group. The Leonidas is far too expensive to produce to ever be deployed without a full escort screen. The massive radiator-fin arrays are frequently damaged in combat, but are over-designed in terms of size relative to other craft and are extremely redundantly designed and organized.

- **Nicander:**

The basic model is good. Needs the standard retros/maneuver/radiator adaptations.

- **Pausanias:**

This is a vessel generally operated by Bzbr, doing somewhat dangerous work. It should look somewhat less expensive/valuable than other Aeran craft without looking shameful – it's an economy car, not a jalopy (so to speak). It needs to do edge-of-atmosphere operations, but edge of gas giant, not terrestrial planets. It shouldn't be a remarkably large vessel (not in the bulk cargo range) but gas takes up a lot of space - there'll be external tanks the gas will be going into that will be very large, surrounding a much smaller actual basic craft. It will be unarmed and mostly unarmored, but sturdily designed to deal with the environments it needs to go in/near. There should be some logical way for the gasses that have been gathered to be extracted post-facto.

- **Pleistarchus:**

Unmanned (UnAeranned, I guess :)) probe. Small, compact, sensor covered. Fragile looking - designed for long duration low acceleration utilization.

- **Pleistoanax:**

Sort of the Aeran version of the Andolian Spaceborn's MacGyver – or the spaceship version of that guy with the utility belt who comes and repairs your roof when it leaks. This is a small vessel designed to be deployed in swarms around larger vessels to preform external repairs and maintenance. Strictly low acceleration, very dainty by Aeran standards of construction, will have armatures for handling welding, etc. and tools/replacement parts on the same order of magnitude as its own craft.

- **Polydectes:**

Escort corvette. No large weapons, but many, many small ones. Needs to be fairly nimble to keep up with whatever it is escorting, and to interpose itself between threats and the escorted vessel before the threats are already in range. Existing concept art isn't bad, but should focus more on proportionally large engine/retro/maneuver resources for a craft of its size.

- **Polydorus:**

In contrast to the Alcmenes, this ship is equally at home both in space and in atmosphere. However, unlike the Alcmenes, this ship can only transport small numbers of troops and equipment, not large vehicles and emplacement components. This craft is used to send boarding parties to enemy ships and away teams to hostile or potentially hostile planets. Its armament is turreted, but extremely light

– they are primarily designed to attack planetary targets, and while they can deal with ground-based armor units and air support, they are not designed to do the manner of damage that is most useful in injuring spacecraft. While its weapons are space-capable, they are too light to truly harm any ship large enough to warrant boarding, though they definitely discourage counter-boarding EVAs, and can be used to disable specific surface systems or defenses in the attachment area.

- **Procles:**

Very large vessel. Carries hordes of sleeping Aera and stupefying numbers of frozen embryos. Aeran colonization is a fairly rapid affair once the planet is sufficiently habitable, as Aerans mature very rapidly, and make heavy use of both cloning and artificial gestation. While colonization is a military affair in the Aeran Ascendancy, the colonization ship itself is not armed and maneuvers ponderously. It carries both Aerans and necessary supplies for an initial colony, and genetic reserves for deployment as soon as the adult Aera on board have sufficient infrastructure to support an expanding population.

- **Prytanis:**

Existing concept art goes in a good direction, but bottom will have to be asymmetrically fat to accommodate cargo role (must fit a container). This is the closest thing to an Aeran 18-wheeler.

- **Soos:**

This ship is seen cleaning up after battles, or after heavy development, as in either case, the Aeran leave debris left over that still has value to be extracted. One of the most ponderous of vessels, it moves very slowly, sucking in anything within range and doing some pre-processing on board, removing functional components, and producing separable slag from the rest.

- **Teleclus:**

Invasion organizing craft, these ships oversee the deployment of Alcmenes and Polydorus against planetary targets, actually housing the Alcmenes within their hulls. Although the Polydorus is frequently seen without the Teleclus (carried in small numbers alongside most task groups), the Alcmenes is exclusively ferried by the Teleclus. The Teleclus is not vessel designed for space-space combat, but it is designed to oversee an area once orbital superiority is gained. It performs orbit-ground strikes and deploys Alcmenes and Polydorus as needed to move its substantial supplies of troops, vehicles and equipment onto the planet to be conquered, secured, garrisoned, or "forcibly evacuated" prior to being razed.

- **Theopompus:**

The primary Aeran craft in the Aeran analog of terraforming (Aenethforming), this ship must simultaneously serve as carrier, factory, refinery, and mobile docking station until the planet is sufficiently re-shaped and infrastructure placed that more specialized craft and installations can perform said roles. With movement usually consisting of maintaining orbit for months to years at a time and having no combat role whatsoever, the Theopompus has some of the least prominent engines in the Aeran fleet. When fully deployed, it also has the unique feature of extending massive, delicate solar panel arrays

that provide renewable power to the vessel until adequate fuel mining and refining can be established to feed the operation's needs.

- **Zeuxidamus:**

Staggeringly large Aeran hierarchical container cargo transport vessel. The beast of burden for interstellar mass shipping, this vessel is designed to carry the hierarchical container bundles that are unpacked and resorted by such much smaller container movers, such as the Cleombrotus. Cargo carried externally, and easily detached in sections and likewise reloaded in sections, this cargo behemoth shares much in functionality, and hence, pragmatically, in design, with the Merchant Guild's Elephant class, although the Zeuxidamus clearly shows her Aeran origins as well.

7.3 Portfolio: The Andolians

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.3.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.3.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:

- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.3.3 Mental

7.3.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.3.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.3.6 Writing, numbers, and insignia

7.3.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.3.8 Faction: OTHER FACTIONS

7.3.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.4 Portfolio: The Andolians

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.4.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.4.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.4.3 Mental

7.4.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.4.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.4.6 Writing, numbers, and insignia

7.4.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.4.8 Faction: OTHER FACTIONS

7.4.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.5 Portfolio: The Andolian Protectorate

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overviews: [Species:Humanity](#)

[Species:Klk'k](#)

[Species:Klk'k](#)

7.5.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.5.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.5.3 Mental

7.5.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.5.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.5.6 Writing, numbers, and insignia

7.5.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.5.8 Faction: OTHER FACTIONS

7.5.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.6 Portfolio: The Bzbr

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Bzbr](#)

7.6.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.6.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.6.3 Mental

7.6.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.6.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.6.6 Writing, numbers, and insignia

7.6.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

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7.6.8 Faction: OTHER FACTIONS

7.6.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.7 Portfolio: The Confederation of Inhabited Worlds

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overviews: [Species:Humanity](#)

[Species:Klkć](#)

[Species:Purth](#)

[Species:Mishtali](#)

[Species:Dgn](#)

7.7.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):

- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.7.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.7.3 Mental

7.7.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.7.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

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Cultural Aesthetics

7.7.6 Writing, numbers, and insignia

7.7.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.7.8 Faction: OTHER FACTIONS

7.7.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.8 Portfolio: Criminal Elements

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

7.8.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.8.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.8.3 Mental

7.8.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.8.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.8.6 Writing, numbers, and insignia

7.8.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.8.8 Faction: OTHER FACTIONS

7.8.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.9 Portfolio: The Dgn

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Dgn](#)

7.9.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.9.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.9.3 Mental

7.9.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.9.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.9.6 Writing, numbers, and insignia

7.9.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.9.8 Faction: OTHER FACTIONS

7.9.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.10 Portfolio: The Forsaken (Union of Dispossessed Settlers)

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.10.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.10.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.10.3 Mental

7.10.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.10.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.10.6 Writing, numbers, and insignia

7.10.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.10.8 Faction: OTHER FACTIONS

7.10.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.11 Portfolio: The Highborn

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.11.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.11.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.11.3 Mental

7.11.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.11.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.11.6 Writing, numbers, and insignia

7.11.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

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Organization

7.11.8 Faction: OTHER FACTIONS

7.11.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.12 Portfolio: Homeland Security

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.12.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.12.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.12.3 Mental

7.12.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.12.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.12.6 Writing, numbers, and insignia

7.12.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

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7.12.8 Faction: OTHER FACTIONS

7.12.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.13 Portfolio: The Bounty Hunter's Guild

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.13.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.13.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.13.3 Mental

7.13.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.13.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.13.6 Writing, numbers, and insignia

7.13.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

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7.13.8 Faction: OTHER FACTIONS

7.13.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.14 Portfolio: The Interstellar Shipping and Mercantile Guild

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.14.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.14.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.14.3 Mental

7.14.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.14.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.14.6 Writing, numbers, and insignia

7.14.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

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7.14.8 Faction: OTHER FACTIONS

7.14.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.15 Portfolio: The Interstellar Socialist Organization

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.15.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.15.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.15.3 Mental

7.15.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.15.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

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7.15.6 Writing, numbers, and insignia

7.15.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

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7.15.8 Faction: OTHER FACTIONS

7.15.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.16 Portfolio: The Klkk

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Klkk](#)

7.16.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.16.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.16.3 Mental

7.16.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.16.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

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7.16.6 Writing, numbers, and insignia

7.16.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

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Culture

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7.16.8 Faction: OTHER FACTIONS

7.16.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.17 Portfolio: The League of Independent Human Worlds

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.17.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.17.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.17.3 Mental

7.17.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.17.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

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7.17.6 Writing, numbers, and insignia

7.17.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

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7.17.8 Faction: OTHER FACTIONS

7.17.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.18 Portfolio: The Lmpl

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Lmpl](#)

7.18.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.18.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.18.3 Mental

7.18.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.18.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.18.6 Writing, numbers, and insignia

7.18.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

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7.18.8 Faction: OTHER FACTIONS

7.18.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.19 Portfolio: The Interstellar Church of True Form's Return

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.19.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.19.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.19.3 Mental

7.19.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.19.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

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7.19.6 Writing, numbers, and insignia

7.19.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

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7.19.8 Faction: OTHER FACTIONS

7.19.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.20 Portfolio: The Mechanists (Mandate for Corporeal Perfection via the Abandonment of Flesh)

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.20.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.20.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.20.3 Mental

7.20.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.20.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

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Cultural Aesthetics

7.20.6 Writing, numbers, and insignia

7.20.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

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7.20.8 Faction: OTHER FACTIONS

7.20.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.21 Portfolio: The Mishtali

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Mishtali](#)

7.21.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.21.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.21.3 Mental

7.21.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.21.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.21.6 Writing, numbers, and insignia

7.21.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.21.8 Faction: OTHER FACTIONS

7.21.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.22 Portfolio: The Nuhln

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Nuhln](#)

7.22.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.22.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.22.3 Mental

7.22.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.22.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.22.6 Writing, numbers, and insignia

7.22.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.22.8 Faction: OTHER FACTIONS

7.22.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

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Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.23 Portfolio: The Purists

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.23.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.23.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.23.3 Mental

7.23.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.23.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.23.6 Writing, numbers, and insignia

7.23.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.23.8 Faction: OTHER FACTIONS

7.23.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

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Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.24 Portfolio: The Purth

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Purth](#)

7.24.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.24.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.24.3 Mental

7.24.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.24.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.24.6 Writing, numbers, and insignia

7.24.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.24.8 Faction: OTHER FACTIONS

7.24.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.25 Portfolio: The Rlaan

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Rlaan](#)

7.25.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.25.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.25.3 Mental

7.25.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.25.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.25.6 Writing, numbers, and insignia

7.25.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.25.8 Faction: OTHER FACTIONS

7.25.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.26 Portfolio: The Rlaan-Briin

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Rlaan](#)

7.26.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.26.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.26.3 Mental

7.26.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.26.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.26.6 Writing, numbers, and insignia

7.26.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.26.8 Faction: OTHER FACTIONS

7.26.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.27 Portfolio: The Saahasayaay

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Saahasayaay](#)

7.27.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.27.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.27.3 Mental

7.27.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.27.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.27.6 Writing, numbers, and insignia

7.27.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.27.8 Faction: OTHER FACTIONS

7.27.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.28 Portfolio: The Shapers

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.28.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.28.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.28.3 Mental

7.28.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.28.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.28.6 Writing, numbers, and insignia

7.28.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

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7.28.8 Faction: OTHER FACTIONS

7.28.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.29 Portfolio: The Shmrn

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Shmrn](#)

7.29.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.29.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.29.3 Mental

7.29.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.29.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.29.6 Writing, numbers, and insignia

7.29.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.29.8 Faction: OTHER FACTIONS

7.29.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
- Moving parts(non-turret):
- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

- Service/Maintenance hatches

Somewhat larger things found on the hull of a large Aeran vessel:

- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.30 Portfolio: The Uln

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Uln](#)

7.30.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.30.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.30.3 Mental

7.30.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.30.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.30.6 Writing, numbers, and insignia

7.30.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.30.8 Faction: OTHER FACTIONS

7.30.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:

- Rarely visible:
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- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

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- Escape pod launcher ports

Yet larger things ... :

- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

Existing concept art is not particularly canonical. Please redesign.

7.31 Portfolio: The Unadorned

Ships overview for all groups (Work In Progress): [Ship Overview](#)

Art-style Guide (Work In Progress): [Artstyle Guide](#)

Species overview: [Species:Humanity](#)

7.31.1 Origin

- Gravity:
- Atmosphere:
- Primary liquid bodies:
- Average temperature of homeworld (pre-industrialization):
- Sun:
- Primary challenges (pre-industrialization):

Habitat

7.31.2 Physical

- Dimensions:
- Mass:
- Skeletal system:
- Major divisions:
- Senses:
- Visual acuity:
- Chemosense:
- Locomotion:
- Manipulators:
- Textural appearance:

7.31.3 Mental

7.31.4 Technological

- Tech:
- Weapons:
- Tactics:
 - Small groups:
 - Large groups/Fleets:
- Installations:

7.31.5 Culture

Factions and Organizational Groups

Listed below are noteworthy Aeran sub-factions and organizational groups:

- FACTIONS GO HERE

Religion

Cultural Aesthetics

7.31.6 Writing, numbers, and insignia

7.31.7 Faction: PRIMARY FACTION

A Brief History of the PRIMARY FACTION

Development

Culture

Organization

7.31.8 Faction: OTHER FACTIONS

7.31.9 Vessels

Style Overview

- Primary distinguishing color ranges:
- Common accent colors:
- Primary lighting color:
- Frequently visible:
- Rarely visible:
- Seen inside, but not out:
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- Capital vs. light craft:

Surface features of large vessels

Small things found on the hull of a large vessel

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- Pinnacle/lander launch bay (non-carrier vessels)

Listing of vessels

- **FOO:**

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Chapter 8

Uncategorized Items

8.1 Aesthetics advice and other conversations

8.1.1 Rlaan Aesthetics

Conversation (excerpts) on Rlaan aesthetics

A: we'll start with the "how much is alive" part not too much, although there are a lot of organics used, especially internally. parts of the life support system are made from arguably living material, and the automated repair systems rely upon living organisms

Q: hmmm.. is it something that can be seen?

A: excepting one case - not really, no. Not unless, sometime far down the line we do interiors. The only visible exception is the effect that having living secretion sites would have on what we might want damage maps to look like. for visual range, the Rlaan are heavily blue shifted relative to our visual spectrum

Q: near uv?

A: yes, they can see in near UV, but their red-end range is inferior to ours, and their peak response point is also shifted up in frequency, although their frequency responses are more even than ours. They use 5 pigments vs. our 3.

Q: interesting.. very much so. the reason I had previously brought up the visual range, was for colours.. so one could get an idea of what they would look like or rather one of the reasons

A: their color choices may look a bit dark (we don't perceive blue tones as intensely) and some of them bland in contrast (different pigment response curves)

Q: ok.. so no seeing through the hulls and that whatnot.. what was the next one?

A: (although there'll be images on the hull we can't see at all, and some of the red-end of our hulls will just look black to them - their sun isn't a yellow star like ours - no superman for them ;-))

Q: *nods* I thought that maybe some insignias and markings might look broken or even fairly faded, as parts of it, may go out of our visual range which would give it an interesting look

A: indeed. the 5 models we have for the Rlaan are pretty good indicators of style for their military craft no visible engines (the Rlaan just do gravitics) Big dual purpose radiator/shield manipulator fins

Q: how about for the larger craft.. battleships, and bases?

A: so, we've got 3 Rlaan small craft, and 2 Rlaan capital vessels right now a destroyer and a cruiser

Q: so.. do you want the stationary rlaan craft to follow the same general gist? squatish insect puapa (sp)

A: no, they should have a lot more radial symmetry rather than bilateral in 4s preferably so, for the stations My first thought is to go for a cored, squashed, pruned, and resurfaced sea urchin look :-) less vaguely: an ovoid (as opposed to a spheroid, hence squashed) with an empty center at its rotational axis (cored) with intermittent long, thin spires and smaller fins (pruned)

Q: more towards crystalline, or with the metallic chiton/membrane look?

A: the latter, as with the underside spires on the (destroyer?) with a surface similar to the topology and aesthetics of the cap-ships, excepting that civilian installations have a *much* more whitewashed color scheme (resurfaced)

Q: ok.. sounds a lot more simplified then I think had been coming out of some folks looking to do rlaan

A: well, that's first approximation the surface isn't smooth though, and each of the four sections isn't perfectly ovoid so there's plenty of detailing to be done

Q: *nods* irregularities and so forth

A: but everything is rounded use the 2 capships as your guide to surfacing

Q: ok.. I'd been coping the uv maps for a little bit of a guide on some of the ships

A: Just as long as it doesn't get mistaken for Mon Calimari design, you're probably somewhere on the right track :-)

Q: heh

A: so, the key is this 1.design a very interesting quarter of a station, for any Rlaan station, really, then make 3 more of them. The only exception for this would be at the very small end (too specialized for arbitrary symmetry) or on something like a shipyard where it's not a practical design for enclosing things

Q: *nods* hmm.. so you can have fairly expansive and maybe even elongated forms.. that still follow the general outlines of this.. or are elongated forms out?

A: in what sense elongated?

Q: well.. I wrote that thinking long.. but if you're going with general crab like shapes.. then elongated would actually be from the center out, rather than along the length of the core say the core is the y access.. you could have the center along the y and z axis fairly wide out, but not along the y axis in comparison to the z and x

A: so radially symmetric around y axis hence $z=x$ but $\text{span}(y) \neq \text{span}(z)$ well, yes they're radially symmetric, not spherical but the bases won't look like them they just borrow the radial concept here are some important things to remember about the Rlaan

Q: *nods* radial and rounded.. I'm trying to get the feel for the general way in which forms are done

A: Consider their music as indicitive in some sense of their attitude towards construction: they like to take lots of simple themes and plaster, superimpose, and alternate among them The result, to human ears, is often hopelessly noisy, or monotonously simple, or both two: The Rlaan are, to quote the "Tough guide to the known galaxy" "Really Alien" they aren't aliens with forehead ridges

Q: *nods* truly different

A: They are foreign to us, and as such are not beings that should lend themselves to comfort in our perception of their being and their edifice thus, in creating things for them there is a line to walk between creating questions of "but why would they do that?" and "No rational being could have done anything

remotely like that”

Q:hmm.. sounds a lot like a form of brainstorming that is drawing based..

A: So, having a large, prominent object of non-discernable purpose that something is built around, or a placement policy for certain necessary things that seems... odd is good, but having recognizable objects in clearly wrong places just makes them look like idiots or lunatics e.g. placing all of the bathrooms for human visitors inside trees - strange, possibly alien misconception. Placing all of the bathrooms outside the hull.... um.... yeah

Q: you’re looking for something that has the taste of something that was done naturally, not something that was randomly placed together

A: The best approach is to pick some fairly arbitrary goals but ones that can be consistently applied the key to the particular mindset of the Rlaan is that these should likely be fairly simple, but there should be many of them and they should interact

Q: oh.. *nods* had to think about that a moment when I say natural.. I mean that it flows as one piece. and not like it was a pirate stealing from various races to build something

A: The huldra and Lodur, I think do a better job of making one wonder what the designer was thinking than do the smaller craft

Q: *nods* the smaller craft look little like different pieces slapped onto a craft to make it look different

A: they also look more familiar - they’re more identifiable

Q: there was something I did want to ask you about.. about technology in vs..

A: sure

Q: is it ok to base technology off those portions of vs that use the magic theme.. so your antigrav and stuff like that

A: Some of them are based off of that, yes

Q: I know that you are doing that with rlaan.. or it would seem so.. but in general I get the idea that folks should shy away from technology that relies on the magic theme based off of existing.. that is

A: gravitics-spacetime warping is pretty heavily in the VS scheme of things right now – there’s always a danger when playing around with *magic* that you’ll paint yourself into a corner

Q: so.. should greebles for rlaan look more like veins and spines? aside from things jutting out.. also, should the fins you get with ships, be present to any degree on stationary craft

A: mmm. some spines, not too many veins. More blisters, and opened blisters with internal protrusions, and overlayed regions of different construction. The fins should still be there T the Rlaan like to have lots of radiator surface

Q: ok

A: and, as mentioned, there’s lots of shield control circuitry embedded in them

8.1.2 Textual ship descriptions

Some very, very brief descriptions of vessels

Manufacturer: Mechanist Defense Contracting, under contract from Confederation Navy

Class: Battle Cruiser

Designation: Battle Cruiser Mk. 32

the armament on the Mechanist battlecruiser is fairly simple
48 heavy beams, and a bunch of PD turrets
and designed such that all 48 beams can face dead ahead
12 can face dead stern
and 12- 16 can face to each side
so, a limited, if potent, vessel
a tapered appearance, starting at a somewhat ovoid part, and narrowing as it goes towards the front - then
stopping suddenly in what amounts to a wide, narrow mouth with 3 4x1 restricted movement LR beam tur-
rets as jutting tusks
on the top, behind the mouth and up the slope somewhat, a less restricted 4x1 turret. Up the slope more and
to each side, more 4x1 turrets
the bottom and top are symmetric
around the rim of the ovoid part
12 cocoon shaped turrets jut out, positioned such that the gun can be pointed forwards and backwards
slanting down on both sides to angle in if need be
but heavily restricted in the other degree of motion
to the rear of the turrets, a brief ring at 45 degree angle slope with PD turrets
then a sudden extreme slope that curves around and gives rise to a bumpy engine and whatnot rear
4 docking bays, each located in a cutaway area in the side

Manufacturer: Andolian Military and Andolian Protectorate Fleet, for crewing by Andolian and Klk'k
Forces.

Class: Destroyer

Designation: Nietzsche

Visual description:

The basic shape of the main hull is roughly cylindrical. The thickness of the body does not vary over-
much, though it does vary, except at the front and rear. At the rear, it tapers abruptly for a very short time,
then curves in on itself, creating a caldera, or bowl-like depression into the rear of the vessel. The main
engine exhausts are in this inset area. On the tapered part of the ring around the engine bowl are four point-
defense turrets, one top, bottom, and to each side. Coming out from the main hull are four projections, one
pair on top and bottom, not too much after the engine area, and one pair on the sides, forward of the top and
bottom pair, but overlapping somewhat in that they begin before the other pair ends. These projections are
quite thick, and shaped something like a compromise between a circle and an equilateral triangle. Imagining
them as triangles one would say that they were aligned such that the top and bottom pair pointed forwards,
and the two side projections pointed rearwards. The projections extend out about the radius of the main
body, whereupon they are capped by a thick, slightly wider plate, much as one would imagine a toadstool,
shitake, or portabello would appear if the stalk were almost as thick as the head, and the head flat on the

top and rounded on the bottom and edge. Just below the cap, embedded in the projections, are large engine thrusters. The engine thrusters in the top/bottom pair are larger than those in the side pair. On top of the cap, at each of the "corners" is a largish turret, though not a massive one, somewhat tilted down from the flat plane of the top of the cap such that its gun can depress below level. Each such turret contains a single gun. Forward of the side projections somewhat, the cylindrical main body differentiates. The top portion becomes a bundle of six tubes (for launching anti-capital missiles) around a larger central projection, two above, two below, and one to each side in slightly svertically squashed hexagonal fashion. The tubes are not actually touching each other, and the area in between them is filled in solid as is the area between the tubes and the central projection. Beneath this bundle of tubes is a hangar/docking bay. The combination of the docking bay and the collection of tubes are slightly slimmer than the main body of the ship. The tubes extend slightly beyond the end of the hangar. The central tube area terminates in an inset sensor array and two small turrets, one to each side. The missile launcher tubes terminate as one would expect them to, flush with the base of the turrets on the central projection. There is a tractor beam turret on both sides of the hangar, and a disabling turret on the bottom lip of the hangar.

There are various PD and anti-fighter turrets, but their position isn't as important at this level of description, save to say that I see 3 anti-fighter turrets on the sides of each projection to discourage loitering beneath the guns, and that PD coverage must be excellent :)

To describe a bit more...

The open face of the docking bay is in the forward direction, and though, from the outside, it is clearly much deeper, the initial open area is somewhat shallow as it terminates in a large armored door that protects the inner docking bay.

Looking at the Nietzsche from dead ahead of the vessel, one might imagine the missile launcher tubes as the hideously deformed descendants of magazine from a six-shooter revolver. Relative to the crisp radial symmetry of the six-shooter, the tubes are stretched further apart horizontally, maintaining vertical and horizontal symmetry, but not radial. Likewise, the aperatures where the missiles exit are vastly smaller by comparison to the size of the tubes themselves than in a revolver. Most notably of course, these tubes do not at all revolve, nor move at all. So they really do not look all that much like a revolver magazine; perhaps the image of a revolver is only the quick shadow of a thought that comes from knowing that one is staring at six tubes, each of which holds death, and each of which has opened its dark mouth in your direction....

Materials/texture/greebles/etc. appearance: A purely military vessel, there are no vulnerable areas exposed unnecessarily. However, there are various sensor arrays, shield emitters, escape pod launchers, and maneuvering thrusters located on the hull, so it is not just a giant smooth armored mass. That being said, it IS a military vessel, and the dominant feature of its hull will still be the nearly seamless overlapping plates of multiple layers of armor.

Approximate Sizes: length of main body - 1500 meters, including engines, hangar bay and launch tubes. radius of main body, 150 meters. length of projection caps 450 meters

Hopefully this gives you something to work with without completely smothering your creative license :)

Anaxander:

(Design work previously ascribed to the Anaxander will be shuffled onto one of the other Aeran ships - as that thread has been silent for a year, I think it's probably not a big deal - and I think I like what I'm coming up with better)

Description 1: (a quick verbal sketch of a quick freehand sketch - I'll write more later)

A tube with length:diameter 6:1 very slightly squashed in the vertical dimension. Narrowed vertically somewhat at front to attach to hammerhead-style frontal region. Hammerhead has teardrop shaped cross section viewed from the side. Point of teardrop faces backwards. At the rear of the ship there are two similar projections on the sides of the 'engine'. There is no narrowing, rather the projections expand rapidly to merge into hull. Height of front teardrop 1/2 diameter length (base to point) 1 diameter (more or less) and rear teardrops are somewhat larger. Width of hammerhead - artist's discretion + field of fire for mounted PD + anti-small craft turrets. At bottom rear of vessel, forward slightly of exhaust region is an underslung docking bay, with an opening at the rear, facing back and slightly downwards.

There are six major projections extending radially from the ship, three rear, and three front. The three rear are in a top, bottom-left, bottom-right radial symmetry, and the front three are shifted 60 degrees to a bottom, top-right, top-left radial symmetry. The rear projections begin just after the engine region and are narrow at the back, wider at the front, have a gradual slope on the rear side, a flat top, and a very steep returning slope (something vaguely like a rose thorn that has been pruned of the pointy part). They do not return all the way to their original height level relative to the hull and instead merge into spinal gun emplacements that sit on top of the hull, each gun emplacement housing three long, large weapons. Attached to the flat top of each projection is a triple-mouthed torpedo turret. The three fore projections are longer, less stout, and have maneuvering engines through their middles. They are faced oppositely (flatter region back-facing, pointy region forward-facing) and are topped with gun turrets.

Additional gun emplacements are present on top of the engine section and on the bottom of the docking bay. The longer projections are (in height) 30% of the ship's length, the shorter rear ones 20%. On the exterior facing flattened sides of the hammerheads (both front and rear) are "sensor stuff". Overall ship's length estimate for scaling perspective 2.1km.

Ultra-brief ship's history:

The Anaxander is old, and even with retrofits is aging significantly. It was the main Aeran cruiser at the beginning of the Rlaan-Aera conflict, having already been produced in some number. As newer designs (some already in the pipeline) were phased in, the Anaxander moved to less prestigious roles. While still a vessel of noteworthy offensive potential, it now almost universally finds itself attached to task forces rather than leading them.

Purist Star Car (Name to be decided later):

LIHW Star Bus (Name to be decided later):

First, some context:

Ownership of personal spacecraft is most akin to ownership of such boats as one would have to dock at the local marina today. Thus, while not of unreachable expense (only the luxury yachts are luxury yachts,

even in space) private craft are not ubiquitous and mass transit, both public and private, is much relied upon.

The bulk of civilian passenger transport vessels (that is, excluding mercantile transport) would fill one of the following niches (with modern analogue in parentheses):

Interplanetary Personal Transit ("Car")
Interplanetary Charter and Rental ("Limo/Rental/Taxi/Charter Bus/Charter plane")
Interplanetary Mass transit ("Bus/Light-rail")
Interstellar Mass transit ("Commercial airliner")
Interstellar Recreational ("Cruise ship")
Interstellar Jump Ferry (no direct analog - taking one's car/small boat across an ocean isn't common enough)
Interstellar Personal Transit("Yacht/Private Plane - not necessarily of luxury variety")

8.1.3 The Aesthetics of Deucalion with tangents on the Klk'k

A conversation on appearances

T: so, first off, a general comment (not directly about the drawing) about Deucalion's ancestry - namely, he has designer genes that appear to draw from several groups as opposed to being a standard Shaper variant of anything, so inferences directly from or to the Shapers are fuzzy.

A: how old do you picture him?

T: early thirties

say 32 for a round number

haven't entirely nailed that down yet, but about that -

A: cool, not enough to be 'old' but old enough to have a past

T: but this is also in the context of a longer expected life-span, gene-smithing, etc

A: so he looks 20-something?

T: the detrimental effects of aging won't have kicked in yet

A: roger

T: it's less that he looks 20-something or that he is particularly youthful than just the above

A: ah, gotcha—should look young yet mature

at once

am I right?

T: something like that ;-)

an extended "prime of life" if you will

rather than the very brief peaking of our modern physiology

if, in 1200 years we can't age much more gracefully, it's time to shoot the geneticists

A: all right. what else? given any thoughts to the scar suggestion?

T: he heals quite well, so it'd be more apt to due some subtle discolorations rather than overt scars
we'll see how it turns out

if it looks good, we'll work with it, if not, we can re-examine it

also might work better to limit the scarring on the face, as faces are delicate in their perception to begin with

A: I suggested decoloring—to ditch the overused stitch-mark cliché

a line of lighter skin, just enough to be noticeable, probably

T: arms and such are much easier to get away with if the face appears over marred
but yeah, give it a try, and we'll see how it looks

A: ok.

T: speaking of markings

he'll need a high bandwidth I/O port

A: what does that look like?

T: discrete, not overt, near flush with the skin (self covering when not active), but obviously not of organic origin. Small region towards the classic back of the head/base of the skull. Might as well make it a utilitarian looking, if aesthetically not displeasing color.

basically, a small panel for interfacing the spinal taps to an external high-bandwidth source, for when the ubiquitous wireless data connection is too slow

A: a Pluralis trait, or is this a standard of sorts for the VS universe?
or rather Klk'k habit?

T: It's mostly Andolian hardware, but connections of various degree and make are common in other groups

A: yeah, andolian—sorry, I may be liking the homo sapiens something signature a bit too much :-)

T: The Protectorate citizens have the highest and earliest implantation rates

With the Andolians and Purth having a 100% implantation rate (the Purth are all heavily cybernetically augmented - but then they have to be to be sapient in the first place) and the Klk'k have a very high implantation rate

well, The vast majority of the Andolian population is distinguishably Pluralis :-)

so it wasn't an inappropriate phrasing

Deucalion actually has a number of augmentations, but most aren't externally visible

A: you'll have to tell me about those some time or other, since I do think it's my duty to know the characters
I draw

T: assuredly :-)

hmm yeah, we'll have to work on hairstyles at some point, but anyone who's seen the various incarnations of my mop would know I'm not an authority on *good* looking hair
some other thoughts that came to mind

A: I have to cut his hair shorter, according to your description. does he wear, I dunno, braids? some sort of mohawk (please tell me he doesn't)? shaved patterns? there's lots of options to choose from, or combine.

T: his main concern would be that his hair doesn't interfere with his helmet, while still showing that he *has* hair

(the Shapers having a lack thereof as a distinguishing characteristic, thus his hair as a distancing feature)

I'm seeing hair that's short enough that he doesn't style it much

a close cut, somewhat unruly mess

A: ah,, that's simple enough. a bit of a manga mess over short hair.
no greek style curls

T: well, perhaps the hint of such on the top

waves that would become curls if they were to grow long enough

A: I'm taking note.

this is a very productive meeting!

T: basically, on the sides, the hair shouldn't jut out any more than the ears do
and the top would be somewhat more amenable to tweaking based on aesthetic issues
it'll be a different version of "helmet hair" than is normally implied :-)

A: so he's a bit vain, he he—is he a ladies' man, or a man's man, or both?

T: well, self-maintenance relative to some societal norms isn't something I'd label quite so harshly as vain
but clearly conscious of his appearance

he'd have to be, if not in the traditional sense, given that he grew up among aliens

A: I'm looking forward to know about that, too

T: He's wired fairly hetero, but growing up among Klk'k is it's own deal with respect to sexual mores - it's
certainly not judgemental in the current western schema

so, definitely not a Man's man. I'd avoid the label of ladies man on the principle that, while he's sexually
active, and not currently involved in any long term relationships, neither does he prioritize activities towards
garnering female companionship

But, not averse to female company, no

The more interesting thought than gender orientation is species specificity :-)

He's specific to humans (of all subspecies) and Klk'k.

A: and so was his sister, from the looks of it

T: well, his "sister" *is* Klk'k

he's adopted

A: I knew he's adopted from the monologue, didn't stop much to think about the sister

T: Interspecies relations are still outside the mainstream. Moreso for certain pairings than for others, moreso
for certain groups than for others.

Clearly, any such pairing is non-reproductive, and the physiological issues presented that govern any physi-
cal relating (let alone alien psychological issues) are non-trivial

A: and when you least expect it, you see the most gorgeous shaper dating the ugliest rlaan.

T: well, any pairing with a Rlaan would be very hard

A: just kidding—I know about their two-strata society

T: actually it's because they aren't Oxy breathers, and require entirely incompatible temperature and pres-
sure ranges

A: methane breathers

T: and who wants to dance with a Rlaan-Briin in an encounter suit, when he has to keep making stops to
recharge it ;-)

anywho

clothing

A: here's where you start defining klk'k (at least their apparel ;-)

T: actually, not yet (at least until I get to the more formal-wearish :-)

I'm seeing the default Deucalion casual-wear leaning towards under-clothes for his flight-suit
non-loose tank-top-esque top

non-loose shorts

flight-suit boots

A: socks?

T: no, the flight-suit boots would cover that. More likely just a couple of soft thin bands to pad above-ankle region from the rim of the boots (low boots, boots rather than shoes solely for sealing purposes)

depending on climate and such

he could be wearing the bottom half of the flight-suit

the flight-suit isn't very thick, and is form-fitting and stretchy, almost clingy

in contrast to the exceptionally loose and baggy nasa space-suits of today

A: ok, for form-fitting flight suits we're talking entirely different technologies

yup

T: yes, different materials science

A: It's clear that I should have talked to you before doing those fixers :p

T: well, a couple of them :-). But clothing will vary greatly amongst factions. Also, it's a flight suit - it's not intended to be worn for hours on end in space on a regular basis - it's designed to keep you alive while flying, and safe in the event of hull breach and such

it's not designed for extensive repair-work or prolonged EVA

that, combined with materials advances, makes it feasible to have a suit that does not encumber the wearer nearly so much

although it's still cumbersome

more like a stretchier wetsuit/drysuit in hinderance factor than a space-suit

so basically, for vacuum wear, Hard-Suit :: Long-Suit :: Flight-Suit :: Skin-Suit :: anything else

well, Skin-Suit/Environment-Suit

err sorry scratch that

Flight-Suit/Environment-Suit

The Flight-Suit is optimized for Vacuum, whereas an Environment-Suit is optimized for one or a range of inhospitable environments due to biologicals, radiologicals, atmospheric chemistry, low pressure, or temperature range

(high-pressure needs a Hard-Suit)

Long-Suits being similar to the Flight/Environment models excepting being designed for extended periods in said environments

A: so how many in total? I'm confused. Just two, the skinsuit and the env suit?

T: Skin-Suits are vacuum rated, but offer little physical or radiological protection, and are valued more for the hermetical seal than anything else

no, several classes

A: ok, how about the hard suit?

T: Hard Suits :: Long Suits :: Flight/Environment Suits :: Skin suits

Hard Suits are completely self-contained

they have external manipulators (fingers being subject to pressure crush issues)

and are designed for exceptionally hostile environments

crushing pressure, massive radiation, highly corrosive atmospheres

A: ah, EVA pods of sorts

T: yeah

<http://www.nuytco.com/exosuit.html>

+1200 years

well, that's actually more like a Long-Suit, but you get the point

EVA Pod

Whereas someone wearing a Flightsuit is going to look more like much more like they are wearing thick neoprene or some such

but, as to his clothing, for casual wear, it's things he doesn't have to take off to put his flight-suit on now, for more formal-wear

A: go on

T: firstly, the Klk'k are somewhat anthropomorphoid insofar as they have 2 arms, 2 legs, are bipedal, and have heads.

Klk'k style uni-gender semi-formalwear tends to be variants on a loose, sleeveless, single-piece garment that runs completely flat across the front, tapers slightly out from waist down and is slit in the back somewhat below the waist

ignoring the lack of arms, the closest thing that comes to mind in human clothes is an Indian garment I saw in a fashion show once

it continues down to slightly above the ground

A: no provisions for neck or collarbone?

I take that, despite its simplicity, it's ornate

T: not entirely sure what you mean?

the neck/collarbone part

it's sleeveless, not strapless :-)

A: ah

T: there is fabric straight from shoulder to neck. but no collar

the rear opening is convenient for the Klk'k as their legs bend opposite ours

The ornateness is highly restrained, with patterns being limited to the edges and waist area, running in thin seams around the garment

the prime regions of Ktah are quite humid, and ostentatious layering would not have been comfortable

informal Klk'k clothing tends towards a short, loose skirt, with tops varying by region

A: but our guy doesn't walk around showing his buttocks through this slitted garment or does he?

T: no, the slit starts lower than that

and he wears undies

when such is called for

nudity not such a big deal in Klk'k culture. The coverings are as much practical and protective as shielding from the public eye.

pockets, belts, places to put or hang things, footwear, clothing to prevent scrapes and scratches to various

areas

A: they're a practical bunch, these klk'k.

T: well, there's also clothing to show respect

show allegiance

traditional body-paintings

tattoos

A: that's a chapter on itself, I take

T: sure

they aren't anti-decoration, or even anti-clothing

they just aren't obsessed with covering themselves up with the local cloth equivalents

A: does Deucalion wear any tatoos, ritual/cultural marks?

T: yes

He has a Tk'latl tattoo on his upper left topforearm/shoulder area, with annotations denoting his rank and record in Amakakt (the martial art heavily featuring said Tk'latl)

<http://www.ocf.berkeley.edu/~jackass/sketches/klk'k-emblem.png>

the Double-bladed staff (seen sheathed and cradled in the horn in the sketch) is the Tk'latl

A: written characters? I can come up with an alphabet/syllabary/pictogram set.

or just make up the marks in the forearm :-)

T: Not written characters

A: the shape of the staff itself?

T: the ranking is above the Tk'latl, and consists of a series of vertical bars of different color, denoting increasing ranks attained, from left to right

A: and in Deucalion's case...

T: the history of the matches is recorded in colors corresponding to the rank of the opponents, and lies below the Tk'latl, with vertical bars for victories and horizontal bars for losses

Deucalion has achieved the 10th of 12 possible ranks

A: no failures?

T: none against lesser or equally ranked opponents. A couple tournament losses against mid-ranked(4,5) early on, a couple challenge tournament losses against masters (11th rank) later on.

A: no horizontals then.

or tiny ones?

hehe

just joking

I can picture him now far more clearly

How do we go about the story for the comic?

T: well, horizontals still. Defeats still count as defeats :-)

A: (not changing subject, just bringing up the issue for when it's appropriate)

T: his other shoulder has calligraphy for each of the family names of his adopted parents, and the chosen name of their bond set

I don't have a clear idea about exactly what the Klk'k written languages will look like, and it's supposed to

be calligraphy and they're all given names, so feel free to make up something

A: family names as in Jewish tradition? "Jehuda son of Moses son of Abimael son of Samuel son of ..."?

Roger

T: not quite

the dominant culture for some time uses a strict two-name scheme

when a bond-set is formed, they choose a name for themselves

A: ok

T: and that is the bond-set name for those children raised by that set

if the set changes, through addition, the name may be changed or it may be kept, but the children will retain the old name, unless very young

if the set changes through attrition, the name does not change

in order to honor what was, even if it is no more

so, you are known by your bond-set name (the name of those who raised you) and your personal name, usually given in that order

so it's not lineage tracing beyond one generation

A: are bond-sets two-partite?

T: no

A: I imagined not :-)

T: 4 is normal

2 is somewhat odd, 3, 5, 6 aren't considered odd, but are less common

A: sounds... complex

T: more than 6 is generally considered somewhat odd

well, the easiest way to think of it is as if a small commune all married each other

A: BTW, I've done reverse-jointed legged aliens before—see if you like the way these look—

<http://www.haeggagaxy.com/haeggagaxy/modules.php?name=Content&pa=showpage&pid=38>

still, two sexes?

T: yes

seen that comic actually, I read it when you posted a link to previous work :-)

the Klk'k are built a bit differently

A: then saga of Ryzom came and stole my idea of a tree-world :p

lol

T: different proportions, more hip splay, longer, flatter feet

good jumping legs

not good things to be kicked with

disproportionately large leg muscles on an otherwise slender frame... but I digress slightly

A: heh, it becomes VS lore the moment you type it, and I need all of the data I can have on those guys

well, that should be all for today—g2g

T: other attire for Deucalion, right armband signifying his rank in the Protectorate Fleet and non-duty status

(depending on where he is, this may or may not be appropriate attire, but he has one)

(Further conversation excerpts (edited) on similar topics)

T: looks too young now, or more accurately, too inexperienced. Especially the eyes, especially in the profile sketch.

Alexbetzone (2:21:07 PM): more knowing eyes... check

I found no guidelines for eye color. What color are they?

I'll fix the hair, no prob

T: Dark green eyes

hair color should be darker

more navy-blue that looks black except next to black and less cornflower/royal blue

A: all right, navy blue dark-shiny, I guess.

T: doesn't have to be shiny

A: matte hair?

I know what you mean, just kidding

T: well, highlights make it perceivable as hair and not a spilled mass of indigo ink

:-)

A: yup-no superman spit-curl

any other corrections or additions? note I haven't tried the scar thing yet. I was going to place it near the jaw.

T: trying to come up with a good rgb approx for skin tone

A: I used the tone in your mockup, but for the sketch I've been using "bleached" colors so the line art is easily seen

I won't next time

T: yeah, the color at present is a bit light, and seems short somewhat on green but, we'll see how it goes as things progress :-)

A: ah, too purple? would you prefer a more neutral tone?

T: just a sec

<http://www.ocf.berkeley.edu/~jackass/sket ches/headproto2.jpg>

A: I'm ... beginning to suspect that your name isn't Jack

T: quick photoshop paint-bucketing

actually it is

sort of

A): I mean from the url :-)

T: I figured as much

A: once again jokingly

T: :-)

I'm not averse to humor

sorry to butcher your sketch with the paint bucket

it's not a precision tool

A: eh, you just gave me a color scheme I needed. that you grok photoshop has made it easier for me.

T: glad to be of service :-)

A: same here—I hope the comic, posters, intro fmvs and whatever else help spread the word about VS deserves a lot more attention than it has

btw, there's talk about a logo every now and then but nothing concrete

T: My thoughts on a new tag line-esque phrase go as follows:

A: (ah, you must've read my post on the subject already.) ?

T: "Before Success must come Survival"

Vegastrike.

"The void beckons"

A: somehow I suspected "tales of the void" not to be final

T: Legends of the Void sounds like a name for an expansion pack :-)

"Play all the NPC characters you could only dream of being in the original!"

hehe

I can see the advert

with the above tag line

or rather, above above

Word on black "Before Success..."

Images of wealth, splendor, glory

word on black "Must come survival"

images and pounding sounds of labored breathing and heartbeats, screams of pain and battle cries, quick cuts of interspersed combat

A: don't mind me if I take this verbatim and screenplay an intro around it!

T: Sound cuts, spoken "And you are very small" Show EVA suit working on repairing battlecruiser in space dock, slow zoom out

Cue logo

A: which we are in dire need of

T: not sure what sounds to put here, something ambient, or maybe some voices in the background through static, or maybe.. not sure

pause for a couple seconds.

text and voice-over "The Void Beckons" (slight pause) between Void and Beckons in the speech, but not the text

A: background music: classical (such as Holszt's Planets), cosmic new age a-la Jarre, rock, VS theme...?

T: different for the different emphasis points

something classical would fit well for the success part

A: Hmmm, something baroque?

T: but the music the survival part should be percussion driven chase music, aggressive, raging, scared all at once

brash, violent and jagged

no music at all for the pan out in space
conspicuous silence after the previous section
not sure what to do for the end music-wise

A: I suggest not music, but an undefined sound of "unknown aliens out there", sort of a low harmonic with just a bit of a shrill halo, or something along those lines
as if there was something mystical about this "call of the void"

T: or a low harmonic with a muted pulsing beat
if it wasn't "the void" I'd go for softly whistling wind :-)
something to play around with, for sure

A: you know, a quantized wind effect could work there too
aka "electronic wind", just manipulated for a more subtle effect

T: I can talk about the Klk'k some, if you're willing to deal with some ideas not yet full rendered from mind to either page or word

A: of course, and if you wish, my pencil is in service of helping ideas take shape—I could try to approximate something from your description

so you can refine, I try again, and so on

T: that was indeed my hope :-)

A: great!

T: so, here was my first attempt to draw a Klk'k skull <http://www.ocf.berkeley.edu/~jackass/sketches/klk'k-skullbones.png>

and here's a poorly done profile (head is still skeletal here) <http://www.ocf.berkeley.edu/~jackass/sketches/klk'k-sketch.png>
and the ankle isn't right

but.. it's a start

average height range 4.5 to 5.5 feet

long, largish feet, reverse jointed knees, large easily splayed hips, excellent jumpers, thick, disproportionately long, muscular legs in proportion to generally much skinnier tops

wide, short, fair lengthed, back-bottom flanging head, with back facing nostrils at the rear base between neck and jawbone

jaw is wider than head on each side. because of angle, more teeth on bottom jaw than on top, bottom jaw teeth face slightly in, top jaw teeth face slightly out

mouth contains 2 tongues. has no connection to air passageway. has resonant "click" cavity in front top of mouth, behind and below the rear of the bone ridges forming the eye sockets

eyes are large and wide set, and the sockets pronounced in their bonyness

ears, such as they are, are 2 long curved ovoids, extending forward from just behind and below the top of the jaw joint to somewhat even with the top of the jaw joint and in front of the joint. Mostly flush with the skull, each ear is a series of cartilage-analog ridges protruding slightly out from the side of the head to focus sound into a central shallow curved trough, the bottom of which has numerous tiny folds of hair-lined skin atop a drum

smooth, hairless, thick, leathery skin

running from green-brown to brown-green

two thumbs on each hand, four fingers between
hands hang at about knee level

as noted, nasal passages are at the rear of the head, connecting to a common tube inside the neck and providing the sole breathing route

the real trick with these guys is to not make them look like little green men :-

A: ah, leave that to me

:-)

T: their anthropomorphic features got them in serious trouble with the Lightbearers

the Lightbearers saw it as a mockery of the human form and took religious affront

A: I'll give them enough personality to upset a KKK

T: you can see my inability to use perspective well here: <http://www.ocf.berkeley.edu/~jackass/sket ches/klk'k-emblem.png>

the center object is supposed to be a Klk'k horn

with dual nasal inputs that must curve around to the back

A: ah, you mentioned that this also goes on Deucalion's arm over his fighting training marks

T: but the forward tube and bell got reial wierded out

well, just the weapon

not the horn

the weapon through the horn is the Klk'k emblem

the (notably sheathed) weapon :-)

A: bladed, shooter, spear, multiuse?

T: it's an old traditional weapon

bladed on each end

A: makes me imagine a trident

T: no, it's a single blade on each side

looks more like a demented double-oar

the blade is wide and can cut on all three edges

but is not blindingly sharp

except on the outermost edge

A: beveled near the edges?

T: yes

the sides are for cleaving, as with an axe

the juts are for piercing, because of angle still somewhere between an axe and a spear, and the outer edge is for slashing, or thrusting, but not against a heavily armored target

or rather, doing so may dull or chip the outer edge somewhat, as it is more heavily beveled

hitting with the side works for bludgeoning, but it's not aerodynamic that way

the "wooden" ones are semi-functional oars

although metal versions are far too over-heavy for that task

the truly traditional incarnations, carved from the (human termed) Obelisk tree

are better suited for being multitasked as oars and spades

ultra-modern incarnations are much lighter, and forsake the traditional cleaving approach for having all three sides terminate in monomolecular thick blades

transforming cleaving into cutting

A: quite deadly

T: no one uses that in sport matches :-)

they use the Obelisk "wood" ones

monomolecular spade works well as an entrenching tool too ;-)

well, not that well really

cuts well, but doesn't carry dirt all that well

strength is all running in the wrong direction

anyway... ummm

that's a start on the Klk'k

any obvious questions right off the bat?

A: quite enough actually

yes, although on a different subject

T: oh, one more thing, lips extend back along jaws, for very wide grins :-)

have to really, at the angles the jaw will be moving at

;conversation wanders;

A: you've seen the new fixers. what's your opinion? I know that those are only partially similar to neoprene suits :-)

T: I like them

the externality of the small features is certainly appropriate for civilian suits, and most military ones too
the only thing I have any reservations about is the head/helmet for the proposed confed pilot

A: that's not the helmet, but go ahead

T: ok, that's what I was checking :-)

good

A: I haven't drawn any helmets now that I think about it

T: makes sense really

they're on the station

A: yup

T: most people would take them off

A: I'll use that as my excuse :-)

T: so, what then exactly *is* the pilot wearing on his head :-)

(the confed one)

A: combination head-gear (additional data feeds for the goggles), audio equipment, an additional level of cushioning, whatnot

T: sounds good

makes sense for most of the human groups :-)

but we can fairly safely assume that most of the pilots working directly for the confederation rather than in forces assigned to the confed are Purists or LIHW of fairly equivalent stock

A: well, could the headgear also be an option for those not wanting a socket in their head?

T: it's the only option for those not wanting a socket in their head ;-)

ell, excepting getting your head removed :-)

(but we'll ignore mechanist military pilots for the moment)

but yeah, you need to get the data one way or the other

A: the exoskeletal bits I imagined as meant to preserve the body from being bent grossly out of shape in high Gs or collisions—self-activating like airbags, maybe with some inertial dampening in them? of course the life-support layer is still below

some sort of support frame. is that still valid within VS techs?

T: no inertial dampening in the suit. it's generated externally to the pilot.

too big to carry around

A: so I need another explanation for the exo bits

T: so - two things

1. conduits

2. old-fashioned structural support for high-Gs (not enough to save you in an accident, but enough to make the flight more comfortable)

i.e inertial dampening is not a perfect thing

A: that'd explain the pilot having so much of it

T: especially the conduit issue,

you need a stable structure for things to flow through

A: how about multifunctional? both 1 and 2, and maybe some additional functions.

T: well, that's what I was implying :-)

A: ah, ok

has anyone come up with an explanation of VS's spatial distortion technology?

T: the details on how it's remarkably efficient to be able to nearly arbitrarily alter the geometry of local space?

or "how do shields stop X"

A: the former

T: not really, and I've intentionally not pursued it, because I believe that, once you've decided that something is *magic* then it's best to not try to explain it until you really have to

now, for questions like "how do shields work" or "how does SPEC work" that seem related, those I've pondered

the underlying ability to be able to manipulate space-time that fuels both of those (among other things) I haven't gone into details for

that answer the question?

A: sure, amply so

oh, before I leave: should pirates have melee weapons showing/hidden in their apparel?

I was planning on a suit for them made for the show: barbaric spikes, armor plates, the works

T: might work for the more eccentric special chars, but in general, one would imagine a pirate would keep a lower profile in most of civilized space

A: so concealment it is

T: the primary non-ornamental melee weapons would likely be a shock-stick and the old-faithful sharp-pointy-thing

the sharp pointy thing purely for stabbing people in the back / cutting throats with

after all, bringing anything heavy enough to breach a hull is not going to be appreciated by security

but if you want to gut each other in an out of the way corridor... so be it

A: clothes to conceal small to medium size weapons, a hint of seclusion

T: yup.

because the bounty hunters aren't there just for looks :-)

and they're likely licensed to carry light weapons :-)

(of the ranged variety)

A: ah, so the brutish pirate thoughts that didn't have a knack for subtlety are extinct now

T: or have fled to more forgiving regions of space

Forsaken and Uln territories should have some ... interesting characters

A: ah, the stories they could tell :-) well, I'm off

A: there's not much data on the klk'k, and I'd rather not use too much creative freedom (most likely my picture of the klk'k wouldn't be very consistent)

I have your data on combat ranks, some on biology (sketches), mating habits and clothing

but nothing to really 'picture them' physically in my mind. how do you 'see' them?

do they move slowly and heavily, or quickly like small reptilians and birds? do their skins resemble a lizard's, or a mammal's?

T: not quite either

more leathery, but not scaled

smooth

Moving freely, but with the constant potential for a quick, jerking, jump

Imagine a dignified dancer, but with too many cups of coffee and convinced he's being stalked

A: he he, that's very graphic :-)

T: the leg angles mean that they have to strut a bit to walk

A: so the legs extend backwards and sideways

T much more back than sideways, but far more splayed than ours are

I often think of them as creatures that came down from the trees, not like our ancestors, onto a savannah, but into a bayou

A: a bayou planet? I like these guys

T: planet, no

original habitat, yes

A: ok

T a common one as well

but not ... ubiquitous
that would be boring :-)
well, or dagobah :-)
only with more sunlight
I guess dagobah was more swamp than bayou
A: if we ever go into production design for this kind of thing, noz and I are gonna have a field day
T: :-)
A: I see a sort of 'lip' in the klk'k skull. what's it for?
T: which pic?
A: side view
heh, actually that seems to be the ocular cavity
T: yeah, somewhat pronounced ocular ridges
A: any special ability/feature associated?
T: they have no nose, so the first thing to hit them in the face hits them in the eyes otherwise
A: so how do they breathe? similar to aera?
T: no
A: thank you
T: rear facing dual nostrils
note the splayed jaw
A: swimmers?
T: they come up under and behind
capable swimmers, not ambphibious, but hydrophilic
A: very long feet, too. clawed, membraned?
T: the foot length is mostly jumping leverage, but it does make a somewhat decent paddle.
A: fast runners?
T: not incredibly - at least for distance
short stubby claw/nails on the feet, degenerated tree grippers.
A: of course. if the length of the feet was arched, then I would believe them to be sprinters.
A: I'm thinking the arms should be a bit bigger in girth than I drew them, but length I'm ok with
not too much though.
A: the double opposable thumb did make me curious
T dextrous
good strong grip
A: more than us I take?
T: A bit, the second thumb doesn't buy that much without additional fingers
but they'd have an easier time opening child-proofed medicine containers with one hand
basically, you can get grip+manipulate with one hand, but that doesn't make the manipulate part better
now, when just holding something, they'd have better stability
A: gotcha. just one eye though? no chance for independent maneuvering on each arm?
T: no, two eyes

look at the top view of the skull

A: anyway. independent sockets, of course? they can be inset in the ridge

T: yah

two distinct ridges actually

A: ah, I see now

must have confused yours with other stuff

T: jack.art-skill.clarity–

;-)

A: no, no, they're clearly distinct sockets, you're right

T: I think a key thing to keep in mind is the Klk'k have to be sufficiently anthromorphic that the Light-Bearers were infuriated by them, but never anything close to pity :-)

8.1.4 A conversation on baselines, models, and playability

P: I am pretty interested in making sure the player has some sensible ships to buy, though.

The way it is now, all the ships to buy are hardcore fighters, shitty, or giant freighters.

T: sure, but that's as much an issue of not having all the models we want as what each model we have should do

P: there's no middle ground, and no progression.

I suppose...

but making a good game is important too.

T: I agree

P: It doesn't really make sense to keep all the top quality models locked up.

I pretty much said "shit, we don't have an Llama +1 s"

T: (I've often been tempted to dump a few hundred place-holder lines into the units.csv and just assign a box as the model... but I thought better of it ;-))

P: "what model looks good, and could fit some cargo in?"

"ahh, the admonisher. cool"

T: so you think the plowshare is too much of a jump from the llama?

P: I do. Well, I mean it is definitely close to the llama! but look-wise it is more towards the cargo-cargo side of things.

what if the player wants to keep on the fighter-cargo route?

a balanced one.

We really don't have enough good models to go around... that's the root of the problem.

So until that happens, I think we should try and find a creative way to satisfy the needs of the game, while keeping the integrity of the universe.

Maybe by double using models, massaging some things around a bit...

T: I'm having a flashback to "red slime, green slime, blue slime!"

P: a necessary evil...

some of the best games have done that.

T: watch out for them palatte shifted ones ;-)

P: Those are always more dangerous, yes.

The new upgrade thing lets players pretty much decide for themselves what they want the ship to be. Aside from mass, cargo, and flying characteristics.

So just massaging some of the admonisher's (or any ship's) core stats around so it could help fill a different role wouldn't really kill anyone.

you know what i'm saying?

T: well, it isn't really a civilian ship to begin with though, so I'd prioritize making sure that the milspec versions made sense.

I think I see what you're saying - give them lots of .blanks, and they'll build whatever they want

P: yeah. a lot of .blanks with a lot of variation in quality, shape, and color. and it should all fall into place.

I'll fidget the admonisher back in the original direction

T:so, as I said, I'm personally tempted to go the placeholder route myself

rather than the co-opting route

but either way the root problem is stil the same - insufficient model capital

P: I honestly don't see what that would add to the game.

yeah

T: it's hard to make the universe piecemeal

so, the ship I think that most suits what you were looking for would be the Forsaken's Scarab

but we don't have one

The Kafka is unarmed, the Reindeer is even more towards the plowshare side, and the only other things that come even remotely close are intended for roles as orbital cargo landers to provide interesting traffic for stations

so...

yeah.. not enough models

there are other things that we've been "making do with" for some time as well.

the Schroedinger is a scout, not an interceptor, and so on

The Goddard model will eventually be moved to something else when I manage to commission something that looks more... Andolian.

bleh.

So, the question from my perspective is, is it better to take an existing model+ship pair, and pull it away from it's intended and eventual role, and then rebalance again when we get more models and can shift around, or to steal/copy a model from an existing model+ship pair and use it to incarnate a ship whose role we desire but whose model we lack

P: number two.

duplicating art is lame...

T: so you mean number 1 then

P: but!

aha. but!

i mind farted for a second there.

anyways

but! it's an accepted practice to do it.

even in professional, commercial computer games a bit.

or... i don't know.

i'm out of brain juice

T: well, what seems to make some sense to me is to do the balancing based on ships that fill the role you're actually looking for, and then, if nothing else, we can always harangue artists for those most key unmodelled ships before each release and not spawn the rest, duplicate art, or decommission underused models for temporary assignment to more important ships (even if the models don't fit so well :-)

but, whatever is chosen, I think balancing based on the ships we'll eventually have reduces duplication of work and the "don't have a model issue" can always be pushed out until we actually have a release

P: that's reasonable.

T: besides, maybe having a bunch of placeholders in CVS will motivate artists to help make some more art for the things they keep having to see ;-) (or not)

ok, so with that in mind - how about we try to perhaps make sure we have the set of ships we really want to be working with :-)

P: that seems like a step in the right direction.

T: so I updated the brief descriptions to reflect the roles of the 8 selected ships. Only a couple of minor changes in emphasis (excluding the major change to the admonisher)

P: yeah, i saw the message.

T: so

llama: Venerable LIHW built armed light cargo shuttle

redeemer: Aging Luddite insystem fighter

admonisher: Purist light assault craft

plowshare: A top of the line Purist cargo shuttle

pacifier: Aging Purist heavy fighter/bomber

gawain: Main line High-Born interceptor

lancelot: High-Born heavy superiority fighter

dostoevsky: Andolian Protectorate mass production superiority fighter

P: those are better descriptions.

T: Thanks :-)

So one thing I want to make sure we have the same semantics about is what "interceptor" means

P: what's your take on the word?

T: designed to take out incoming assault craft

generally sacrificing durability, and enduring firepower etc. for accel and heavy first strike capability in order to be sure to engage and destroy hostiles outside of the range at which they can effectively damage friendly targets of importance

ot, however, a synonym for "agile, fragile light-superiority fighter"

et tu?

P: yeah, pretty much. interceptors intercept. that's what they do.

T: the VS ai priorities currently reflect this :-)

okiedoke. Just something I wanted to check because I've seen games where that really wasn't the case :-P

APPENDICES

Appendix A: Species information

Primary	
Subspecies	Uplifts/Clients
Humanity	
Dgn Mishtali Purth Super Cetaceans Super Simians	Homo Sapiens Sapiens Homo Sapiens Superioris Home Sapiens Pluralis Homo Sapiens Cyberis Homo Sapiens Suprahomo Homo Sapiens Cosmonatalis
Rlaan	
Lmpl Nuhln Saahasayaay	Defender Hybrid Worker
Aera	
Bzbr	
Ancients	
Unknown	Various (at least 2 local)
Those Who Have Only Names (TWHON)	
Klk'k	
Shmrn	
Uln	
Hoffman's blobs	

Table A-1: Relevant species of the UTCS time period

A.1 Aera

An intelligent centauroid species which developed on a misbegotten hell of a jungle world, the Aera are oxygen-nitrogen breathers, with a strong internal skeleton, smooth ashen-gray leathery skin, a decided lack of psychiatric assistance for their obviously repressed dissatisfaction with natural ecology and, at least ac-

cording to the Cult of the Devourer on Mishtal Seven, a flavor remarkably similar to that of a human with a high protein diet, but only if both have been served with a nice Chianti.

Unfortunately for the Aera, their region of the jump network offers no known paths towards significant further expansion. To expand they must go coreward, passing through Human or Rlaan controlled systems. Requests to do so have been denied by both the relevant parties of both species. Opting for another method, the Aera tried to sneak a colony convoy through Rlaan space, but a lack of comprehension of the Rlaan mentality regarding civilian casualties caused this ploy to be not only a failure but a disaster, provoking the Rlaan into a military response.

A.1.1 Physical characteristics

The Aera are a centauroid species measuring 2-3 meters in length from the head to the end of the balancing tail, and 1 - 1.25 meters high at the four leg- shoulders. The four stocky, sturdy running/gripping limbs provide support, and the front two limbs end in three-digit hands, with two fingers and an opposable thumb. When active, the upper body bends up from the rest of the body just past the middle limbs at about a sixty-degree angle, with the forelimbs sprouting from about two thirds of the way up the upper body, and with the head bending back down so as to be parallel with the main trunk and the ground. Aera tend towards slim, muscular builds, and are usually both quick and agile. They have two genders, each of which is similar in appearance. Among the spacefaring races, the Aera have one of the shorter natural lifespans. Prior to the advent of advanced life extension technologies, it was as rare for an Aera to reach 60 years of age as it was for a twentieth century human to reach 100.

The physical appearance of the Aera reflects upon their origins. The Aera have a smooth, leathery skin not dissimilar in appearance to the bark of a birch tree, with occasional yellowish patches reminiscent of lichens. The hinged portion of the mouth is, in contrast to that of terran species, the upper portion. The mobile portion of the mouth is also notable in that it does not consist of a bony arch, and is actually a solid bony plate. Inside this mouth are two rows of teeth, the second moving forward to replace the first as they naturally fall out, and a new second row is grown. The front teeth are razor sharp and are obviously for tearing flesh, and the next sets of teeth are likewise designed for the chewing of meat, but the rearmost few teeth have grinding surfaces, allowing the consumption of nuts, seeds, and other such vegetable matter. The corners of the mouth are usually open, and provide the normal breathing route. When exerting itself, an Aera will pull back its lips, increasing the size of the airway. The wide, narrow eyes are almost universally a milky green, with wide, narrow pupils, and are largish in size relative to the head. The eyes are above the terminating point of the downward slant of the lipline, but below the bony jaw plate. Just below the mouth, on each side of the head, is a row of small pits that are used for chemoreception. Beneath each eye is a kidney-shaped patch of lighter skin that marks the location of a tympanum. On the underside of the Aera head is a pair of organs, each capable of producing variable amplitude, low frequency vibrations, which the Aera use to communicate.

NOTE: depiction of head in Figure [A-1](#) is non-canonical, picture otherwise highly informative:

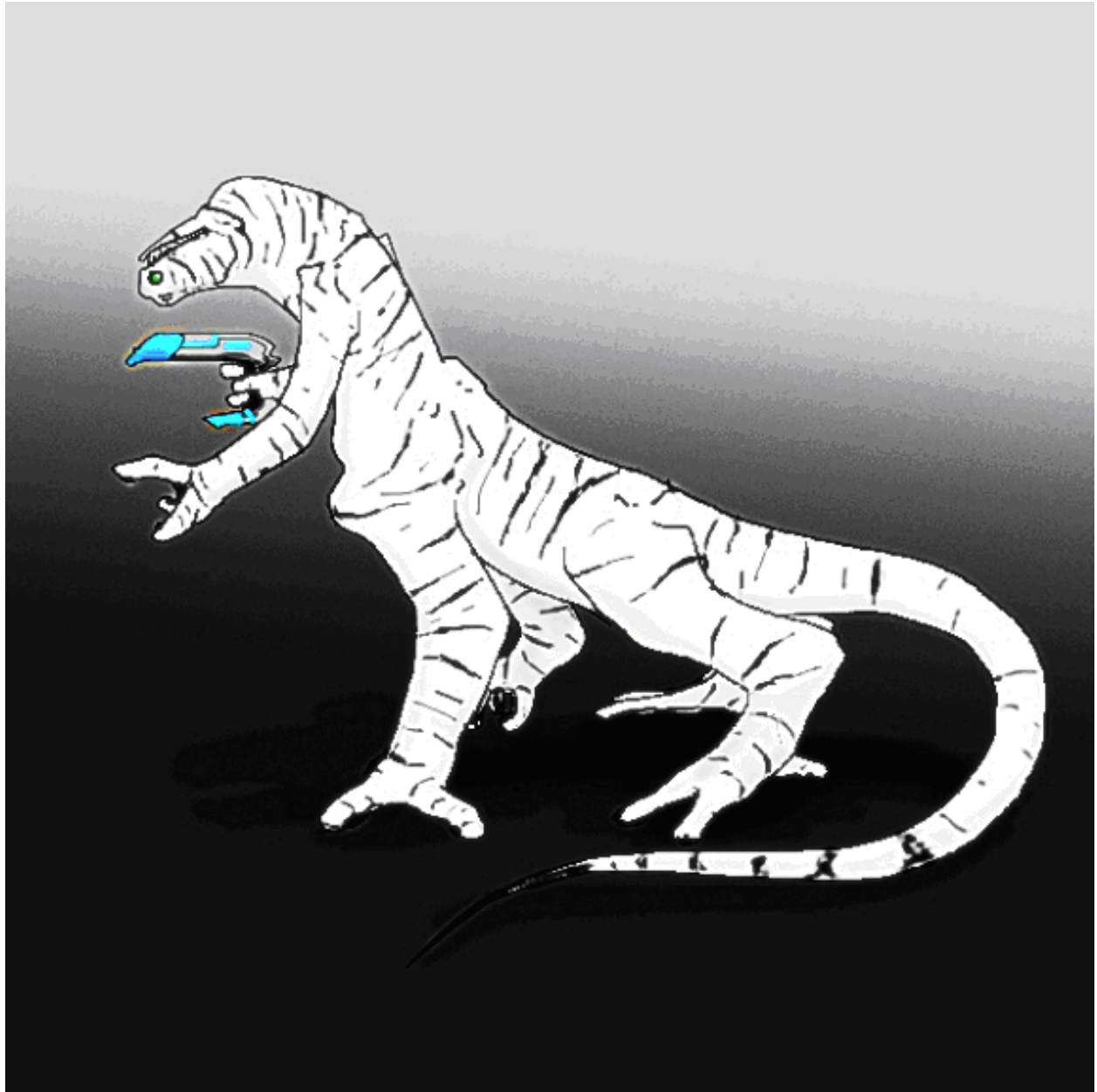


Figure A-1: Aeran. Head is non-canonical and should be treated as such. Rest of body is a reasonably solid depiction.

A.1.2 Habitat

The Aera homeworld was, prior to changes imposed by the technological advancement of the Aera, a nearly seasonless planet with an oxygen-nitrogen-neon atmosphere, on whose surface were a single large landmass and many large and small islands. The mainland was nearly entirely covered with jungles and marshgroves, with only small belts of more sparsely overgrown land on the northern and southern reaches of the continent. The rich jungle land was home to all sort and manner of parasites, predators, diseases, and competitors for food. It was in this vast, dark jungle that the Aera arose into sentience, tool use, and civilization.

A.1.3 Culture

Aera culture is highly organized and decidedly hierarchical, but in the form of a meritocracy rather than an aristocracy. While what has constituted merit has morphed over the millennia since the first Aera tribes selected work crews to cut back the encroachments of the jungle upon their early settlements, given the relative position of the pre-technological Aera in their local food chain, there has long been a favoring of cleverness and determination over raw strength. The current social and vocational position of any Aera is immediately indicated by the color and pattern of an individual's coverall. The Aera are ruled by a subset of the highest caste, with membership in the oligarchy changing whenever either an individual steps down, or a third of the other members call for a member's replacement. New members must be confirmed by two thirds of the current oligarchy. It is much more common for members to voluntarily remove themselves from power, believing themselves more useful elsewhere in society, than to be cast out. An average stay in the oligarchy lasts a few Aera years.

The long struggle of the Aera against the erosion of their society at the hands of the natural world has instilled in them a deep respect for that which has enabled them to conquer their environment: technology. Not only is the advancement of technology greeted without fear, the social position of the artificer and the engineer is one more greatly elevated than that seen in any pre-Diaspora human society. What is feared is the unmastered and uncontrolled. Even after the last war between Aera and Aera was fought, bringing the last of the major islands under the control of the mainland, the Aera only slightly relaxed their military investment. Perhaps in large part due to their short lifespan, and the consequential rapid dying off of adherents to old theories, science advanced quickly, and with the understanding of their place in the universe came a belief that just as they had been forced to fight back against the jungle to keep themselves alive, so would they likely have to push back against all that waited for them beyond their world. Thus, eight centuries ago the Aera burst forth from their homeworld, not afraid, but determined that nothing would stand between them and their indefinite existence.

Factions and Organizational Groups Listed below are noteworthy Aeran sub-factions and organizational groups:

- Aeran Merchant Marine

A.1.4 Religion

The nature of the Aera homeworld never inspired much belief in any sort of loving deity. What began as a collection of local deities coalesced, through conquest by what was to be the dominant group on the entire

planet, into a single pair of entites, one force of creation, and one of destruction, both abstract, and both uncaring. As time progressed, and the Aera advanced, these entities progressively lost entity status and drifted into the realm of spiritual concepts. Becoming more self-centered in their exploration of existence, destruction morphed into personal death, and creation into species survival. Organized religious activity among the Aera, such as it was, ceased centuries ago, but the impact on their culture of the concepts of death and survival is still quite strong. Indeed, Aeran mausoleums are said to be, quite possibly, the only pieces of Aeran art that might ever be considered beautiful. The Aera respect death, but value is placed on the accomplishments made in the face of one's imminent demise. All Aera are cremated, and the repositories for such remains are vast public works, filled with displays of the accomplishments of those entombed within, those who contributed greatly to the species being rewarded with physical space devoted to listing their deeds, and the rest consigned to a rotating schedule of intermittent holograms and access via terminal displays. It is in such places that an Aera would go to ponder, in silence and solitude, relenting briefly from the near tireless schedule of a short-lived species, the nature of its existence.

A.1.5 Miscellaneous

The Aera use a redundant numbering scheme: Radix 3, digits drawn from the set of values -2,-1,0,1,2

A.2 Ancients

A.2.1 Physical characteristics

There are precious few preserved remains of either species A or B (especially B), so knowledge of their physiology is pieced together from various, sometimes conflicting sources.

Species A

Species A were moderately sized beings, between 1 - 3 meters in height, and no more than 2 meters in diameter.

Species B

Species B were smaller beings, no more than a meter wide, high, or thick.

A.2.2 Habitat

The native habitats of these creatures are unknown. Given the nature of the planets they settled, it can be assumed that they were carbon-based lifeforms, and that at least of one of the two was an oxygen breather.

A.2.3 Culture

Beyond their technological advancement, little is known.

Excerpt from "A Brief History in Time and Space"

"While there is much contention about the nature of the predecessors of the Ancients, the Ancients themselves left enough rubble strewn around the galactic arm to convince even a fairly hardened skeptic of their having dwelled in these parts. The Ancients appear to have been made up of at least two major species

groups, and interacted with at least three others, albeit it is not known whether these were client species, or contemporaries from another part of the galaxy. Their reign over this region lasted until about 1 to 2 million years ago, whereupon they rapidly ceased to be present. There is a wealth of evidence that severe infighting played some part in the destruction of the Ancients, but, assuming there were victors in such a conflict, little is known of what became of them.

The best source of such evidence, however limited, is the Uln homeworld. While they are quite sensitive about the subject, the widely held belief among the major races is that the Uln are the descendants of the Ancient's equivalents of lab monkeys. The Uln culture sprang up among the remains of a sprawling set of Ancient structures... if they hadn't been so ill prepared for the gifts they unintentionally received, they would have conquered the entire arm. Fortunately for the aspirations of dominance held by other species, the Uln were decidedly unprepared. Indeed, they spent so much time blowing each other up with weapons they didn't entirely control that it is a wonder that either they or the ruins on their planet still survive. The ruins, however, did not escape unscathed from the genesis of the Uln culture. While assuredly the largest known source of information on the Ancients, the ruins deliver little coherent information about many key aspects of the Ancients' existences, largely due to vast portions of many buildings having been turned to dust."

To clarify, the statement about the Uln possibly having been able to conquer the arm is contingent upon them NOT having blown most of the ruins up, along with the devices they were using to blow each other up, and large portions of their own species. No superweapons as such are known to be currently possessed by the Uln. The Uln are in possession of one particularly impressive piece of Ancient technology (what is known as the Sul-Gatwa high castle), but it's potential is effectively limited to the defense of their homeworld. However, even as heavily damaged as the finds on the Uln world are, they remain the best source for archeological research, and research visas remain a large part of the Uln economy.

Why would this blasted planet be the best source of artifacts? Because, unlike most of the planets that seem to have been inhabited by the Ancients, it didn't have it's entire surface slagged, get broken into a debris field of billions of pieces of rock, or become pockmarked by craters implying assault equivalent to prolonged planetary bombardment by 500Km wide asteroids.

Despite this, the occasional piece of debris is found in such places. However, the only officially reported finds of fully-functioning Ancient technology have been the nano-plague and various minor finds on the Uln homeworld.

The largest known piece of Ancient technology is the Sul-Gatwa high castle. Whether or not it is technically functional is a matter of some scholarly contention - the object is a slagged chunk of some small moon sized ship or station. No systems appear to be remotely functioning. However, what information has been declassified by the Uln Royal Ingatwa fleet and confirmed via espionage implies that the structure is so dense that it should have collapsed under its own gravity into a solid mass - however, as the material that the high castle is composed of defies the best efforts of science to explain or duplicate (it has been jokingly dubbed "unobtainium") it could just be some intrinsic property of the material and not evidence of functioning gravitics. While the high castle has none of it's original equipment and is, in essence a giant chunk of debris in orbit around the Uln homeworld, every indication is that it retains the potential to absorb absurd amounts of damage, and, as such, the centuries that the Uln have spent arming it with their own

weapons have made it the most formidable planetary defense station known to exist. Its existence, the threat of the Uln destroying what remains of the Ancient artifacts, and general opinion that any of the major powers could pen the Uln into their home system if necessary are believed to be the primary factors responsible for the Uln remaining independant entities.

Small fragments of Ancient technology, even completely non-functional, fetch a fair price at any research facility or university planet. Functional pieces of Ancient technology, even if relatively useless, are of exceptional value, and it is not unheard of for persons to attempt to make a career out of artifact prospecting, subsisting on the rewards from finding small pieces of debris while waiting for the big catch of working Ancient tech. However, as time progresses, the easier pickings have already been scavenged, and exploration of progressively more hostile environments has become necessary to sustain the trickle of finds.

A.3 Bzbr

The Bzbr are a psuedo-reptilian species found on a jungle planet by the Aera early in their expansion. The discovery of organized alien intelligent life, even if harmless in it's neolithic state, furthered Aera convictions about the dangers of the universe, even as they worked to co-opt the Bzbr.

A.3.1 Physical characteristics

A Bzbr most closely resembles a jungle-green, copper-highlighted 1.5-meter long, ten-legged, arboreal reptilian with a nearly meter long prehensile tail. Each limb has four segments, the fourth being the hand/foot equivalent. The rear six legs are built for jumping, and are used only for locomotion, the two underslung short arms primarily for food manipulation, and the two forward inline limbs primarily for gripping branches or other such objects, arching upwards and forward from the rest of the body, in contrast to the other inline limbs, which proceed upward and outward from the torso. Lacking vocal cords, the Bzbr communicate in a simple language consisting of varied buzzing tones produced by rubbing their feeder limbs together and motions of the gripping limbs.

The Bzbr have three genders, breeder, broodherd, and gatherer. Gatherers are the most common gender, and conduct all hunting activities. Breeders are smaller than the gatherers, and forage close to the nest area for roots and nest building material. In far smaller number than the breeders or gatherers are the broodherds, larger, stronger, sterile, and existing solely to protect the young and territory of their sisters. Normal Bzbr nest groupings number in the few dozens of adults. Bzbr are exceptionally short lived, living only 35 - 40 years, even with modern medical technologies, but, given their small size, this is not entirely unexpected.

A.3.2 Habitat

A world of jungle islands, spontaneous firestorms due to the high oxygen content of the atmosphere, and extreme seasonal weather shifts, the Bzbr homeworld can be safely considered unpleasant to all of the known spacefaring races.

A.3.3 Culture

Adopted by the Aera out of some combination of pity and sympathy for similar jungle origins, the Bzbr were pulled straight from the stone age to the FTL age. Adapting about as well as can be expected to this rapid change, many Bzbr simply went insane trying to adapt, but after a few generations, the Bzbr had come to accept the new reality, even if they were, due to rather much less than genius level average intelligence, ill equipped to fully understand the full complexity of it. Although not particularly bright or creative, the Bzbr are actually quite good at both remembering and following instructions, and have come to be used in various Aera space construction projects, where they are valued for their ability to deftly maneuver in small spaces and to leap from girder to girder. Bzbr, are, however, never seen far from their Aera Patrons, as they are quite lost without them. The Bzbr still, to some great degree, see the Aera as messengers of the gods, having delivered them from the horrors of their world, even if they know the Aera to be both mortal and fallible.

A.3.4 Religion

Though the Aera have attempted to convince them to do otherwise, the Bzbr engage in hero-worship of the Aera. A majority of the Bzbr are convinced that the actions taken in this universe play out in other planes where the great nest of all life is threatened by chaos. They believe that the Aera, by having brought greater order to their lives, make them all great warriors in the other planes.

A.3.5 Miscellaneous

Bzbr use Aeran numbers.

A.4 Dgn

The Dgn, like their brethren the Shmrn, are the descendants of a joint Shaper and Lightbearer uplifting program begun with dextrous, tool using, but pre-civilized saltwater marsh dwellers. The Dgn are the branch cultivated by the Shapers and remain an integrated servant class in Shaper society.

A.4.1 Physical characteristics

See images [A-2](#) for bodyplan and [A-3](#) for locomotion (the Avian style is closest):

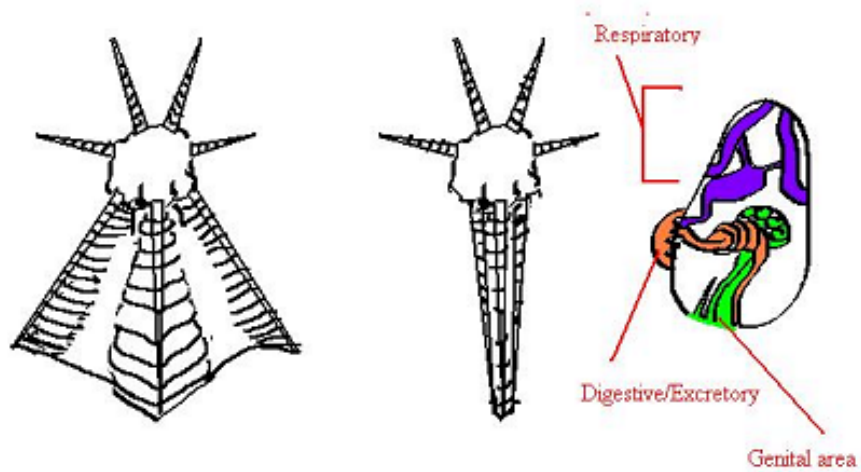
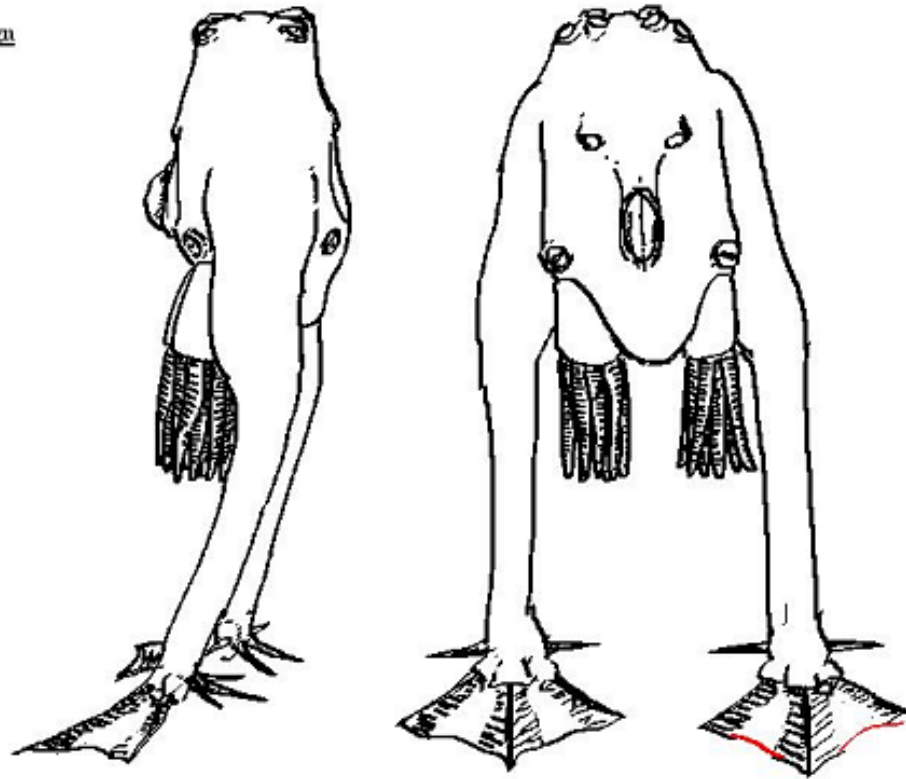
See Also: Shmrn ([A.14](#))

Through genetic engineering their life expectancy has been extended to over 50 years.

A.4.2 Habitat

The Dgn can breathe in both atmospheric and aquatic conditions, provided that there is sufficient oxygen dissolved in the water. They do, however, require either a humid land environment, or frequent re-wetting to keep both their skin and breathing orifices from drying out. The native Dgn habitat ranged from coastal saltwater marsh-land to tidal flats and into the coastal shallows themselves.

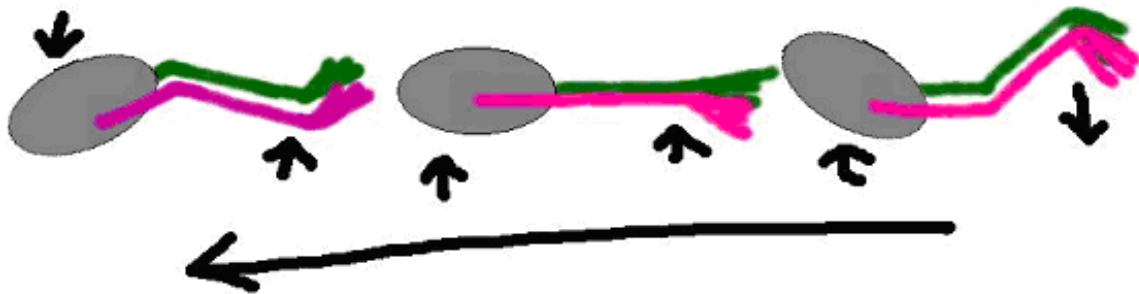
Dgn



Proposed important organs. Excluding Circulatory, Nervous Systems , etc.

Figure A-2: Dgn body-plan

Tilting Of Main Body & Motion in Swimming -
Dgn/Shmn



Walking/Running Posture??

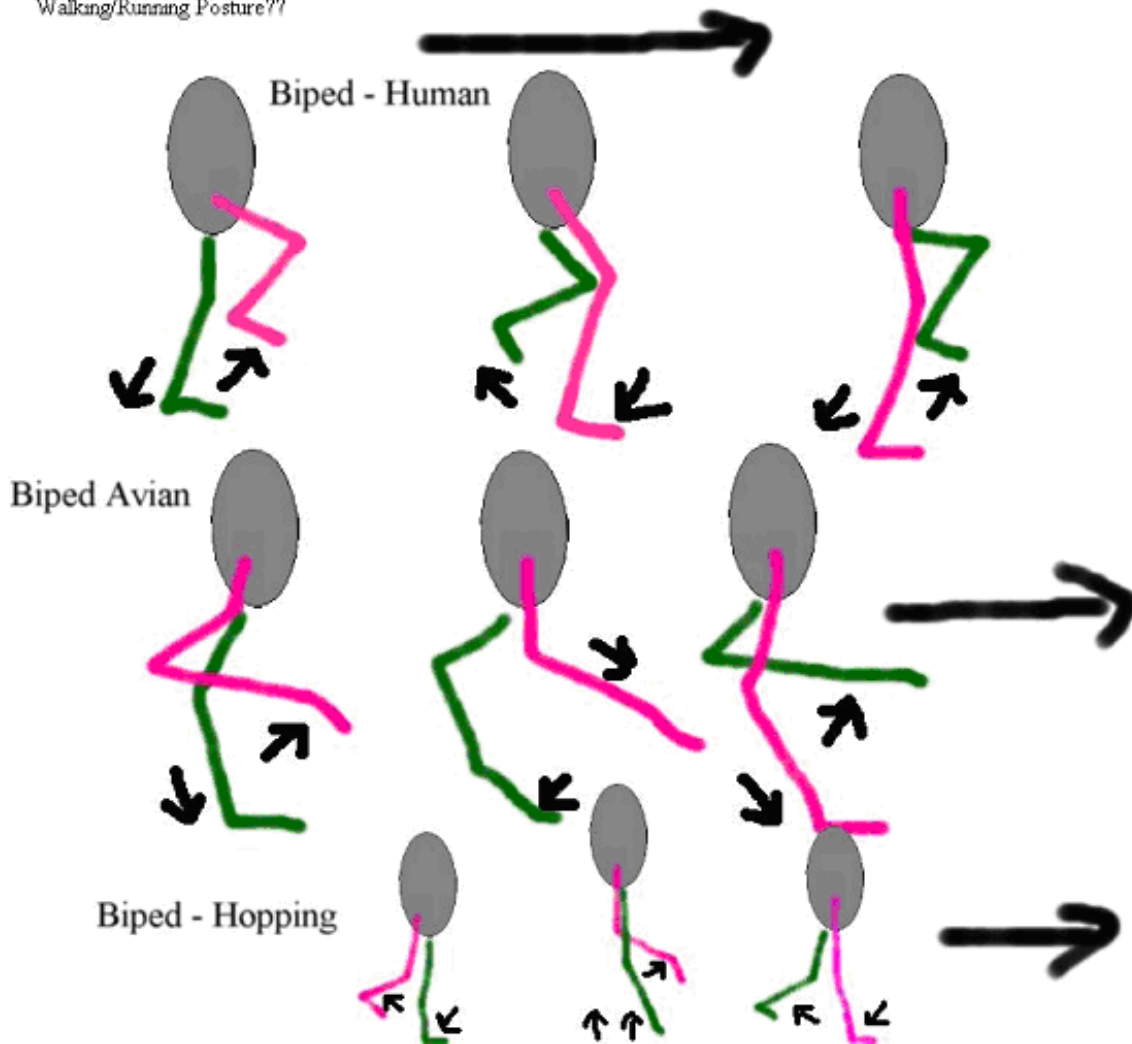


Figure A-3: Dgn locomotion on land and in water

A.4.3 Culture

What native culture existed among the pre-modified Dgn has been greatly altered. Bred for servitude, the Dgn are not greatly renowned for intellectual achievements. The Dgn exist as a servant race for the Shapers, working on nearly all Shaper aquatic projects, and filling other unwanted roles in society. The one noted exception to this rule is the use of Dgn as medical assistants in Shaper hospitals, where their dexterity has proved them faster than humans at prepping the injured for surgery. While the rights of the Dgn are well defined by the Shapers, and abuse is not at all tolerated, their rights are not the same as those of the Shapers, and if the Dgn are to be considered citizens of the Shaper political body, then they are, at best, second class citizens. The Shapers have built them to not be overly concerned about this (the Shapers having had a different vision of what they desired from their uplift than the Lightbearers, who were more concerned with continued evidencing of their believed and beloved superiority over lesser species). One cannot say that the Dgn are entirely pleased with their position, but neither can one say that there is fertile ground for revolt, as the Dgn do not seem to possess within them a particular desire to be forced to decide their own destinies. As the Dgn do not complain and the Shapers do not overtly or actively seek to mistreat the Dgn, their freedom is something sought after by activist groups rather than brought about by an armed foreign entity.

A.4.4 Religion

Whatever glimmerings of disorganized religious beliefs they may have had as more simple creatures have been lost. Currently prohibited from engaging in organized religious activities due to historic fostering of undesired solidarity.

A.4.5 Miscellaneous

Dgn use Human numbers.

A.5 Hoffman's blobs

Hoffman's blobs are seemingly non-sentient creatures living in the void of space. They were discovered by Burno Hoffman in the Barnard's Star system.

A.5.1 Physical characteristics

Very little is known of those bizzare interstellar beings. The last sighting has been in the Galileo system. Scientists are now flocking to study these creatures before they leave, attempting to determine how it is that they are able to sustain themselves in the void of space. Observations suggest their size varying greatly, with the largest individuals proving as large as a space cruiser, and the smallest only the size of a shuttlecraft. It is unclear whether these differences are attributable to age or polymorphism. The creatures appear to primarily be drifters, but are capable of some acceleration.

A.5.2 Habitat

Hoffman's blobs live in the void of space. Since they were discovered there have been six sightings of them, most recently in the Galileo system.

A.5.3 Culture

There has not been any exhaustive research on the behavior of Hoffman's blobs yet. From previous observations, it appears they travel in flocks of about a dozen units.

A.6 Humanity

Table A-1 shows the relevant species in the UTCS time period and notes their organizational relations. FIXME (placeholder)

- Homo Sapiens Sapiens (Faction with highest population percentage: Purists)
- Homo Sapiens Superioris (Faction with highest population percentage: Shapers)
- Homo Sapiens Cyberis (Faction with highest population percentage: Mechanists)
- Homo Sapiens Pluralis (Faction with highest population percentage: Andolians)
- Homo Sapiens Suprahomio (defunct)
- Homo Sapiens Cosmonatalis (Faction with highest population percentage: Spaceborn)

A.6.1 Physical characteristics

- Homo Sapiens Sapiens

Although small changes have occurred over the millenia, a great percentage of the human population remains without intentional genetic or physical modification, and thus remains not too far removed from the humans of more ancient history. Whether through simple lack of resources, lack of desire, or rejection of change, Homo Sapiens Sapiens, unmodified except for the genetic drifts incurred over centuries of colonization, remains the most populous of the human subspecies.

- Homo Sapiens Superioris

Many eugenics programs have been launched in human history, but none have been so successful. The path of self-affected evolution via active genetic redesign has lead to a strain of humanity stronger, more durable, more resistant to disease and injury, of higher average intelligence, enjoying longer life-spans, and possessing keener senses. Assuming that the universally ink-black UV-resistant skin and complete lack of any hair other than the signature blue-white eye-brows is not disconcerting, any Superioris is almost certain to be considered physically beautiful, but it takes some experience to discern one Superioris from another. However, these benefits come at the cost of much higher sustenance requirements, and a tremendous narrowing of diversity.

- Homo Sapiens Cyberis

Having replaced many of their body parts with mechanical equivalents, or having forgone any pretense of human form, these cyborgs cover a diverse and vibrant set of body types. Those with total body replacement can usually pass anything short of close inspection if they're willing to deal with maintenance of a synthetic flesh exterior. If the goal is, as is often the case, to adapt the body to the demands of work or habitat, anything from mining attachments to full strength-enhancing endoskeletons could be an integral part of the form. Locomotion seen to date ranges from bipedal to poly-pedal, tracked, wheeled, or even sets of thrusters. In addition, this sort of technical enhancement may provide the ability to extend one's lifespan indefinitely if the base neurological systems have already been altered to be non-senescent (provided one has access to regular maintenance service). However, no matter how modified they may be, at the least, portions of their brains and nervous systems remain. While communities of such modified humans exist on the worlds of many factions, the Mechanist faction is the only full-fledged meme-group centered upon the post-flesh goals of Homo Sapiens Cyberis.

- Homo Sapiens Pluralis

While various communities have arisen that rely upon linked existences, none save the Andolians have sufficiently differentiated themselves en masse from the rest of humanity to be a discernable grouping. Implanted at birth with hardware that allows data-net access and an array of almost constantly transmitting sensors, a permanently linked existence has rendered this strain of humanity notably different in culture and mentality from all other strains. While every Pluralis retains its individuality, each is awash in a similarly accessible sea of information. Culling from the group of those not capable of entering into such an existence combined with a willingness to engage in limited crafting of offspring has also lead to small but noticeable genetic drift over the past 800 years. Implantation is universal, and the use of synthetic or mechanically enhanced body modifications is not uncommon, but the desire for total body replacement present in the Cyberis strain is absent. The linked existence and general cultural proclivities of the Andolians have brought them to near unity on their religious doctrine. While an Andolian would refer to his/herself as a devout skeptic existing in the absence of proof of the metaphysical, many others find it simpler to call them Atheists. While not overly concerned with improving the physical form, health-related genetic traits deemed undesirable have been recorded and then excised from the gene pool. When isolated for long periods of time from any data-net, Pluralis individuals often experience pronounced withdrawal symptoms, earning them the nickname "Link-Junkies".

- Homo Sapiens Suprahomo (Lightbearers) (Nearly Extinct)

One of the earlier factions to aggressively expand outward in the FTL era were the Lightbearers, a meme-group built around the development of a supra-human race. Believing the human form to be the sacred forefront of evolution in the entire galaxy, they sought to claim the place of their distilled and purified strain at the throne of all sentients.

- Homo Sapiens Cosmonatalis

Crafted as a slave race by the now defunct Light-Bearer faction, the Spaceborn, as they are commonly referred, remain frail and over-specialized, incapable of surviving in planetary environments. Instead, as they were designed, they spend their entire lives in micro-gravity. The Spaceborn have a unique cardiovascular system superbly tuned to life outside of a gravity well. Their bone structure, however, is a less cheery affair, and the Spaceborn, though not suffering the degenerative effects of planetborn entities in prolonged micro-gravity, never had much durability in the first place and are weaker and more easily injured. They are almost universally tall, lanky, and flexible, and all are possessed of a rather pallid complexion tending toward a slight reddishness. Spaceborn frequently begin developing severe medical problems between the age of 60-80 Earth years, giving them a somewhat shorter life expectancy than that of the other subspecies. Almost all Spaceborn live in habitats situated in Andolian Protectorate space, having relocated from Light-Bearer space after liberation from that faction.

A.6.2 Habitat

Originating on the third world of the Sol system, all variants of humanity, even Homo Sapiens Cyberis, are most comfortable in Oxygen-Nitrogen atmospheres, and temperatures not overly distant from 294 Kelvin.

A.6.3 Culture

Listed below are links to noteworthy human Meme-groups, organizations, and governments:

FIXME

A.6.4 Religion

Among the most mixed and varied in the known galaxy, running the gamut from atheists to zealots. Refer to the individual groups for more information.

A.6.5 Miscellaneous

Base 10.

A.7 Klk'k

FIXME

One of only five extant species to have achieved some measure of space-flight prior to contact with other sentients, the Klk'k had what can be readily argued as the worst first-contact experience on record. Although the Andolian backed Ktah Restoration Project did much to stem and repair the damage caused by the Lightbearers during their occupation of Ktah, nearly a quarter of the Klk'k species were killed by the Lightbearers, the majority of the deaths stemming from the Lightbearers retargetting their fusion-tipped anti-orbital defense missiles for ground impact and launching all batteries in a scorched-earth response to the Hoshino Uprising. While the laser-induced fusion warheads were exceptionally clean in the radiologic

sense, the scale of the bombardment was such that there remain a number of areas of Ktah which have not fully recovered, even at more than two centuries remove.

Currently, almost all Klk'k are citizens of the Andolian Protectorate. While the Klk'k are self-governing over their own colonies on domestic matters, with a government centered in Ktah, they defer to the Andolians on external affairs. A significant minority of the Klk'k population have become active adherents to the Andolian meme-group, living integrated existences networked into surrounding Andolian populations. Several mixed-species colonies featuring both Humans and Klk'k exist, and there is both a human and Klk'k presence on all Purth worlds.

A.7.1 Physical characteristics

average height range 4.5 to 5.5 feet (in meters?)

long, largish feet, reverse jointed knees, large easily splayed hips, excellent jumpers, thick, disproportionately long, muscular legs in proportion to generally much skinnier tops

wide, short, fair lengthed, back-bottom flanging head, with back facing nostrils at the rear base between neck and jawbone

jaw is wider than head on each side. because of angle, more teeth on bottom jaw than on top, bottom jaw teeth face slightly in, top jaw teeth face slightly out

mouth contains 2 tongues. has no connection to air passageway. has resonant "click" cavity in front top of mouth, behind and below the rear of the bone ridges forming the eye sockets

eyes are large and wide set, and the sockets pronounced in their bonyness

ears, such as they are, are 2 long curved ovoids, extending forward from just behind and below the top of the jaw joint to somewhat even with the top of the jaw joint and in front of the joint. Mostly flush with the skull, each ear is a series of cartilage-analog ridges protruding slightly out from the side of the head to focus sound into a central shallow curved trough, the bottom of which has numerous tiny folds of hair-lined skin atop a drum

See additional discussion (later in document)

Figures [A-4](#), [A-5](#), and [A-6](#) are poorly drawn sketches of the basic Klk'k body plan. Though they show the general outlines, they are inconsistent as to whether they are showing skeletal/muscular/etc. structures and details (to be taken as rough guidance only - not canonical due to poor implementation of desired visible outcomes (i.e. jacks can't draw worth a damn))

The most anthropoid of the sentient species that humanity has encountered (admittedly, two arms, two legs, two eyes, one head is enough to place them ahead of most others), the Klk'k are nonetheless notably alien in nature. Bipedal, with bilateral symmetry, the Klk'k stand 1.3 to 1.5 meters tall on two splayed, reverse-jointed, muscular legs, balancing on extremely elongated feet. Two arms, disproportionately long by human standards, drape down from the shoulders, each ending in a hand with four wiry fingers and two thumbs, one on each side. The thumbs have something resembling nails, while the rest of the fingers terminate with a hard, leathery, callus covering the top and front, the finger-tips remaining fleshier. Klk'k toes terminate in short, thick, blunt, stubby claws far more useful for climbing than for tearing. The Klk'k head is wide and somewhat squat in comparison to its breadth, being noticeably wider, at the bottom, than the Klk'k neck. The Klk'k face features two large eyes and a mouth that opens most of the way back to the

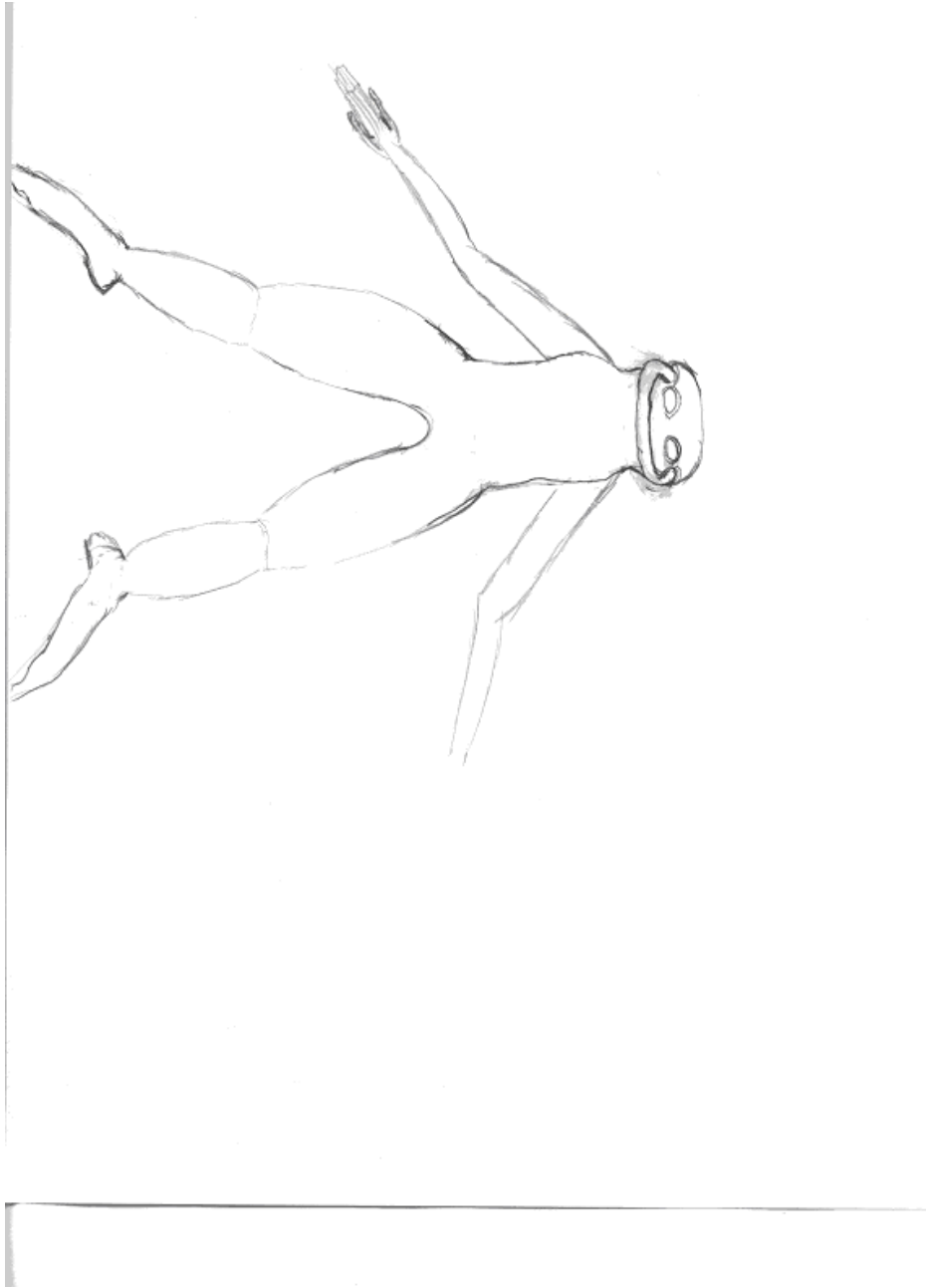


Figure A-4: Basic Klk'k body plan (front)



Figure A-5: Basic Kik'k body plan (side)

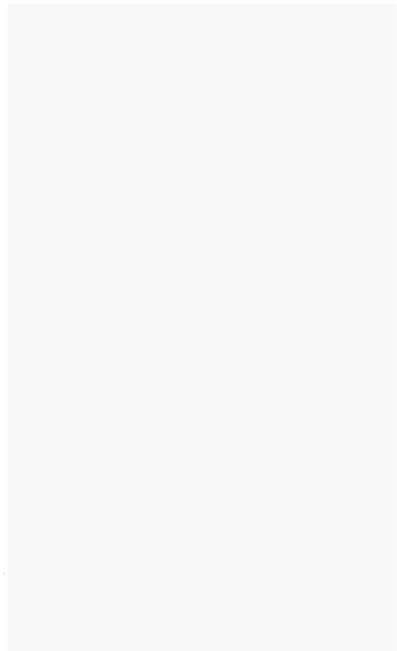


Figure A-6: Basic skeletal structure of Klk'k head

jaw hinge. The jawbone continues in an outward direction somewhat as it goes down from the skull, further accentuating the width of the Klk'k head. The Klk'k air passageways and digestive tract are separated. Breathing is performed through two rear-facing nasal openings, one on each side of the back of the head, situated behind and under the jawbone attachment, opening where the head curves back to meet the neck. The two eye sockets are protected by pronounced brow ridges. Inside the mouth is a resonating click cavity, and two tongues. Klk'k have several smaller, sharp, front teeth, and a smaller number of larger grinding teeth, present only at the back of the mouth. Klk'k ears have minimal external presence compared to human ears, presenting themselves primarily as a furrow curving back and down along each side of the Klk'k skull. The ears are water-tight, and Klk'k underwater hearing is significantly superior to that of humans.

Klk'k are hairless, and the skin tends toward a swampy, uneven green-brown, excepting the secondary sexual characteristics which express themselves as thin, rosy-to-purplish highlights on the sides of the head, hips, wrists, and ankles. Skin tends to be smooth, and slightly leathery in texture, but a substantial layer of subcutaneous fat keeps it from being hard to the touch. Both sexual and excretory organs are positioned similarly to those of humans, at the posterior of the torso. The Klk'k have two genders, the female of the species tending to be the larger of the two, and distinguishable, among the adult population, by the presence of more purple, rather than rosy, highlights. Distinguishing between the genders of Klk'k children is a more difficult task for the untrained human eye.

Klk'k have single fetus (with few exceptions) internal pregnancies, and exceptionally long gestation periods. The later stages of the pregnancy are extremely debilitating to the mother, eventually leaving her nearly immobile as the fetus grows to increasing size and the birthing blister migrates progressively closer to the surface. However, at birth, the newborn Klk'k can already walk, swim, and consume normal food.

Klk'k speech is produced primarily as a combination of vowels and tones from the nasal airways and clicks from the tongues and resonating chamber. Manipulation of the closures to the nasal airways also produce a smaller number of consonants. The tonal nature of each airway is independent, and harmonics have semantic and syntactic meanings in most of the native Klk'k languages. The iconic Klk'k nasal horn takes explicit advantage of the dual-tonal capabilities of the Klk'k. Some human observers have likened Klk'k speech to listening to a pair of Hawaiians having an animated conversation with a pair of Khoisan, but most real xeno-linguists attempt to discourage such simplistic comparisons as more misleading than informative. "Klk'k" is itself an anthropic transliteration of their word for themselves, likewise for Ktah, and Tk'latl, etc. As the Klk'k have proven far more adept at understanding spoken human tongues, than the reverse, even if they cannot produce the full range of human sounds, the anthropic forms have become accepted standards, rather than requiring all humans to utilize translator devices to refer to anything of Klk'k origin. Klk'k living or traveling among humans tend to equip themselves with vocalizing augmentation devices that fill in the missing gaps in their ability to emulate human speech.

A.7.2 Habitat

Ktah is a warm, wet world with an Oxygen-Nitrogen atmosphere and vast open stretches of ocean surrounding the two major continental bodies. The Klk'k originated on the smaller of the two continents, developing amidst the seemingly endless criss-cross of rivers and bayous that dominate it. Though not amphibious, the Klk'k are quite at home in the water, being excellent swimmers.

A.7.3 Culture

Humor plays a deep and intrinsic role in Klk'k culture, far beyond that in any human one. While the Klk'k equivalents of humor and even laughter have strong similarities to their human counterparts, the situational appropriateness of humor is viewed quite differently. There are few things that necessitate a somber decorum for a Klk'k - they would see nothing inappropriate about joking and laughing at someone's deathbed, funeral, execution, summit, board meeting, intelligence briefing, etc. Indeed, quite the opposite is true. Even war and combat are not seen as entirely serious realms – there are numerous Klk'k stories involving tales of foes refraining from death blows because each was waiting for the punchline of the other's joke. Humor is also seen as appropriate in public actions, officials, and governmental entities. In one particularly long-running tradition, legislation is frequently put forward to change the Klk'k anthem for the duration of a visiting dignitaries arrival in order to make atrocious puns.

Being unable to find or generate humor in one's situation is a sign, in a Klk'k, of a present or imminent psychosis, if often only a temporary one. Klk'k can be riled to an indignant rage that, if short lived, is still disturbing in its intensity. In Klk'k martial arts, such as Amakakt, sparring contestants are often required to keep a running dialog of humorous insults. If one of the combatants becomes noticeably silent, the match is suspended, as it is a sign that control has been lost, and the onset of rage may be approaching.

The basic Klk'k family unit is the the bond-set, based around a mutually polyamorous clique arrangement. A bond-set usually consists of 3-6 adult Klk'k and their assorted children, with the parentage of the children coming from any arbitrary pairing within the bond-set. Bond-sets consisting of only 2 Klk'k, save as a result of the death of additional members, or as an initial state, are considered strange, and their members potentially dysfunctional if that arrangement persists. Bond-sets will continue to grow over time by mutual interest in inclusion until they reach a steady point for the individuals involved. Bond-sets with more than 6 members exist, but are rare, as finding large numbers of co-interested partners is a non-trivial task. Four members is the median expectation, and many bond-sets of three partners will delay having children until a fourth has joined. Some researchers believe the extended size of the basic family unit to have roots stemming from the degree to which the later stages of Klk'k pregnancies are completely incapacitating, leading to a need for a larger supporting family unit.

- Bond-set Naming Conventions

The dominant culture for quite some time has used a strict two-name scheme. When a bond-set is formed, the members choose a name for themselves, and that is the bond-set name for those children raised by that set. If the set changes, through addition, the name may be changed or it may be kept, but the children will retain the old name, unless very young. If the set changes through attrition, the name does not change in order to honor what was, even if it is no more. One is known by one's bond-set name (the name of those who raised you) and your personal name, usually given in that order, thus Klk'k names are not lineage tracing beyond a single generation.

- Clothing and Ornamentation

Nudity was not a big deal in any notable pre-contact Klk'k culture, and continues to be of little concern except among those Klk'k visiting human worlds obsessed with particularly archaic taboos. Common Klk'k coverings are as much practical and protective as shielding from the public eye,

featuring pockets, belts, places to put or hang things, footwear, and isolated pieces to prevent scrapes and scratches to various sensitive areas.

Klk'k style uni-gender semi-formalwear tends to be variants on a loose, sleeveless (there is fabric straight from shoulder to neck, but no collar), single-piece garment that runs completely flat across the front, tapers slightly out from waist down and is slit in the back somewhat below the end of the torso (the rear opening being convenient for the Klk'k as their legs bend opposite those of humans). Ornateness, except in extremely formal clothing, is highly restrained, with patterns being limited to the edges and waist area, running in thin seams around the garment. The prime regions of Ktah are quite humid, and ostentatious layering would not have been comfortable. Those looking for a more vibrant appearance tend to do so with body paints on exposed skin rather than additional clothing. Informal Klk'k clothing tends towards a short, loose skirt, with tops, if any, varying by region.

There is also specific clothing to show respect, show allegiance, and traditional body-paintings and tattoos. In particular, Amakakt tattoos are expected among those practicing the martial art. A Tk'latl is tattooed on the upper left topforearm/shoulder area, with annotations denoting rank and record in Amakakt (the martial art heavily featuring said Tk'latl). The ranking is above the Tk'latl, and consists of a series of vertical bars of different color, denoting increasing ranks attained, from left to right. A history of the matches is recorded in colors corresponding to the rank of the opponents, and lies below the Tk'latl, with vertical bars for victories and horizontal bars for defeats.

Klk'k members of the Simons are known to frequently sport dynamic tattoos, making their membership explicit when desired and hidden when inconvenient.

A.7.4 Religion

The Klk'k frowned intensely upon organized religion even before they settled under the wing of the Andolians. Klk'k history had been rife enough with false prophecies and self serving church-like establishments (including a theocracy that once dominated much of Ktah) that the Klk'k analog to the Enlightenment had been rather total in its sweeping reforms. Klk'k culture, however, has a long history of veneration of ancestors, which continues in various ritualized forms of behavior. There is no belief among the Klk'k that the deceased may be contacted, nor is there any particular spiritual nature to the reverence for those who came before, merely the conviction that it is one's duty to honor the fact that, without them, one would not be.

A.7.5 Miscellaneous

Base 12, with numeral set derived from 2x2 entries in (2,3) double base number system.

A.8 Lmpl

A.8.1 Physical characteristics

See Figure [A-7](#) for image of a Lmpl. Figure [A-8](#) shows a Lmpl performing various tasks.

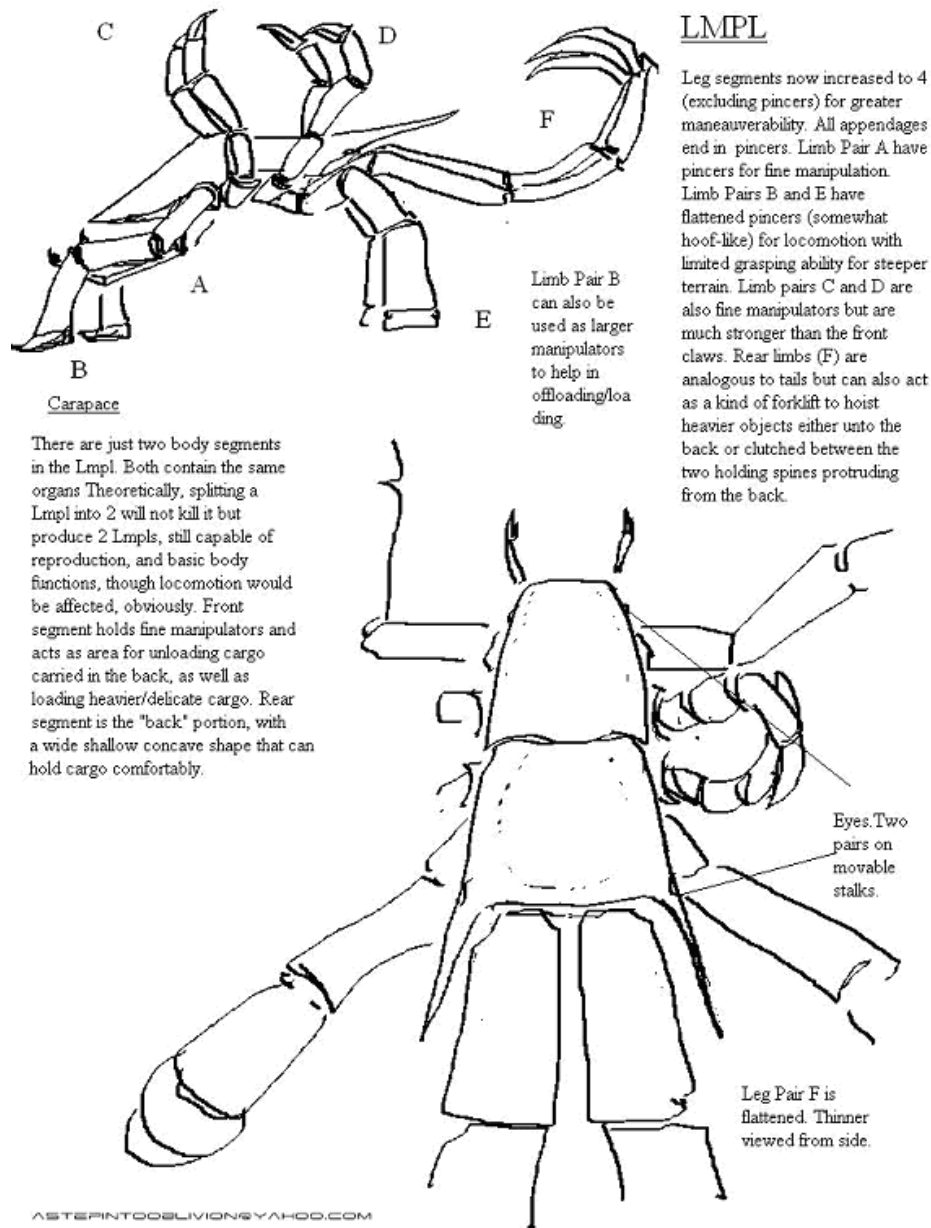
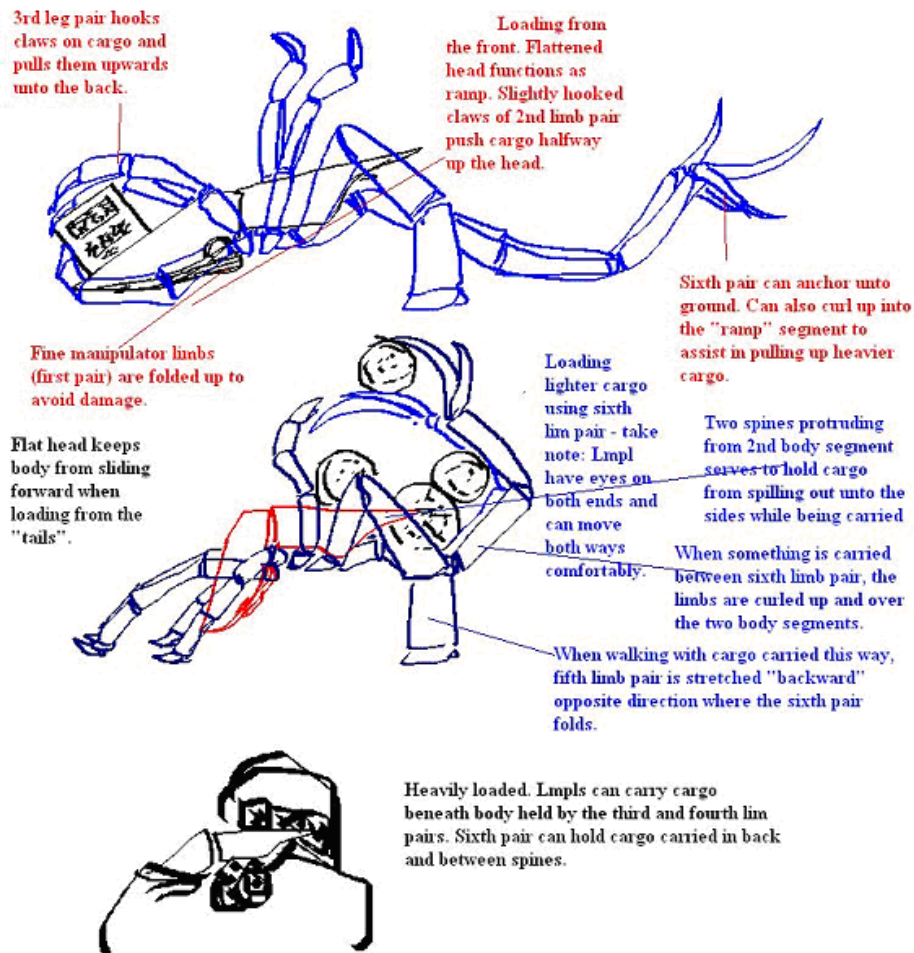


Figure A-7: Image of a Lmpl



I'm not really sure about balance in this. Sixth limb pair seems heavy. But they're thinner in comparison to the main ambulatory limbs (2nd and 5th pairs). So maybe by making them lighter (though still as strong) they would not present a balance problem, besides this Lmpl concept is mainly quadrupedal now...and... the sixth pair is mainly carried up and over the body segments. The 4 walking legs are widely splayed when walking. Body is wide and kind of flattened, heavier too. First limb pair is, as suggested, for fine manipulation only, and are normally folded into the first segment when the Lmpl is doing heavy work.

Body segments each have three limb pairs. Both are more or less identical to each other, the segment most commonly facing direction of travel (the "head") is on the left of the drawings and and is the one most used for communication, reproduction, eating, etc. "Rear" segment is more specialized for heavy work but nonetheless can function like the first segment when needed.

Figure A-8: Lmpl doing work

A.8.2 Habitat

Oxygen-Nitrogen

A.8.3 Culture

Like the Nuhln, the Lmpl were a sub-sentient species that the Rlaan selected for uplifting. The Lmpl were a project in adapting a lifeform to an environment inhospitable to Rlaan workers. The Lmpl are intelligent, but remarkably, and sometimes to a fault, single-minded, though such is in keeping with their technical workforce mission. The second of the two major uplift projects, the Lmpl are considered a solid success, and enjoy their own niche role in Rlaan society. Admittedly, as they are Oxygen-Nitrogen breathers, they spend very little time actually in Rlaan society proper.

A.8.4 Religion

All Lmpl are adherents of Rlaanbzztkrlbzeentkaan (see [A.12.4](#)).

A.8.5 Miscellaneous

The Lmpl use Rlaan numbers.

A.9 Mishtali

The Mishtali were the first intelligent life forms Humanity came in contact with, and at the time were enjoying a prolonged and happy bronze age. Perhaps fortunately for them, the Unadorned were the discovering faction, governing the Mishtali with a benign neglect. The Mishtali managed the jump from a nomadic existence to being spaceport baggage handlers quite well, all things considered, only eating a fairly small number of colonists and tourists in the process.

A.9.1 Physical characteristics

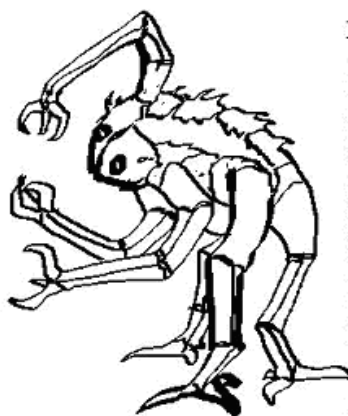
See Figures [A-9](#) and [A-10](#) for details.

A.9.2 Habitat

Oxygen-Nitrogen FIXME

A.9.3 Culture

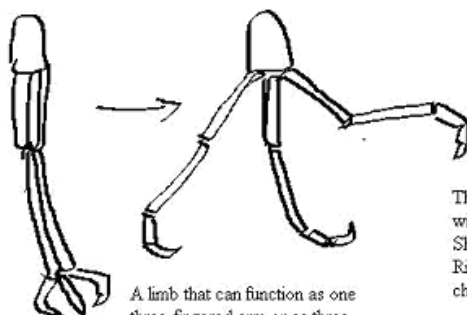
Given the cultural oddities of both the Unadorned, who come close to religious reverence in their views on computers, and the Mishtali, known for being the source of the Cult of the Devourer wherein the religious rituals are accompanied by the consumption of the remains of both Mishtali and alien sentients, it is believed by many to be just as well that the Unadorned, as their discoverers, are responsible for shepherding them.



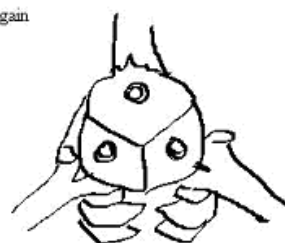
MISHTALI -

Originally trilaterally symmetrical, they have evolved into the bilateral form to adapt to a fast predatory lifestyle. The last two joints of the limbs can be divisible further into 3 parts, each terminating with a sharp three segmented "finger". There are three eyes set on each of the three jaw-plates. The Mishtali I drew here is slightly potbellied :) to convey a less feral occupation - space station porters. The highly dextrous arms is also a reflection of the almost eidetic memory of the Mishtali, though coupled with a mind of questionable rationality. When working in large stations the Mishtali are required by law (even the Unadorned have adopted the precautions) to wear a specially fitted muzzle, as there have been past incidents of Mishtalis taking a "tourist" snack during work hours. During this time, they are fed with special nutrient liquids that also contain a chemical repressor of violent tendencies.

The three ambulatory limbs are likewise unfoldable. The Mishtali can gain astonishing speeds running on these limbs.



A limb that can function as one three-fingered arm or as three separate hooks. Perfect for baggage handling :)



Three jaw-plates open wide to reveal Big Shiny Teeth. Little Red Riding Hood had no chance.

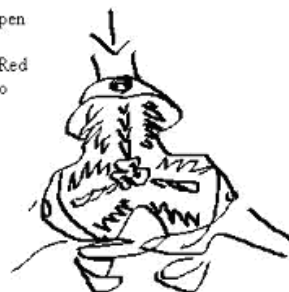
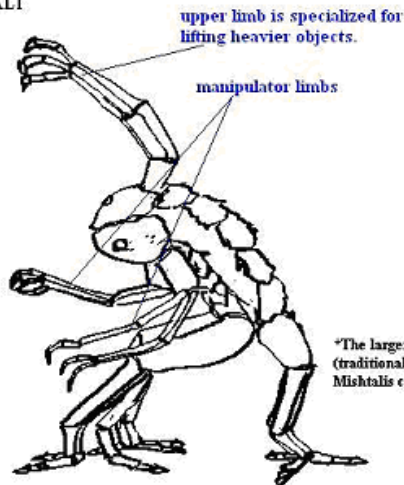


Figure A-9: Mishtali

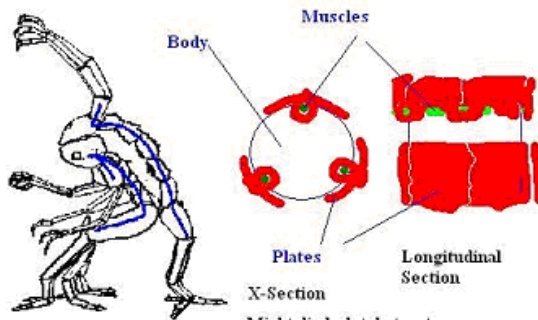
MISHTALI



New Mishtali concept. As you can see, balance would not really be a problem for them as being tripodal/polypdal gives the body a stable base. The legs can be further unfolded to spread body weight when heavier objects are being carried. Mishtali skeletal structure is unlike ours. They do not have a single "spine", but three. Each composed of protrusions interlocking underneath the body plates. Each of these "vertebrae" have a central hollow that contains very strong muscles that connect all movable parts of the Mishtali body; it extends from the jaws to the tips of the limbs. These spines further strengthen the Mishtali so that lifting would not be as strenuous as it is to us.

*The larger central upper limb was originally used to hold heavy corpses (traditionally that of fallen Mishtali enemies) up for the mouth to reach, as Mishtalis cannot stoop down comfortably.

Mishtali running gait..



Mishtali skeletal structure

Angering a mishtali is always not a good thing. Mishtali take quarrels very seriously. Treating what might lead to a simple fistfight in humans, as a fight to the death to prove one's superiority. They take pleasure in killing an enemy as it means they will have the honor of becoming stronger by eating the remains. Nowadays, this tradition is limited to the members of the cult of the devourer, whose supply of bodies come from legal (nonviolent. lol) means (but there are rumors...); though, Mishtalis who have converted to other religions are still quite hazardous to annoy.

Mishtali juvenile. Quite helpless. :) Like us humans, the Mishtali take care of their offspring. Mishtali society is not as violent as most humans are willing to believe. Though they practice cannibalism, they were quite civilized when discovered by the Unadorned. Traditionally eating another sentient is done inside a clan, feasts held during funerals feature the recently departed on the menu. Occasionally, in times of mortal disputes or wars, the corpse of a defeated enemy belongs to the victor, which he invariably eats.

Figure A-10: Mishtali

A.9.4 Religion

The Mishtali practice a number of religions, both native and foreign. Chief among the native religions in, albeit infamous, notariety, is the Cult of the devourer. The Cult of the Devourer centers on the belief that success in life is directly tied with what one eats, and that the more powerful the being that was eaten, the better one's life can be. Thus, eating the remains of sentient beings is as good as it gets. This, obviously, raises a few issues among many groups, but there are enough humans and Dgn willing to be paid for the eventual consumption of their corpse that the churches of the Cult of the Devourer tend not to lack for sustenance. These churches are, as a rule, very festive and pleasant places to visit, provided one is not turned off by the cuisine. The Mishtali have been very willing to convert to just about anything, so the Mishtali also tend to have the largest alien populations of most obscure human religions.

A.9.5 Miscellaneous

Base e.

This is what happens when math types (of admittedly questionable initial sanity) decide to bring civilization to an undeveloped species that doesn't understand exactly what is meant by "optimal".

A.10 Nuhln

A.10.1 Physical characteristics

Figure [A-11](#) provides a clear depiction of a Nuhln.

A.10.2 Habitat

Methane-Nitrogen

A.10.3 Culture

Like the Lmpl, the Nuhln were a sub-sentient species selected by the Rlaan for an uplift project. The first of the two major uplift projects, the Nuhln are generally considered far less successful than the Lmpl, being somewhat intellectually slow. They are almost exclusively found performing jobs where the ability to repeatedly perform seemingly mindless tasks without complaint is a distinct positive attribute. Though present throughout Rlaan inhabited space, they are a culturally subsumed group, possessing no internal culture to speak of.

A.10.4 Religion

All Nuhln are adherents of Rlaanbzztkrlbzeentkaan (see [A.12.4](#)).

A.10.5 Miscellaneous

The Nuhln use Rlaan numbers.

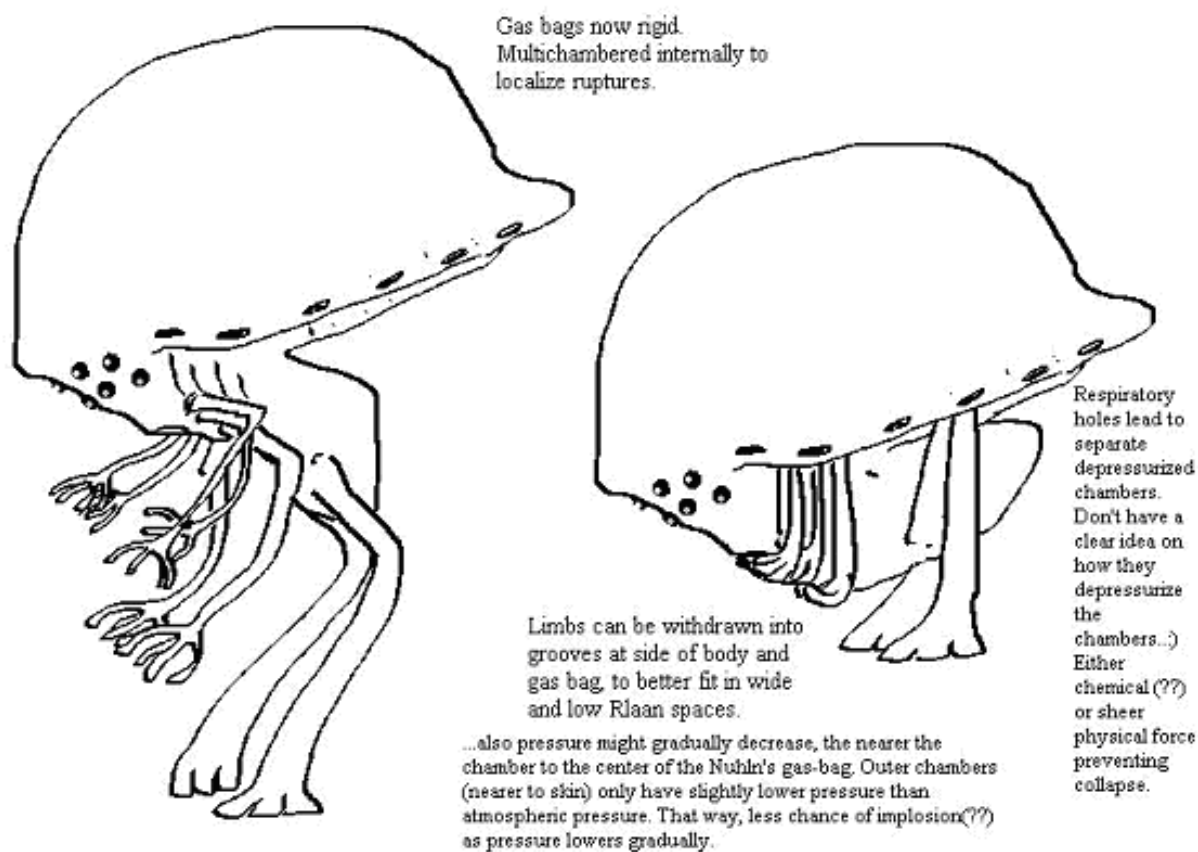


Figure A-11: Image of a Nuhln

A.11 Purth

The Purth are an uplifted client species of the Andolians. In large part an experiment in synthesis of work done by the Unadorned and the Mechanists, the Purth are cybernetic beings, with assistive AI and built in networking capacity. It is only through these upgrades that a Purth achieves something much like sentience. Although they sometimes operate autonomously from their Andolian patrons, Purth never do so alone. Only by networking their minds together will a group of Purth be confident enough to venture off without guidance.

A.11.1 Physical characteristics

The Purth were chosen primarily because of their very hardy constitution, and have proved themselves invaluable in high gravity applications. Each individual Purth is quite large, comparable to a small motor vehicles, and covered in a skin heavily composed of silicones. The silicones are at their most present on the footpads, which allow the Purth to walk across still-cooling lava flows and traverse boiling mineral springs.FIXME

A.11.2 Habitat

FIXME

A.11.3 Culture

FIXME

A.11.4 Religion

The Purth were pre-sentient before the Andolians altered them, and are universally predisposed to ignore religious issues entirely.

A.11.5 Miscellaneous

Purth use binary, due to their number processing being heavily computer assisted.

A.12 Rlaan

Ammonia-blooded, methane breathers from a cool world distantly orbiting a hot star, the Rlaan are a collection of oddities. Unique among the known space-faring groups, the Rlaan are actually two separate species, the defenders and workers speciating some hundred thousand or so years ago.

A.12.1 Physical characteristics

(Defender, Workers and Hybrids)



Figure A-12: Rlaan - view from above and side

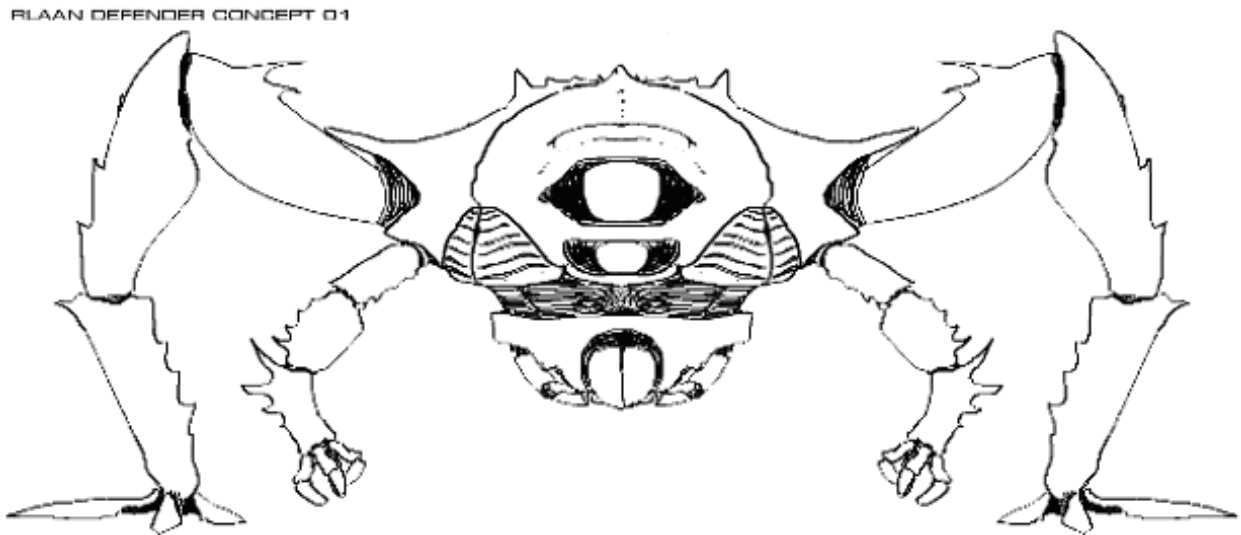


Figure A-13: Rlaan Defender - front and back limbs omitted

Rlaan are radially symmetric beings with a base four split. Figure [A-12](#) shows a perspective view of a Rlaan from above. Their Workers (see Figure [A-14](#)) stand about one meter high at the prime knee, and are nearly one meter in diameter. Members of their Defender caste (see Figure [A-13](#) for cutaway image of Defender species) tend towards being 50% larger in both dimensions. Rlaan natively breathe a methane-based atmosphere, and must wear special breathing apparatus to negotiate oxygen-nitrogen environments. Their skeletal structure, being an exoskeletal carapace supported internally by millions of reinforcing struts, is best suited to lower gravity worlds, and leads to the use of mechanical assistance on larger or denser rocky bodies.

Both species are similar in appearance, with the primary differences being size, the degree of fine control in the manipulator appendages (workers have better fine control), and the structural integrity of the skeleton (defenders are less fragile than workers). The defenders tend towards darker shades of red and purple, whereas the workers are somewhat pale. Though the offspring of worker-defender matings are sterile, these hybrids exist as nearly 4% of the population, and have come to play important social roles, especially in the realm of politics. Rlaan are radially symmetric with four equivalent segments. Each of these segments contains one compound eye composed of four segments, one ambulatory appendage, one mouth with four

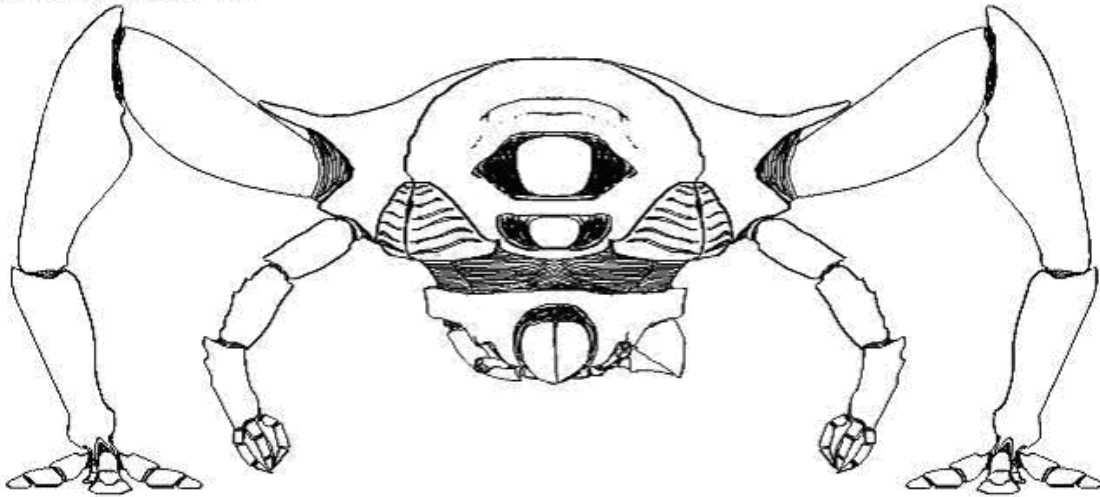


Figure A-14: Rlaan Worker - front and back limbs omitted

mandibles, one manipulator appendage, various local organs, and portions of the central organs. The Rlaan skeleton is a supported exoskeleton, that is to say, the exoskeleton is supported internally by a network of millions of small extensions of the skeleton, which together form a sort of highly porous lattice that the soft internals reside in. A defender stands about 1.5 meters high at the top of its carapace, and 2 meters high at its knee joint. The central body is around one meter in diameter, and a third of a meter in thickness. Out of this central body come the four abulatory limbs, going up and out from the body to the knee joint, and then proceeding down where they terminate in a four-splayed gripping foot. Suspended below the central body is the "head" portion of the Rlaan, about half a meter in diameter and also about a third of a meter in thickness, with its bottom covered in a particularly thick extrusion of the exoskeleton. The manipulator appendages sprout from the region connecting the head with the main body, and end in four radially arranged fingerlike structures. A worker's dimensions are about 70% that of a defender.

A.12.2 Habitat

With equatorial temperatures peaking near 230 K, seas of ammonia, and a methane atmosphere, the Rlaan homeworld is not what most species would consider a prime vacation spot. Life on this planet progresses at a rather slower pace than that on water worlds, but proceeds nonetheless. From the point of view of ammonia-methane life, the Rlaan planet is actually quite toasty.

A.12.3 Culture

Rlaan lifespans tend to be between 250-350 years. This is believed to be a large factor in their cultural homogeneity and the methodical nature of their advances, both through space and as a culture. Rlaan culture itself is a very dry affair, with social dynamics primarily involved around expository investigations of philosophical debates that have yet to be satisfactorily translated into the language of any other species.

Music

Their music, if it can be called such, has been compared to "the set of frequencies one would expect to register if a Myztherian Octpanther were let loose in a campanile". On a more disturbing note, the Rlaan central archives possess the largest collection of data concerning Jerry Lewis and Yoko Ono outside of Human space. The Rlaan are, however, regarded by many of the other space faring races as much more intelligent than their culture's taste in art would suggest.

Writing

Rlaan written language appears as a sequence of characters consisting of one to four radial slashes in each of four quadrants formed by a pair of crossed lines. It is read in a counterclockwise spiral out from a blank central region that is reserved for the signature glyphs of the author. The Rlaan have vast stores of written documents going back thousands of years, but attempts to decipher most of them have met with limited success, as the concepts often being discussed seem to have no corollaries in the languages of any other species.

Science

Rlaan science is more advanced in the fields of chemistry and genetic manipulation than any of the other space-faring races. The Rlaan are also quite knowledgeable about materials science and the advances in the latter are often related to the former. Aside from these noted cases though, Rlaan science has advanced more slowly than that of the Humans or the Aera, and the extent of its advances is more a measure of the age of Rlaan investigations into science than any particular brilliance on the part of the Rlaan. Though not truly uncreative, the Rlaan seem hard pressed in the department of inventive spontaneity. In particular, the Rlaan are rather behind humanity in their exploration of both artificial intelligence and tightly integrated biomechanical systems, having sufficed with loosely coupled designer organisms.

Politics

The Rlaan are governed by a body whose name translates to The Rlaan Assembly it appears to be some form of representative democracy, but the exact methods of choosing one's representative seem complex and arcane beyond the tolerance of most observers to bother attempting to figure out. This body then churns out laws and regulations at a breakneck pace, the enforcement of which is then delegated to the complex Rlaan Bureaucracy. Attempts to understand the inner workings of the Rlaan Bureaucracy have met only with confusion for all parties involved. Strangely, the members of the Assembly are disproportionately sterile hybrids, believed by the Rlaan to be more levelheaded than either the aggressive defenders or the timid workers. One thing that did translate clearly, however, was the Rlaan differentiation between civilian and non-civilian. Given their biological distinction between these two, it is easy to see why the Rlaan have such firm views upon how civilians should be treated.

Notable Rlaan Factions and Organizational Entities

- The Rlaan Assembly

- Rlaan Briin
- Rlaan Merchants
- Rlaan Hunters
- Rlaan Enforcers

A.12.4 Religion

Most Rlaan are adherents of Rlaanbzztkrlbzeentkaan. What this means is very difficult to say, as, though it is a text based religion, the text is under constant revision. Indeed, the Rlaan Assembly regularly submits changes and additions to the holy text. Contradictory edicts abound, and scores of companion volumes are included with every copy that debate the relative merits of breaking one set of edicts over another. Edicts contradicting each other, however, are the least of a reader's worries, as the universe is created 37 times in 17 entirely distinct fashions, by a grand total of 4301 entities, albeit 4210 of these were all in one creation story. History, morality, ethics, and the fundamental nature of reality itself are all presented in so many different forms in the text, that it defies rational understanding as to how the Rlaan consider the book canonical and relevant. However, they do. And they gather together at one of the 73 specified intervals of worship, for those that interpret worship as being allowed, to engage in whatever activity is currently believed to be both correct and legal by the group that has thus met. Rlaan places of worship are thus remarkably like most Rlaan art: constantly changing in nature but composed of themes that are themselves mind-numbingly repetitive, and constantly possessed of an aesthetic that runs counter to common human tastes.

A.12.5 Miscellaneous

Depending on your viewpoint, the Rlaan use either base 4 or base 256. Namely, every Rlaan character is composed of 4 subcharacters, so, going by the subcharacters, it's base 4, but there are 256 distinct numerals per character read. Rlaan numbers are distinguishable from the characters in the rest of the Rlaan script in that the center of each subcharacter is marked with a dot. As far as the Rlaan are concerned, it's base 256.

A.13 Saahasayaay

Fast, beautiful and deadly, while they serve the Rlaan, they do so because of the technological and economic benefits gained from the association rather than out of gratitude. Whereas the Rlaan succeeded in making both the Lmpl and Nuhln useful and docile, the Saahasayaay are indeed useful, but far from docile.

While the Saahasayaay are a single species in the technical sense, their array of different metamorphic forms, each clearly of distinct origins, is somewhat unique, and, as only certain of the forms are possessed of any particular intelligence, and only one of accepted sapience, in common reference "Saahasayaay" may often refer only to the portion of the population in dominant sentient morphology.

The Saahasayaay have the strangest, and, on several levels, most disturbing life cycle of any of the known extant sentients. Foremost among its disturbing points is that the life cycle is clearly of artificial origin external to the Saahasayaay homeworld. The non-squeamish often find this more disturbing than the fact that

metamorphosis usually begins with the death of much of the body, and proceeds via the semi-autonomous archival organ consuming what would otherwise be the uneaten remnants of its own corpse to fuel its generation of a new body. The archival organ, itself effectively inedible, and encased in a protective shell, is not a native feature. The organ features an absurd amount of unexpressed genetic code - indeed, it contains genes describing thousands of species, almost none of which are actually present on the Saahasayaay homeworld. Indeed, the Saahasayaay appear to be the result of some ancient (although not believed Ancient) xenoforming gone awry. Many of the gene sequences present in the archival organ appear to be irrevocably damaged or woefully incomplete, despite the presence of significant error correcting facilities.

Only the lowest level of the metamorphic chain for the Saahasayaay can actually breed. All other forms have been rendered sterile. This lowest level is a fast growing photosynthetic invader species that has infiltrated or replaced competitors in most of the native ecosystems of the Saahasayaay planet. It cannot be correctly termed a plant, animal, or fungus, although it shares some features with all of these more familiar categories. While likely originally designed to be the prime xenoforming agent for the planet, destroying native ecosystems and replacing them with those of its creators, the archive creeper has wandered from its original mission, producing a warped hybrid ecosystem that almost certainly bears little resemblance to either the original or intended replacement. The origins of the Saahasayaay are clear in both their metamorphic paths, their traditional food chains, and the sterility and monosexual nature of all of the extant forms save for the archival creeper. Local "herbivores", for lack of a better word, came to eat the creepers, but were in turn recorded and replaced, themselves devoured and recreated by the archival organs they attempted to consume. This effect then proceeded to trickle up the food-chains of all of the ecosystems invaded by the creepers. A limitation of this process, was, of course, that organisms smaller than the archival organ were not readily assimilated. Thus, the detritus feeders competing for flesh on the fallen corpse of an assimilated species were more likely eaten by the archival organ than the other way around.

The archival organ is an incredibly complex, advanced, and subtly broken biological machine, but it is not itself remotely intelligent. Likewise, it is not quite sufficiently autonomous to generate widespread agreement as to it being referred to as a symbiotic organism, especially as the genetic definitions are skewed, given that it contains all of the genetic code for all of the "host" bodies. All tissues in the archival organ feature cellular immortality, and the archival organ is itself amortal (not aging, nor dying from old age) although the bodies it produces do not share these properties. The organ is well protected and possesses some independent subsystems, so surviving the death of the rest of the body is common (depending on the manner of host-death) - which is necessary, given that such is the only means for morphological change and the preservation of more interesting forms of species. The archival organ plays key hormonal regulatory roles in all of the assimilated forms.

A.13.1 Physical characteristics

Terminal form Saahasayaay are physically impressive beings, if not, because of mode of movement, as bulky as some of the other sapients, and fossil records indicate this to be a quality preserved from pre-assimilation times. They are beautiful, if possessed of features that, if designed, would speak of a certain viciousness to the crafting hand. The terminal Saahasayaay are the only extant sophonts known to be able to fly, albeit they are, in practice, more often gliders than active flyers through their thick and caustic chlorine-nitrogen

atmosphere. Their bodies are long, almost serpentine, though the strong muscular development for the wings and arms belies that image. They are bilaterally symmetric, with 4 wings rising above, and 8 arms hanging below the largest and middlemost segment of the body, set between a long tail at rear and longish neck and fierce head at front. The front and rear sets of arms have hand-like endings, gripping appendages of a gaunt leather-and-bone appearance, that are dexterous, if clearly meant to hold fast to live and struggling prey while the curved blade-like endings of the middle four arms carved and scooped the meal into edible submission. Skin on the middle-body is mostly hidden behind large, thin, overlapping scale-like protrusions of smooth, hardened flesh, iridescent, ranging through colors from green to red to gold. The tail, in cross section, could be thought of as a square whose sides have been bent in, or whose corners were pulled out, to produce a four-sided concave shape. The tail is heavily segmented, as is the neck, which has a similar shape, although much larger, and it lacks the short spines protruding from the corners of each tail segment that serve to let the tail be used to grip surfaces or objects it has been wrapped around. The tail narrows somewhat as it progresses rearwards, but was always fairly thin in comparison with the body. Towards the rear of the tail, the spines end, and four specialized spines are present that act as fins that can be raised or lowered to act as flight control surfaces. The scale-like protrusions are much larger on the tail and neck than on the body, corresponding heavily to the structure of the segments themselves leaning somewhat towards a more chitinous-plates appearance than scale-like appearance, for those portions, although in truth it is only a matter of size and flexibility required for each segment that has lead to the differing appearance, and not a fundamental change in material. The head is slightly larger in girth than the neck, excepting the mouth itself which is forward of the rest of the head. The terminal form Saahasayaay have no teeth in their mouth. Grinding, separating and pulverizing are instead done by stone-hard protrusions that line their equivalent of the esophagus. The mouth instead consists of a set of flexible, segmented spines, connected to each other by membranes, that can be focused to a point, as when sucking in fluids or flying, or opened to engulf a portion of a prey animal. This semi-engulfing is necessary, as the chunks of flesh freed from the target by the multiple bone-bladed tongues that slash out violently from within the mouth might otherwise fall out. There are four eyes, two at the corners of the top of the head and two, more centered, below. There are ears and nasal openings that lie on the side of the head. The brain itself is primarily on the top of the head, although there is significant neural matter at the bottom of the head that does optical processing for the lower eyes.

A.13.2 Habitat

All of the native species integrated by the archival organ are now extinct. Thus, entire food-chains now consist of nominally Saahasayaay organisms. It is presumed, given that all of the non-creeper morphologies are sterile, that the intended process involved a kill-off of all of the food-chains via a wave of progressive morphology changes up the food-chain, thereby progressively starving each link in the chain. Alternate theories presume an external agent being introduced that would kill off all of the hybridized life forms, while leaving the invaders intact, but the non-native codes are sufficiently mangled that it has been difficult to test if such differentiation would have been readily achievable. Given the large number of codes stored, it is presumed that total kill-off was not an intended goal. Clearly, however, none of these have happened, especially those models requiring external intervention. Instead, the regulatory mechanisms presumably in place to delay any native depopulation until there has been sufficient infiltration of the native populations

have instead functioned merely to regulate the frequency with which the next body of a dead Saahasayaay differs from the previous. Also noteworthy is the terminal nature of the Saahasayaay metamorphic process. Fossil records point to the ancestor of whatever native species preceded the sapient Saahasayaay population as having been wide-ranging, and wherever present, atop the food chain. Thus, the Saahasayaay sophonts are currently the "terminal" metamorphic form - an archival organ that survives a Saahasayaay sapient's death will normally build another Saahasayaay sapient. Note that none of the previous individual's memory or mentality is preserved, and inefficiencies in conversion and the genetic imperatives of brain development in the original source species, even in the presence of a nearly full corpse, result in the production of a juvenile individual.

A.13.3 Culture

The most successful of the Rlaan client species, the Saahasayaay are not, unlike the Nuhln and Lmpl, true uplifts, having already achieved some minimal level of societal advancement at the point of discovery.

The Rlaan have taken to using Saahasayaay troops to reinforce their border with the Aera, are, however, somewhat hesitant to let this concentration of troops return home.

As most of the Saahasayaay forms are not capable of complex thought, they don't much consider either the nature of their life cycle, nor that they often are eating what is technically a member of their own species. This is not the case for terminal form, whose culture has been deeply shaped by the role that death plays in the Saahasayaay life-cycle, and the semi-reincarnations that are the daily occurrences of Saahasayaay life. The terminal form Saahasayaay are, in fact, quite bright, and learn voraciously, but a cultural disinterest in knowledge unrelated to superior killing ability and an exceptionally low life-expectancy rate due to unending war, murder, and ritual killings has historically hampered internal sources of advancement. It is not too difficult to see where their obsession with death has come from, albeit only they, perhaps, can truly comprehend the directions it has taken them in. It is fortunate for all other sapient species in the region that the Saahasayaay were found in the stone-age by space-faring sapients, and not the other way around, as the Saahasayaay have no compunction when it comes to killing, whether it be other sentients, each other, or lower Saahasayaay forms. Death is the natural order for them, it is the source of progress, and their right and duty to disperse. Their obedience to the Rlaan and restraint in aggression against both the Rlaan and other species is predicated on the Rlaan's greater ability to bring death upon them than they upon the Rlaan, as well as the opportunity for greater empowerment that the Rlaan bring to the Saahasayaay. Death is the ultimate blessing the Saahasayaay believe they can bestow, and the frequent regeneration of their fallen into newborns has utterly deprived them of the fear of their own demise present in all other known organized species of measurable intelligence.

Some of the other Saahasayaay forms possess some level of intelligence, though none as pronounced as the terminal form Saahasayaay. Some of these forms have been "domesticated" and the most intelligent of these, generally considered comparable to some of the Terran primates, are sometimes used in a servitor role. The most valued of the servitors are granted a chance at "ascension" by being taken to an isolated area, free of terminal Saahasayaay, and killed swiftly, leaving the entire corpse intact. The lack of terminal Saahasayaay in the area improves the likelihood that the next metamorphic form will be a terminal Saahasayaay, rather than another servitor, as the choice of next form is heavily influenced by the presence of other forms

detected by the archival organ, a manifestation of its original, more overarching regulatory role. Punishment in terminal Saahasayaay society rarely involves killing of the archival organ, an act considered disgraceful unless the individual in question has been deemed to be heretical to the advancement of the Death God's agenda, but it almost universally involves killing. Punishments range from the minor, a swift and clean death followed by adoption for what most other species would consider misdemeanors, to use as hunt bait and eventual consumption by lower forms, to the most serious crimes being punished by the removal of the archival organ, the starvation thereof for a period of time, to increase the chance of form reversion, smearing the archival organ in the mixed remains of lower forms to further increase the odds that the next form will not be a terminal Saahasayaay, and then letting the starving archival organ eat the victim (still conscious, but wracked with crippling chemical imbalances) alive.

It is generally considered fortunate that only a small percentage of the world known to be reachable via the jump network feature a chlorine based ecology. The Saahasayaay, from the creeper on up, feature a profoundly rapid metabolism, and they have quickly overrun and populated other chlorine-worlds that they have been introduced to. Indeed, it has long perplexed researchers as to why exactly the concentration of chlorine-life friendly worlds is significantly higher in the region of space containing the Saahasayaay home-world, and then marginal elsewhere. What many believe to be the likely originating planet of the archive creeper is in very nearby space, just one jump link removed from the Saahasayaay system, but it is difficult to ascertain this connection with any certainty. The system shows signs of previous habitation by a technological entity, but, outside of semi-preserved ruins on various moons and other uninhabitable locations, there is precious little left of the inhabitants. In particular, what is believed to have been their homeworld would seem to have fallen victim to both some sort of limited grey-goo event and a widespread use of fusion, antimatter, and kinetic weapons that, combined with the already reactive nature of the atmosphere, served to make it exceptionally difficult to discern much about the previous inhabitants. Levels of nano-plague are also exceptionally high in the system, leading several researchers to advance theories that the inhabitants made what proved to be a fatal mistake of attempting to counter the nano-plague in an aggressively military fashion.

The Saahasayaay navigate 3D space with great agility, and, despite the distinctly different dynamics of planetary and vacuum flight, make excellent pilots in either medium. The Saahasayaay have not significantly industrialized on their own, although their technological usage has greatly advanced since absorption into the Rlaan Assembly. All Saahasayaay ships are specially manufactured for them by the Rlaan out-system, and Saahasayaay pilots shipped out to military bases from one of the Saahasayaay worlds. The Rlaan are somewhat reticent when it comes to providing the Saahasayaay with a means to make their own starships. They are, however, more than willing to freely give them technologies which increase their sustainable populations so that they can draw upon more Saahasayaay troops. The Saahasayaay, for their part, hunger for more control over their own destiny, but are currently kept sated with the opportunity to bestow much bigger deaths with the starships the Rlaan build for them (the Saahasayaay consulting on certain aspects of the design). Saahasayaay operating in Rlaan space must wear atmosphere/temperature suits at all times, precluding flight abilities. Their suits are therefore augmented with thrusters so as to make them more comfortable - an uncomfortable Saahasayaay is not a safe Saahasayaay, though there is of course, no such thing to begin with. Saahasayaay work only with defenders and hybrids in Rlaan society. They have no

respect for the Rlaan workers, who cannot be killers in any meaningful way, and the Saahasayaay are considered an unnecessary threat in interacting with Rlaan workers.

A.13.4 Religion

The dominant belief structure of the Saahasayaay revolves around each of them being an instruments of the great death god who sits in judgment over the universe. The Saahasayaay believe themselves to be the chosen people who alone are privy to the sentences being passed down upon the mortals of this realm. Saahasayaay prophet halls are built to express the joy of the hunt, the glory of the kill, and subserviance to the great death god. The prophet halls are built in keeping with the 3-dimensional nature of Saahasayaay travel, with perches on many levels, and rank denoted by attainment of a higher perch.

A.13.5 Miscellaneous

The Saahasayaay used to use a unary system with groupings done in sets of 8 (flat, without a notion of base), but have been converted to use of the Rlaan base 256 system.

A.14 Shmrn

The Dgn and Shmrn share a common time-of-uplift ancestor. The resulting species was further refined in separate efforts by the Lightbearers and the Shapers into two distinct, but closely related species. As the Lightbearers were destroyed as a meaningful entity, the Shmrn were let loose as a freed species to settle new worlds.

A.14.1 Physical characteristics

A.14.2 Habitat

A.14.3 Culture

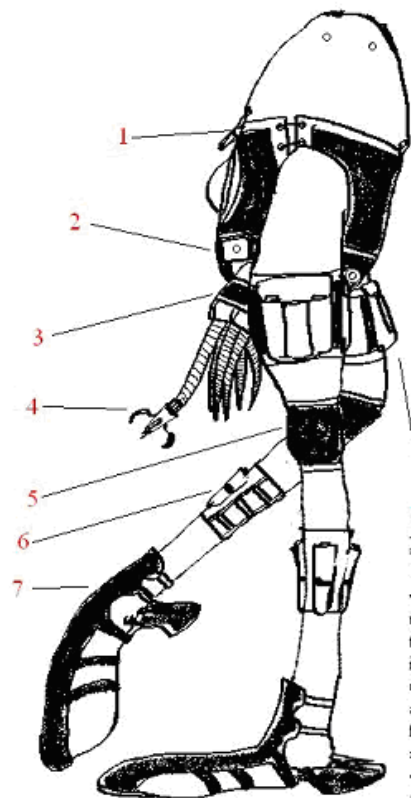
For above 3 categories, please see the following list of images: Figures [A-15](#), [A-16](#), [A-17](#), [A-18](#), [A-19](#), [A-20](#), [A-21](#), [A-22](#), [A-23](#), and [A-24](#).

A.14.4 Religion

The Shmrn have a spiritual existence quite different from their brothers the Dgn, with communal meetings contemplating the nature of suffering over one's lifetimes dominating the organized religious landscape. Shmrn culture and universe view centers on the principles that life is unfair and painful, but a necessary stage to receive the reward of eternal painlessness that awaits those who have, over several lifetimes, overcome their desires to avoid the unpleasantness of life.

A.14.5 Miscellaneous

Base 7. Nothing special.



Shmrn

Shmrn standard wear. Shmrns dress with difficulty, with or without assistance, so aesthetic appeal is not particularly high on their concerns in clothing. When dressing alone, a Shmrn will lie back unto the body vest (not a problem as they have a pair of posterior eyes) and pull the flaps over the thigh junctures. They then pull the rest of the outfit over the front, covering the genitals (modesty is as important to the Shmrns as it is to humans) and aligning the beaked mouth with the central opening. Self-locking connectubes® join the flaps of the vest. The soft material of the vest and most other Shmrn clothing is impervious to liquids, maintains humidity, and is designed to prevent chafing, particularly on the sensitive and continually moving thigh juncture and knee joints.

Shmrn with access to automated assistance in dressing usually wear one-piece torso suits that have external water repositories on the thighs connected to the rear pair of breathing tubes (Shmrn usually drink through the four respiratory intake openings).

List Of Standard Shmrn Accessories

1. Drinking Siphon - as Shmrns are less likely to plunge into the water to replenish body fluids as their ancestors, they require the use of a drinking siphon pushed through one of the exit valves of the two front breathing tubes. Drinking through the beaked mouth is possible but would involve as much spillage as it does drinking (swallowing is a voluntary action in Shmrns and Dgns, accomplished by a fringe of tongue-like smaller tentacles that push food materials into the digestive tract). A hydrating hose or a standard human water container is connected to the opened end of the siphon, suction is achieved by closing all respiratory valves and expanding respiratory cavity, forcing liquid through the siphon. This device is unnecessary if the Shmrns use the drinking tubes with water containers strapped to the thighs (see description of vest)

2. Goggles. Can be basic (for eye protection and vision focus only), or can be outfitted with any of the current human visor technology. Shmrn construction workers usually have enhancements for seeing in murky water, as well as for data handling and display. Shmrn medical workers have much more specialized goggles, necessary for their delicate and complicated work (they often service injuries, illnesses, and surgical procedures on different species at once).

3. Hydrating Band. Not actually a necessity but worn by a lot of Shmrns, as they feel more comfortable with these bands around the tentacle sheaths. These hydrating bands constantly convert excess oily secretions that accumulate in the sheath bases into water. Small tubes leading into the sheath secrete water every time the tentacles are retracted. This is particularly refreshing for Shmrns doing strenuous physical work out of the water.

4. Custom Tentacle Tips. Shmrn tentacles are not naturally adept for fine manipulation, except when working in conjunction. Tentacle tips that have multiple functions aid in much more complex tasks, as well as provide shortcuts for what once required all 14 tentacles. Indeed, modern Shmrn tools are usually placed on tentacle tips - these include personal weapons, blades, and grasping ends.

5. Knee Protectors - made of the same material as the vest and with a small internal hydrating band, they ease the discomfort of either drying or excessive oiliness.

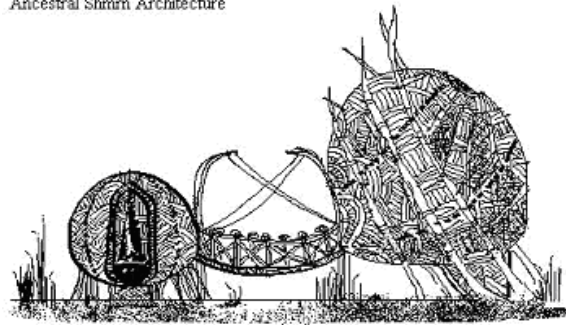
6. Small utility pouches. They usually hold the different tentacle tip tools for quick switching.

7. Shmrn footwear. See separate sketch of the Shmrn footwear. :)

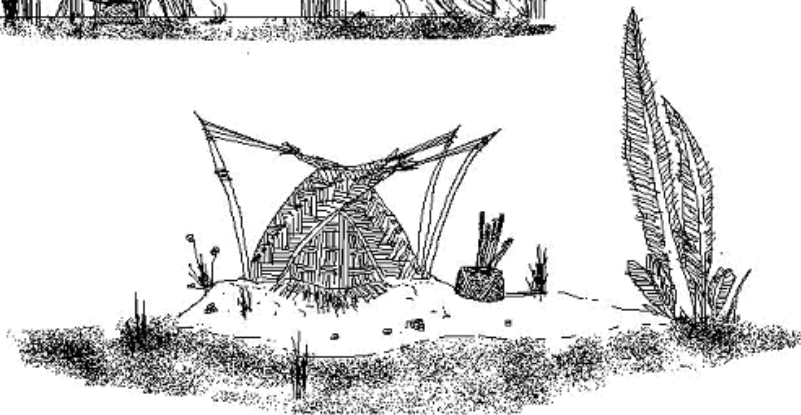
8. Larger utility pouches. Shmrn pockets, actually. At least one of these pouches contain a water container. For the "automatically dressed" Shmrns, the first pair of pouches is replaced with replenishable water containers. See vest description above.

Figure A-15: Shmrn Overview

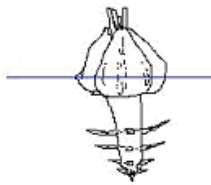
Ancestral Shmrn Architecture



Huts made of woven reeds. Built in areas where good mud cannot be acquired in sufficient quantities, they last for two seasons at most before bowing to the fierce typhoons of Beckett's Murky Venture.



Hut made of mud and reed. Reeds are woven to form two envelopes. Wet mud is then dribbled into the cavities. The reed and mud "walls" are pulled over a framework of stronger bamboo-like reeds and secured in place to three poles driven deep into the ground. There are two entry/exit points. The hut is built on small mounds mostly made of sand and loose gravel, partly to discourage mud-burrowing pests and to facilitate faster absorption of water into the hut. Inside the hut is a depression below the lowest tidal water level. Here, a Dgn/Shmrn ancestor can rest without the discomfort of drying out. The hut is built to keep out the sun, and welcome the rain. The mud keeps the interior cool and moist.



A common inhabitant of the shallows, this filter feeder is heavily armored and anchored securely to the ground. When it senses abnormal vibrations in the nearby ground/water it snaps the armored plates shut. Strong muscles make it impossible to pry them open as well as to pull them out. The Dgn/Shmrn ancestors hunt these with reed spears, taking care to tread carefully in the mud and water and spearing the organism before it can close its armor.



Camouflaged among reeds and often buried, these predators are smaller than the underwater monsters of Beckett's Murky Venture, but are one of the daily threats of ancestral Dgn/Shmrn life. The tentacles are tipped with sharp barbs covered with deadly poison and are shot out of the chambers when these creatures are stepped upon. However, once detected and disarmed, these creatures are quite delicious - both to Dgns/Shmrns and Humans - provided that the poison chambers are properly removed, of course.

Figure A-16: Habitat of the ancestral Dgn/Shmrn

Shmrn Elder

Member of the
Shmrn Elder Council

Local Planetary
Tribune

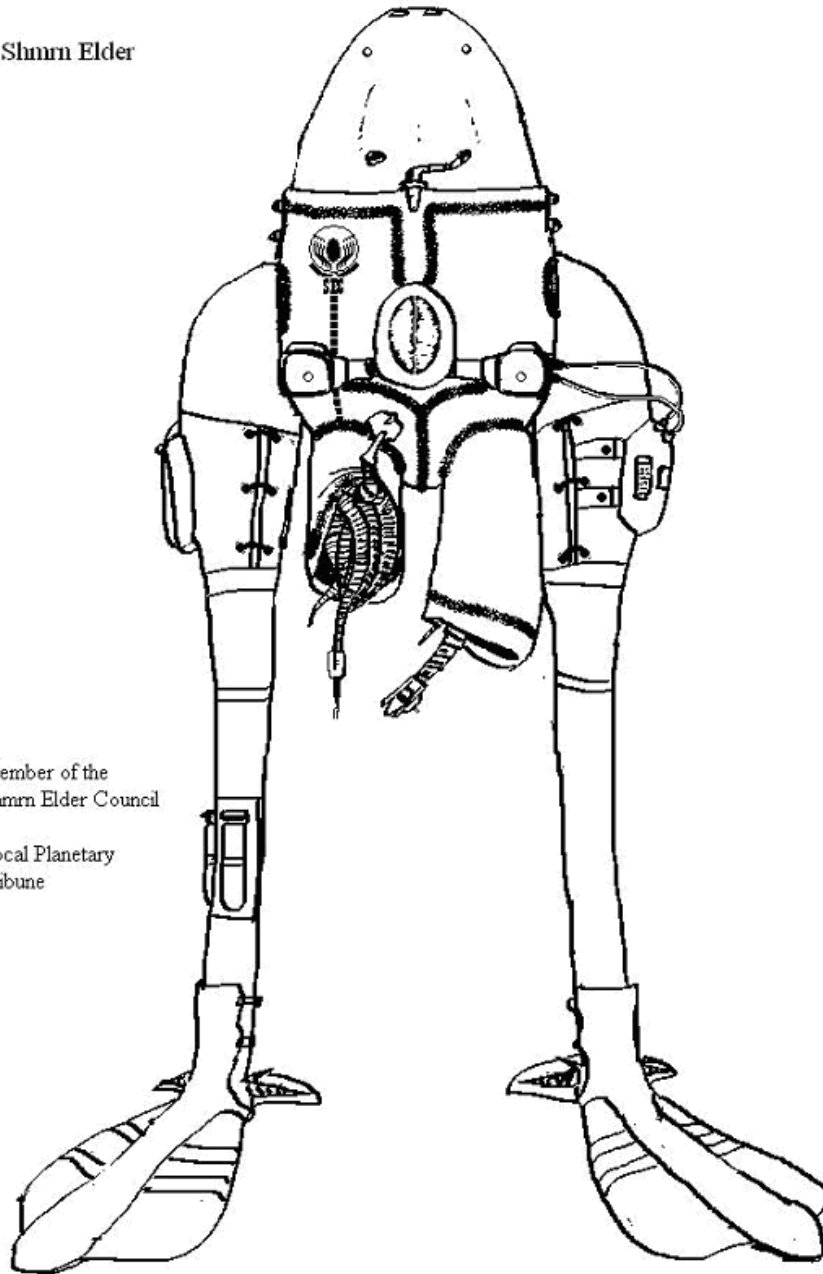


Figure A-17: Shmrn Elder

Shmrn Healer

Covered almost entirely with protective suits, due to the wide variety of pathogenic organisms they come in contact with everyday.

They require regular decontaminations and hygiene showers, though they need not change their outfits for at least two days.

This is an example of a Shmrn outfit that requires the assistance of a servant, partner, or AI to put on properly.

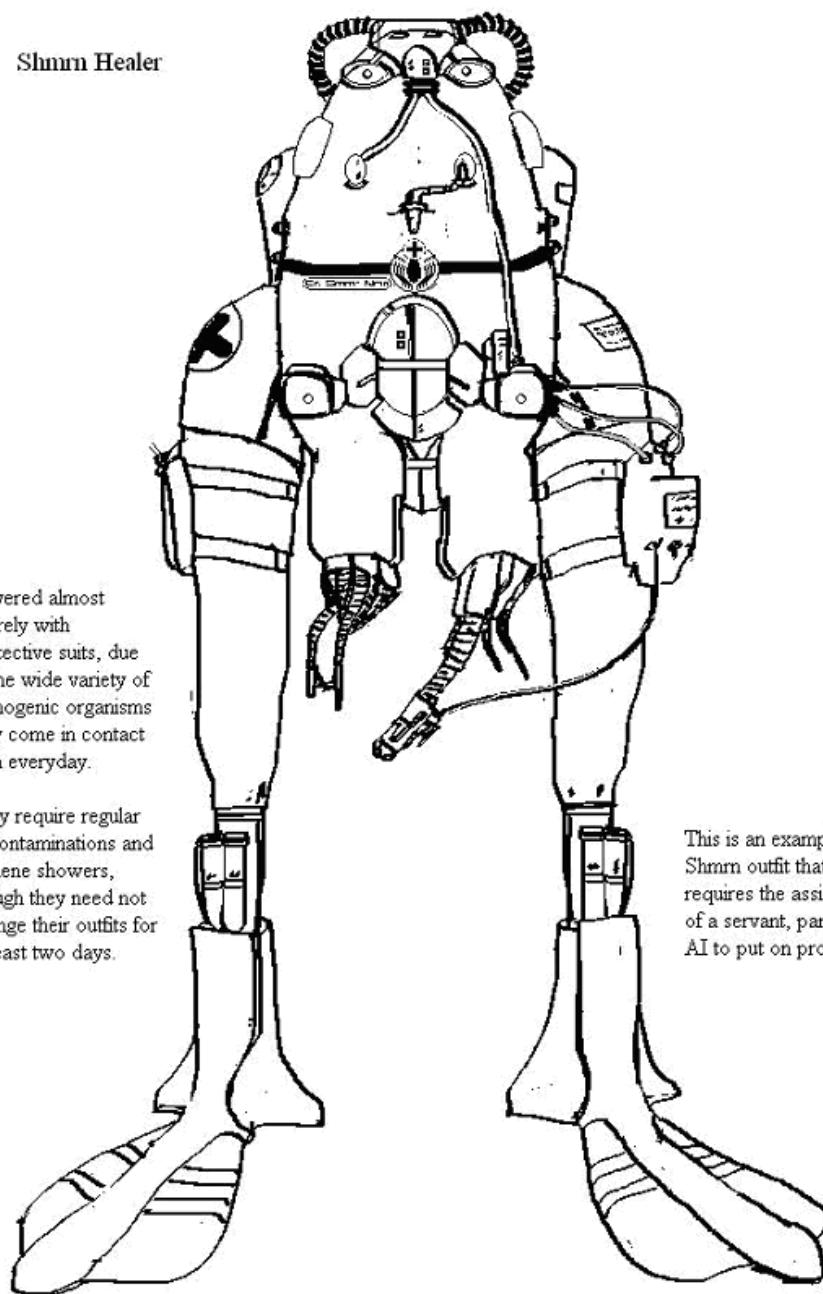


Figure A-18: Shmrn Medic



Figure A-19: Shmrn Pilot(1)

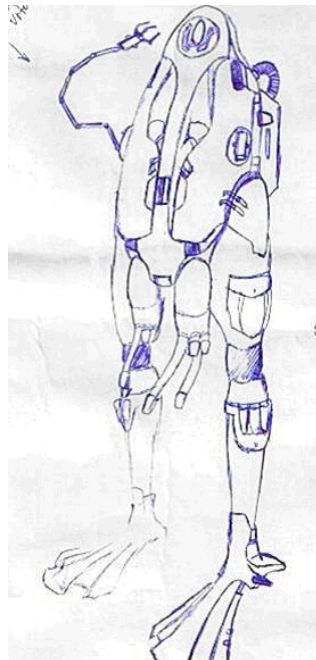


Figure A-20: Shmrn Pilot(2)



Shmrn footwear - rubberlike synthetic material. Has sponge-like inner pad that absorbs only Shmrn excretions and breaks it down to water. The footwear help protect and hydrate a Shmrn's feet and simulates walking on wet mud. Side extensions can be spread to help in navigating uneven surfaces while still protecting the webbed lateral toe-spines.

Rear fan-like projection of footwear projects over maximum length of Shmrn rear toe-spines, protecting the toe-spines from injury as well as ensuring the Shmrn will not accidentally pierce someone with them.

Figure A-21: Shmrn footwear



Figure A-22: Shmrn formalwear

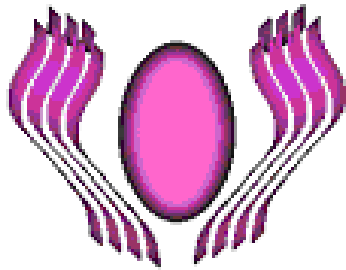


Figure A-23: Shmrn logo



Figure A-24: Shmrn - rendered

A.15 Super Cetaceans (SuCets)

Super Cetaceans (SuCets) are the result of what some consider the first truly profound endeavours of Humanity in combining the fields of genetics and cybernetics. While there are still SuCets around, they are generally considered a "failed" experiment, never thinking in a sufficiently compatible manner to become either useful tools or partners, and requiring cybernetic additions that were too costly, post nano-plague, for novelty value. Small communities of SuCets exist on some of the more affluent and metropolitan oceanic worlds, and their largest community, though quite small, remains on Earth.

A.15.1 Physical characteristics

The bulk of their genetic code derived from a potpourri of whales and porpoises, they are oxygen breathing swimmers of immediately recognizable cetacean form, overcoming their lack of manipulator limbs via integrated mechanical prosthesis.

A.15.2 Habitat

The shallower seas of the continental shelves and the vast waters of oceans and oceanic worlds with oxygen-nitrogen atmospheres.

A.16 Super Simians (SuSims)

Super Simians (SuSims) and SuSim Cyborgs have been one of the more stunting trends for "true" AIs, arising from the advances in the fields of genetics and integrated cybernetics. For physically manifested tasks considered too menial, too dangerous, or too monotonous for Humans, the SuSims and SuSimCys proved cheaper, more reliable, and, through advancements in genetics, easier to dominate than AI alternatives.

As a client race they are quite prevalent in High-Born space as servants. In other societies, however, the use of SuSims is seen as inhumane or otherwise frowned upon.

A.16.1 Physical characteristics

The SuSims were constructed from augmented blends of Terran primates, and many discernable features of their Chimpanzee and Bonobo ancestors are immediately recognizable. They remain hairy, not for practical purposes, as much as to help convince their masters that the lines between pet, tool, and slave have not been crossed in an era when some "Humans" may be further distant genetically than the SuSims are from Homo Sapiens Sapiens.

A.16.2 Habitat

They are capable of breathing an oxygen-nitrogen atmosphere.

A.17 Those who have only names (TWHON)

What little is described of this group is gleaned from writings left behind by the Ancients. While most descriptions are quite vague, it is clear that TWHON, if the Ancients are a reliable source, were at least as advanced as the Ancients, and much older.

A.18 Uln

FIXME

A.18.1 Physical characteristics

8 limbs, 4 legs, 4 arms. Each arm end in a "hand" with 4 "fingers" one of which is opposable. The four legs terminate in fleshy-padded feet, each of which ends in sets of broad, thick, fore and back claws capable of allowing "tree"-climbing. All four legs are visible in the rear picture (this specimen has somewhat skinny front legs). The two arm pairs are socketed between the two leg pairs, one pair of arms reaching over the head, the other coming up from under. The head is large and block-like, situated on a short, muscular stalk of a neck protruding from the main torso. The main torso features twin rows of breathing holes, visible on the back/underside.

There are 3 moving parts in the Uln jaw, a lower jaw, and two side portions, all of which are normally involved in eating. There is a single visual input band that stretches across the front and onto the sides of the Uln head, forming a cover for their complicated compound eye. Uln vision is actually remarkably good, and they can see from the infrared/near-microwave into soft UV (hence, some interesting trends in Uln clothing materials).

Figure [A-25](#) sketches the basic shapes described above.

Digestion

The Uln don't do well with carbonated beverages. At all. Their digestive tract isn't suited to things that expand that rapidly upon consumption, and they will make a horrid, stinky mess of things when they exhibit that gem of convergent evolution (traditionally for toxin removal) of spewing their food back out.

A.18.2 Habitat

FIXME

Oxygen-Nitrogen.

(Shmrn logo)

A.18.3 Culture

The Uln culture sprang up among the remains of a sprawling set of Ancient structures and advanced in technology faster than their biology or social structures could adapt, leading one noted human researcher to note upon seeing them, "It was as if I had suddenly come across a spacecraft piloted by Homo Erectus



Figure A-25: Partial sketches of Uln body plan, details of head.

– if they hadn't been so ill prepared for the gifts they unintentionally received, they would have conquered the entire arm." Fortunately for the aspirations of dominance held by other species, the Uln were decidedly unprepared. Indeed, they spent so much time blowing each other up with weapons they didn't entirely control that it is a wonder that either they or the ruins on their planet still survive.

- History

Uln development is somewhat difficult to follow, as they are not actually "native" to their homeworld. Indeed, very little of the plant and animal life on the entire planet appears to have been of native origin, present for only millions of years. In particular, the species on the planet appear to have come from many different origins, as is sensible given the broad range over which Ancient sites have been discovered in other star systems. The Uln are not generally very talkative about their origins, especially as it is the common agreement among the other sapients that they're the descendents of whatever the Ancients were using for lab rats/monkeys. It is therefore still a matter of some debate as to which features of the Uln are naturally occurring, which were engineered, and what reasons there were for such choices.

- Clothing

The most commonly worn Uln garments range from "open-toed(clawed)" short-boots, some utility pouches with straps around the upper arms resting on the neck, and a helmet-scarf (draping down to cover more sensitive regions between the underside of the neck and the lower arms) which would be common casual-wear for the common peon, to the foul-weather knee-length boots and helmet-poncho and the bizzare extravagances of the aristocratic class, with gaudy creations not unlike wearing an array of very fine wire-meshes and doilies, that require servants to dress them. The back/underside is not normally overly covered, though something may drape loosely behind the top arms - to do otherwise would interfere with their breathing.

A.18.4 Religion

Growing up amidst the ruins of an exceptionally powerful and ancient culture on a planet where life was artificially introduced gave the Uln the idea that they were the children of failed gods. Convincing them that they are much more likely the descendants of lab-monkey-analogs from a long destroyed outpost hasn't gotten very far. What passes for organization in Uln religion involves seasonal festivals that mostly serve to reinforce the doctrinal line that being born Uln is a wonderful thing, relative standard of living to the other species be damned.

A.18.5 Miscellaneous

Base 4. Nothing special.

Appendix B: Faction information

FACTIONS of the UTCS Time Period

FIXME

Confed IntelSec o Confederation Navy o Exploratory Service o Concerned Confederation Citizens
Against the War o Confed Pleasure Planet Travel Consortium (CPPTC)

B.1 Aeran Ascendancy

The Aeran Ascendancy governs the Aerans and Bzbr. The Aeran Ascendancy is, in practice, a body wholly controlled by entirely Aeran will of the Aeran Oligarchy. All distinct Aeran subgroups, such as the Aeran Merchant Marines are subject to the edicts of the Aeran Oligarchy.

B.1.1 Aera

Faction data Aera Species Aera Homeworld (Origin) Aeneth Capital Aeneth

A Brief History of the Aera

The Aera homeworld was home to extremely competitive ecosystems. It was not a supportive environment. If one considers Earth the "mother" of the human race, then, in comparison, Aeneth was an abusive parent. The Aera evolved in an environment where a slew of things really did want to kill/eat/infest them. Beginning with the early harnessing of fire, and ending with industrial might, the Aera remedied this problem by destroying the vast jungles that bore them. However, their outlook on the universe was fundamentally shaped by their beginnings in a direction that humans would consider paranoid, or at least profoundly pessimistic and somewhat untrusting, though the Area merely see it as prudent recognition of how the universe works.

This outlook was greatly reinforced by the Aera experience with the nano-plague. The precocious Aera, unlike humans or Rlaan, developed jump-based FTL before having otherwise left their solar system. The resultant reactivation of the nano-plague and the devastation it wrought on their population, served to gel their concept of an inherently antagonistic universe. Aeran society greatly increased its militarization, heretofore on the wane since global unification, so as to better prepare for potential conflicts in what, evidenced by the nano-plague, they presumed was an inhabited galaxy.

The Aera are the youngest of the three currently dominant space-faring major groups, but are also the most expansionist, fastest breeding, shortest lived, and devote the highest fraction of their economy to military and military related R&D spending. They are not evil, they are not delusional, they are not irrational, but they have some fundamentally different assumptions they are working from that make them somewhat difficult to get along with. Finding out that their section of the jump network had them pinned by the Humans and Rlaan, they first attempted to negotiate passage, and were rebuffed. They then attempted to sneak a colony convoy through Rlaan space, but this turned into an utter debacle after Aeran escorts killed Rlaan Civilians, sparking a war lasting several years, that churned the Rlaan-Aeran border into an abattoir. Although formal peace has never been brokered between the two, a cease-fire has been in effect for several years. The Aera have now turned their sights toward Human space, invading Forsaken territory, hoping to

push through toward the less defended Forsaken/Confederation border crossings, carve a corridor through to the other side of humans space, and keep it open long enough so that they can send enough colonization fleets through to the other side to make the venture worthwhile.

Development

Compared to contemporary 33rd century humans, the Aera are comparable or somewhat more advanced in some of the physical sciences and their applications, notably so with respect weaponizations of certain technologies. They are noticeably behind in life sciences and AI.

Having been wandering the jump network for the least amount of time (among the Rlaan/Humans/Aera), the Aera, though occupying the same order of magnitude of systems as the Humans or the Rlaan (Rlaan/Lmpl/Nuhln/Saahasay have most, followed by Humans/Klk'k/Dgn/Purth/Mishtali, followed by Aera/Bzbr, then the much smaller Uln, Shmrn) have not occupied many of them for nearly as long. The Aera expanded in territory faster than that territory could be developed up until running into the Uln. After one last push then brought them to the Human and Rlaan borders as well, the Aera have been racing to build up their newly settled colonies nearer the borders, but the bulk of their industrial potential remains concentrated in systems closer to their homeworld than to alien space. This difference was especially clear during the Rlaan-Aera conflict, wherein many newly settled Aeran colonies along the border fell to the Rlaan assault, but the same Rlaan fleets were badly bloodied when they tried to push into Aeran systems with more matured defenses. Due to the war, Aeran military spending and infrastructure development has been extravagant in comparison to human budgets, but the Aera also had to cope with sizeable losses in personnel and materiel.

While there are key differences between the level of population and industrial development between the core colonies and the newer colonies, due to the very strong central organizing forces in Aeran governance and economy, this is not a deep political divide, nor an economic one - it is merely a matter of the more fringe planets growing as fast as they can into states undifferentiable from the more core worlds. This centralization should not be taken as evidence that Aerans are a selfless society of collectivists. Rather, the Aera have a strong natural ability and desire to sublimate personal interests to higher authority, a trait left over from their more pack-like origins. Success, however, is still judged at individual granularity, and Aera are entirely opportunistic about personal advancement when the opportunity either does not come at the expense of the dictates of higher authority, or places them into a position of higher authority.

Culture

The Aera are a bit culturally dour, although they do engage in organizational events, such as rallies, sporting contests, and Military parades. Entertainment pursuits, such as music, for personal pleasure are not a significant thread in Aeran culture. Such pursuits are seen as necessary avenues of release, but to devote oneself to pursuing purely entertainment oriented activities merely because they are pleasant is seen as wasteful, wantonly hedonistic, and a reckless abandonment of one's duties. Entertainment with physical components, such as sporting competitions, are viewed in a more favorable light.

In Aeran culture, mortality is to be pondered and meditated upon in its inevitability. It is worth noting that it is not so much those that came before them that the Aera cherish as the accomplishments of those

who came before them. The Aera perspective is that it is only through accomplishment on behalf of the Aera that the Aera can continue, and the dead, thereby, can continue to live in the memories of the Aera.

Organization

Aera culture is highly organized and decidedly hierarchical, but in the form of a meritocracy rather than an aristocracy. While what has constituted merit has morphed over the millennia since the first Aera tribes selected work crews to cut back the encroachments of the jungle upon their early settlements, given the relative position of the pre-technological Aera in their local food chain, there has long been a favoring of cleverness and determination over raw strength. The current social and vocational position of any Aera is immediately indicated by the color and pattern of an individual's coverall. The Aera are ruled by a subset of the highest caste, with membership in the oligarchy changing whenever either an individual steps down, or a third of the other members call for a member's replacement. New members must be confirmed by two thirds of the current oligarchy. It is much more common for members to voluntarily remove themselves from power, believing themselves more useful elsewhere in society, than to be cast out. An average stay in the oligarchy lasts a few Aera years.

Need to more usefully carve up faction vs. species information. Will do so later.FIXME

B.1.2 Aeran Merchant Marine

Faction data Merchant Marines Species Aera Homeworld (Origin) Aeneth Capital Aeneth

The Aera don't really have a civilian sector. All Aera resources are controlled by the state, and ruled over by the Oligarchy. The Aera do, however differentiate between combatant and non-combatant forces, and the Merchant Marine, while armed, are designed to transport goods through dangerous space rather than conquer said space. (It may be duly noted that the Aera are predisposed to consider all space to be dangerous).

B.1.3 Bzbr

Faction data Bzbr Species Bzbr Homeworld (Origin) Fixme? Capital Fixme?

The Bzbr are a client race uplifted by the Aera. They are reasonable laborers, but poor conversationalists, in part due to their lack of vocal cords. The Aera uplifted the Bzbr out of pity for the Bzbr due to similarities the Bzbr homeworld had with the Aera homeworld.

The Bzbr engage in significant hero worship of the Aera, although indications are that the Aera are not appreciative of this tendency. The Bzbr are wholly integrated into the Aeran Ascendency, and given extremely little self-control as a group. Aeran officials permeate their entire governmental structure, itself in parts borrowed from and imposed by the Aerans upon the existing stone-age Bzbr. The Bzbr, however, remain near universally accepting of their Aeran overlords due to a combination of religious reverence and vast improvements in their standards of living. Experiences during the Rlaan/Aera conflict found Bzbr to be even less accepting than Aerans of non-Aeran governance. Their fanatical level of religious devotion to the Aera found them to be prime subjects for guerilla actions involving the likely demise of the participants.

B.2 Confederation of Inhabited Worlds

Faction data Confed Species Humans, Klk'k, Purth, Dgn and Mishtali Homeworld (Origin) Various Capital Mars

The Confederation of Inhabited Worlds (Confed) is made up of partially-autonomous member states, and was created with a primary purpose being to arbitrate disputes between them in a more structured and less violent way than the Andolian-Lightbearer dispute was handled. In addition to this, with the Klk'k representing a reasonably advanced alien species and the Andolian-Lightbearer war pushing home notions of the potential for interstellar war, a re-evaluation of the need for maintaining a unified defensive force was seen to be in order.

Each constituent state is allowed to maintain its own military forces, but it must submit some portion of its resources to maintaining the Confederation fleet, which is distinct from any state's military.

The confederation's rights over its constituent states are those and only those so ceded by the constituent states in the confederation constitution. Admittedly, exactly what rights were ceded is always a debatable issue. Likewise, the confederation's unicameral legislature has oft attempted to pass dubiously constitutional edicts. However, the constitutionality of the Homeland Security Forces is actually unimpeachable, as they were specifically called for in the constitution to bypass the previously tangled web of extradition policies between the constituent states and to force some measure of legal compatibility between said states such that outright and overt support for groups violently antagonistic to other member states would not be tolerated. While none of the member states is particularly ecstatic about the confederation's nature and its imposition on their internal affairs, all are, at least publicly, thankful for the unified front that allows humanity to operate alongside alien entities much larger than any single member state.

The civilian center of the confederation as well as the fleet headquarters is located on Mars since the Sol location is symbolic of humanity's common roots. Earth came with too much political baggage, and so Mars was chosen to be the center of the confederation. A hierarchy of civilian and military installations then extends out from Mars to the furthest reaches of confederation space. While sufficient function is distributed redundantly to prevent a catastrophic beheading, only the confed installations on Mars can be said to have been designed with splendor in mind, and thus hold no rivals among the other installations.

B.2.1 Andolian Protectorate

Faction data Andolian Protectorate Species Human, Klk'k and Purth Homeworld (Origin) Various Capital Kubernan

The Andolian Protectorate refers specifically to a government.

Members

All Andolians are members of the Andolian Protectorate, not all members of the Andolian Protectorate are Andolians. In particular, there are Klk'k, Purth, and non-Andolian human citizens of the Protectorate (the non-Andolian humans mostly being non-integrationist members of annexed entities or yet to be integrated immigrants to the Protectorate from other polities). Andolians, being the dominant faction within the Protectorate, are good indicators of how the Protectorate will act.

History

The Andolian Protectorate was created by the Andolians as the political entity controlling both Andolian and Klk'k interests. During the formation of the Confederation, there was some consolidation of minor factions, bringing an influx of non-Andolian humans into the Protectorate (an extremely small minority of the human population born into the Protectorate remains non-Andolian - less than 1% of the total human population). Many Klk'k are more accurately considered Andolian at present (in ideological adherence), but the integrated Klk'k are a distinct minority of the total Klk'k population, which is ideologically more diverse.

Andolians

Faction data Andolians Species Human, primarily of the Pluralis variant. Homeworld (Origin) Earth Capital Kubernan

Andolians are a human faction primarily consisting of the Pluralis variant well developed in both information and physical resources. All Andolians are members of the Andolian Protectorate but maintain a subordinate government concerned with Andolian affairs.

Many of the major Human governments could be considered "ideocracies" wherein a supermajority, often a near totality, of the population governed by an entity are adherents of a given ideological perspective. The Andolians were such a group, with a clear correspondance between the Andolians (the adherents) and the Andolians (the political entity controlled by the adherents) until the Andolians came to have a more diverse political landscape when they became Protectors of the Klk'k population, and later, the Purth. Many Klk'k have since become integrated with the Andolian mainstream, but the Protectorate remains more ideologically diverse than the Andolians proper.

Needs more FIXME

Klk'k

Faction data Klk'k Species Klk'k Homeworld (Origin) Ktah Capital Ktah Needs a better desc FIXME

The Klk'k are a client race of the Andolians, but enjoy exceptional freedom within this position. Indeed, while fiercely loyal to their Andolian benefactors, there exist a non-trivial number of independently operated Klk'k vessels. The Klk'k are perhaps best known for their odd brand of twisted humor.

Purth

Faction data Purth Species Purth Homeworld (Origin) fixme Capital fixme

The Purth are politically subserviant members of the Andolian Protectorate, heavily reliant in most facets of their existence upon the assistance of the Klk'k and Human members of the Protectorate. The Purth do not operate independently, instead being heavily integrated into the Protectorate military forces, as might be expected given their origins as a cybernetics research project. FIXME

Spaceborn

Faction data Spaceborn Species Spaceborn Homeworld (Origin) Cradle Capital Kubernan

Those Spaceborn who chose to remain as such rather than attempt to reintegrate into more mainline human gene-pools live almost exclusively under the auspices of their liberators, the Andolian Protectorate. The Spaceborn make up a miniscule fraction of the total Protectorate population, but are heavily involved in many of the Protectorate's free-space construction and maintenance projects.

B.2.2 Highborn

Faction data Highborn Species Humans Homeworld (Origin) Earth Capital Fixme?

The Highborn are a human faction better known for its disregard for life than its art or achievement.

They are one of the oldest colonial groups and had significant resources on Earth, lending them the cream of the initial colony locations. They were the main defenders of the 1st Confed Party Reform, which had forbidden the ISO. Primary manufacturers of dueling weaponry. Motto: "There is no substitute for a superior human being."

B.2.3 Homeland Security

Faction data Homeland Security Species Human Homeworld (Origin) Earth Capital Mars

The Homeland Security forces are primarily composed of Purists but contain members from most human groups. The Homeland Security forces exist for internal policing and control, especially in cases crossing between the jurisdictional boundaries of member states of the Confederation, as they are an arm of the Confederation rather than an amalgamation of forces from member states. While distinctly limited by both practical and political concerns in how much pressure they can bring to bear if a member state actively obstructs the pursuit of their duties, they counterbalance by being more authoritarian than generally deemed necessary within what is clearly their own domain. This is known to be especially true of the IntelSec wing of the Homeland Security Forces.

B.2.4 Hunters

Faction data Hunter Species Humans Homeworld (Origin) Earth Capital Non-governmental group.

Arising in the profit opportunities of the lawlessness of the Diamond Dust period, various mercenary groups underwent iterations of consolidation due to expanding polities, increasing regulation, and a decline in per-capita bounty-hunting opportunities. While still comprised of numerous independent groups of guns-for-hire, the Hunter's guild provides a unified interface for those seeking their still-needed services and a well-financed legal wing to make sure that bounty hunting remains as legal as it is profitable.

B.2.5 League of Independent Human Worlds

Faction data LIHW Species Human Homeworld (Origin) Earth Capital FIXME

Scattered across the frontiers of known space are many worlds housing minor subsets of humanity which hold no place among the larger meme-group entities.

Humanity has, throughout the past, been an oft balkanized lot. While the bulk of human power and population has, for various reasons, aligned itself with one of the major or minor meme-groups there are many colonies, that, for reasons of either intense pluralism or adherence to a tertiary meme-group have remained independent (examples of such being the inhabitants of Vegan-ville, or the citizens of the "Brotherhood of Militant Agnostics" (motto: "I don't know, and neither do you!")).

But in the wake of the Mankind's first notable interstellar fraternal conflict—the demolishing of the Light-bearers by the Andolians—and the efforts which followed in the founding of the Confed, whose membership consists of the major meme-groups, the bulk of the lesser subsets realized that—while they may not get along all that well with each other—if they did not in some way present a united front of resistance, they would likely be consumed by the major meme-groups. As such, they joined the Confed united as the League of Independent Human Worlds (LIHW), and, counter-intuitively, gained, through their co-operation, a guarantee of protection of their individual and often separatist modes of life.

Those that did not band together or exit en mass to Forsaken space, are now only records in history books, having been overrun, subverted, co-opted, or in other ways gobbled up by the major meme-groups.

B.2.6 Mechanists

Faction data Mechanist Species Mechanist Homeworld (Origin) Earth Capital Plato FIXME Stub entry - taken from `dynamic_news_content.py` Full faction name: Mandate for Corporeal Perfection via the Abandonment of Flesh Government name: Concordance of Enlightened Ones

B.2.7 Merchant's Guild

Faction data Interstellar Shipping and Mercantile Guild Species Humans Homeworld (Origin) Earth Capital Bantam

A latecomer to the great sowing of Earth's seeds, a too-small planet, previously passed over, became the new home for a group of colonists united more by a desire to leave behind their varied existences in Sol than by any common ethos. The colonists struck out from their settlements in the deep canyons and valleys where the air was thicker, clearing out the simple layers of native life, ever so slowly etching humanity's presence indelibly into the planet's crust. However, the future of their efforts did not lie on the surface of a world, but in the cold of space surrounding it.

No too-small world can hope to passively hold on to the sort of atmosphere that gives rise to sunny, green meadows alight with frolicking schoolchildren. The release from the domes, from the deep places, would be a Herculean task, but the insights bestowed by modern science had given mere mortal men more abilities than the authors of the ancient demigod had foreseen. In a common goal, the residents of Bantam found new unity and identity. They labored together tirelessly to construct the centerpiece of their terraforming effort: a colossal station that would serve as both the shipyard producing and maintaining the resource gathering fleet and the processing center that would amalgamate the offerings of the entire system into sustenance for Bantam's development.

It would likely have worked.

The nano-plague struck without warning, long before the first human FTL ship would visit the system.

Only the near-paranoid levels of over-engineering with which Rainbow station had been constructed saved it from the fate of many of Bantam's residents, too reliant on cheap and plentiful nanites. It was far too early in the terraforming effort to live in the open, and suddenly overstrained environmental systems caused entire cities to suffocate. Bantam was devastated, losing all vibrancy and vitality in a matter of weeks. What before had been a growing planet-wide civilization was now a collection of frightened outposts of inhabitation. Thus were Rainbow station and its infant fleet of resource gatherers nearly orphaned, the mother planet an invalid. With the station barely able to sustain itself, the stationers were left with the unenviable role of deciding whom amongst Bantam's survivors they could afford to save.

As the Diamond Dust Age progressed, and Bantam continued to wither away to a pale shadow of its brief heyday, Rainbow station endured, growing throughout the period of isolation, if at a glacial pace. Warning messages, lazily arriving at the speed of light from their neighbors, came in one after the other, followed sometimes by descriptions of chaos, and sometimes by silence. There was no official expectation of assistance, but humans are renowned for their counter-empirical optimism.

Thus, it was with great surprise and anticipation that the arrival of the first FTL ship was greeted, and numbing disappointment the feeling that swept the stationers when they learned that it was not a portend of any mission of mercy. All, however, did not look grim. The visitors were High-Born explorers, but from a family of lower standing. The Marcos family realized that they had much to gain from control of Rainbow station once it began producing jump capable vessels. With FTL technology and the silent threat of a second abandonment for leverage, the Marcos family gained a large stake in Rainbow station.

Luck had indeed changed for the better for the people of Bantam and Rainbow. Not only were much needed resources flowing in from High-Born space, payments for an ever increasing list of ship construction orders, but Rainbow soon proved itself to occupy a prime location in the jump network, a hub on what would remain for many decades the only practical routes connecting several populous systems to each other - including Sol.

Some colonies had fallen far and some had not had far to fall. The lone merchant was a valuable target in a starved land. Neither were the financial benefits of collusion upon profit margins lost upon the increasing number of traders operating out of or, less commonly at the time, passing through Rainbow. The first of the great mercantile cartels was formed, again under the leadership of the Marcos clan, a silent, nameless cartel that worked to establish a near monopoly on interstellar trade in much of human space during the Reconstruction period. Coercion, cooption, and even the occasional assassination were all valid tools to grow the blossoming financial empire centered on Rainbow and the slowly awakening Bantam. The Rainbow station cartel was one of a few groups to capitalize upon the realization that, in the absence of any overarching authorities, whomsoever dominated the trade lanes now could well be able to do so for centuries to come, barring fantastic advances in interstellar travel.

Generations passed. Competitors fell as they came, though some struggled valiantly, and only the governments of the larger meme-groups were sufficiently imposing to hold their own at the bargaining tables. Shares of control of Rainbow station changed hands, and it became wholly an instrument of the cartel, although Bantam and Stationer descendants still held a plurality of control of the cartel, a sizeable majority if one included the increasingly integrated Marcos clan. The name of the station changed then as well, and the cartel gained a name, rechristened Cherryh station and the Cherryh Mercantile Trust (CMT), respectively.

Though flagrantly in bed with High-Born interests, the CMT maintained a resolute official neutrality, even going so far as to make a point of hiring other parties for anti-piracy protection rather than building their own combat fleets. While many at the time took this to be a purely political maneuver, those more informed knew that it was actually a necessity. Cherryh station had been a vital trump card for the CMT in the early portions of the Reconstruction period, but mankind had recovered somewhat, and was once more advancing, and the age of the station was beginning to show. Bulk freighters are in many ways much easier to build than the tiny craft that protect them and avoid obsolescence much longer, and Cherryh station was only up to the task of constructing the first, and not the latter.

More modern shipyards, though not on the scale of the CMT's aging beauty, were being constructed all over, and the competitive advantage the CMT had enjoyed due to their production capacity was waning. There was, however, little feared by the CMT at this point, as there was no longer any competition of note to gain upon them. All other transport of goods was in-system, governmental, or doomed to obscurity or absorption. The CMT used this time to increase its wealth, strengthen and modernize its infrastructure, and deepen its influence on various governments. The resettlement of Bantam was in full swing.

The CMT's opportunity to rest did not last as long as they would have preferred. The development of the SPEC drive dramatically changed the landscape of trade routes, altered latencies, and made runs by smaller vessels much more practical. Rapidly expanding borders made for new regions for local competitors to exploit more rapidly than the CMT might be able to react. However, like the age itself, the CMT had matured. There would be no massive wave of assassinations or stream of engineered third-party blockades. Rather, there would be the ultimate buy-out - the largest recruitment effort ever mounted, a clarion call summoning all traders to a common banner with the offer of common profits. What could have been the death knell for the CMT merely announced the birth of the Interstellar Shipping and Mercantile Guild, which if it still had the CMT at its core, was, by the nature of its creation, intended to be a beast with a very different public face.

The emergence of the Confederation only served to strengthen the position of the Guild, being included in the Confederation Senate's Committees despite technically only owning a single star system (the plethora of commerce stations and trading outposts in the star systems of other powers not counting as seats of population) - an important technicality, as it would otherwise be difficult to pretend they were a governmental entity in the same sense as the other Senate members. The newly formed Confederation Navy and Homeland Security forces served to decrease piracy along standard trade routes, even if the decline of several independent powers in the face of enforcing new Confederation regulations gave rise to a whole new breed of paramilitary forces. While in matters internal to the Confederation the Guild was still maintaining an increasingly less fictitious neutrality on matters not of self-interest, there was no love lost between the Forsaken and the Guild, the much lower profit margins available on return trips never having enticed much Guild investment, and Guild price fixing long having raised the ire of the Forsaken. Guild presence in Forsaken space is thus limited to border stations, much like the trade relations with the Uln and Rlaan.

Contact with alien trading partners was a great boon to the Guild, as Guild political clout ensured that all major alien traffic would pass through Guild trading stations, that Guild shipping would be awarded nearly all lucrative inter-government contracts calling for human merchants, and so forth. Moreover, no independent trader could so easily call upon the shared resources of the Guild in obtaining appropriate

permissions from the Uln and Rlaan governments to conduct business within their borders, or the expertise of a cultural specialist in determining the likely intentions of an alien customer.

Though the upper echelons of the Guild are still plentifully stocked with CMT personnel, the Guild favored success over nepotism, and many rose through the ranks to positions of power - unlike the larger meme-groups, no grand conversion of belief system is required for acceptance, merely the conviction that profit conquers all, and timely payment of portions thereof. The lower tiers of the Guild are full of all sort and manner of small time traders who were willing to trade a fraction of their profits for protection, access, and opportunity. Unlike the pre-SPEC period, the smaller independent traders are not actively squashed, and those who achieve success are always initially courted rather than destroyed outright, but this is largely because any emerging independent group which appeared to offer a real threat would be rapidly legislated out of existence by calling in favors in the Confederation Senate. The current Guild is rivaled only by the logistical corps of some major meme-groups that did not desire to give up the independence of their internal supply chains, but even these entities are dwarfish by comparison. Though still not a military power, nor aspiring to become one, the Guild's numerous shipyards, kept modernized under lucrative Confederation contracts now churn out capital and sub-capital military vessels for the Confederation Navy alongside their freight bearing kin. With the renovation of Cherryh station over the last few decades further boosting production, the Guild shipyards maintain a distinct lead, by tonnage, as the largest suppliers of Confederation military vessels.

B.2.8 Purist

Faction data Purist Species Human Homeworld (Origin) Earth Capital Earth

A surprisingly large memegroup, and the dominant one in Sol, the Purists seek a humanity free of changes to the species. They do not stand for non-therapeutic genetic modification, nor for unnecessary cybernetic implants. They are, however, not opposed to technology which is not used to alter humans. Motto: In being what we are, become all that we can be.

B.2.9 Shapers

Faction data Shaper Species Human Homeworld (Origin) Earth Capital Bifrost

The Shaper government, such as one exists, was originally constructed along 'libertarian' lines (albeit with some elements that would seem deeply foreign or even perhaps contradictory to any person harking to the same 'libertarian' title who is not also a devotee of the Shaper ideology), and is a generally minimalist entity, delegating many of the tasks performed by the other human governments to private interests within the Shaper populace. Confoundingly, the Shaper views on children are remarkably collectivist, and closely tied to the particular Shaper notions of what constitutes an actual human existence. Government social programs are unheard of for adults, but heavily invested for children, and while there are a number of government standards committees, they almost exclusively produce guidelines, rather than regulations. Government interference into the economy is utterly intolerated. Individual civil liberties are fiercely protected, and one of the more significantly funded programs, aside from defense spending, is the publicly funded "Authority Surveillance Guardianship" or ASGuard, the funding for which and chief administrators of being determined

directly by the Shaper populace.

Shaper society is egalitarian in opportunity, but extremely competitive and indifferent, when not outright unforgiving, of failure, with notable emphasis being put into ensuring that the failings of members of one generation are not allowed to be magnified through their offspring. Notably, procreation in any form (be it cloning, or gene-mixing, or more traditional conception) is not considered a right within Shaper society. The furtherance of one's genetic material is deemed a privilege of personal success. Attempting to raise Shaper children without appropriate resources or accepted competence in child-rearing is considered criminally abusive of the children. Non-Shaper children have a decidedly different legal status, are protected only in a sense of general 'human' liberties, and are under no circumstances the recipients of collective support.

It should be noted that childhood is a rather abbreviated thing in Shaper society, due to genetic engineering and common practices greatly affecting both pre-natal and post-natal growth and learning. Natural childbirth is seen as exceptionally eccentric within Shaper society and is tolerated in much the same way that artists in the 20th century who deigned to use their own bodily fluids in their artwork were tolerated, but far from welcomed. Normal Shaper children are born in child producing factories, more often than not, with the exception of vanity children, being very carefully designed from mixes of parental DNA with sequences from currently popular designs. The gestation period in such factories tends to run toward 14 months, a length second only to Andolian full-growth gestation-immersion tanks - unlike the other cultures using the tanks to replace normal childbirth where the delay of from conception to birth is often seen as an inconvenience to the prospective parents and time-to-delivery is generally minimized, Shaper society considers the physically ineffectual infancy of normal humanity far more inconvenient (and repugnantly archaic - an evolutionary solution from before our own evolution was ours to control) than the delay. Shaper children leave the tanks already able to walk, run, and metabolize most foods - which is important, as they have a voracious metabolism that will lead them to grow to their adult mass within another 7 years. Brain development in Shaper children is also accelerated. The mind is extremely plastic for the first two years post-natal, and allows for socialization and other acclimating patterns to form via processes still analogous to those of a human child, if a somewhat precocious and extremely intelligent one. The brain then rapidly proceeds to develop fully all of its cognitive regions, at the expense of much of the childlike plasticity for reorganization, and the Shaper child begins their "adolescence", a state lasting from age two through seven, during which they will leave the direct care of their parents, and begin to compete against one another to be able to progress through an assortment of privately run educational facilities (albeit the students themselves are still collectively supported at this point). The general educational period lasts an intense five years, ending at the same time as Shaper children achieve physical and legal adulthood and are no longer supported in any collective fashion. This academic feat is made possible by the extremely low sleep needs of the Shaper body, the lack of any need to exercise or endure sun exposure in order to maintain health and muscle tone, and the genetically-engineered capacity for extreme focus, easy memorization, and ravenous intellect that every Shaper is possessed of.

For those not at the top of the competition, they remain free to choose their path, but even the dullest Shaper is more than bright enough, and by the turn of adulthood, sufficiently scrubbed of initial ignorance, to understand with fair clarity where they are likeliest to find others willing to choose them, and the importance of their own below-the-billing role in Shaper society. The Shaper population is not very densely arrayed on

their planets, and the most menial tasks are handled by Dgn, engineered lifeforms, and machines. While the Shapers utilize AIs, the bulk of these AIs, for the past several hundred years, have generally been of foreign construction, and the Shapers are somewhat wary of the allegiances of the AIs in their employ - both to other AI entities and to their constructors. A number of Shaper specialists are therefore employed to monitor the AIs, and some Shaper research has gone into developing minds better suited to such tasks. Social unrest remains extremely low among the Shaper population - Shaper society is not utopian, but it is without noticeable friction - despite the intense competition and uneven distribution of resources. This is largely due to the firmness of belief in the Shaper ideology ingrained into the population - the underlying rightness of the system of struggle is accepted, the rightness of the goals of the society unquestioned, and those involved are possessed of minds capable of understanding how they have come to occupy their place in society, their role in that society and its continued existence, and, just as importantly, how other individuals in Shaper society fit into the greater picture. They operate with self-interest, but informed, exquisitely reasoned, and long-termed self-interest that includes a notion of Shaper society that has been made difficult to cast as counter to personal interests.

For those who succeed, there is more than time for art - to practice The Art is success. In the Shaper ethos, design is king, and flesh is the favored palette. Thus, Shaper spacecraft, if not aesthetically neglected as with the Mechanists, and, to an arguably lesser extent, the Unadorned, are not anywhere near as profound as their work groundside. While there is some artistry at work in their inanimate constructions, working with metal and stone is as cold as either to the Shaper mind: pale when compared to the calling to bend the path of life to one's will, expressed for as long as the creations may continue to survive their competitors and environs. Those tools, such as spacecraft, of which great functionality is demanded, suffer greatly in relative aesthetics to architectures that may be bent to support the aesthetic demands of myriad Shaper minds, writ in living spaces filled with living things, but only those living things chosen to be there. While this leads to jaw-dropping wonderlands of living material populating their art-oriented enclosures and an enjoyable spread of magnificent creations adorning most living areas, the exercise in control over what life lives where leaves Shaper planets as devoid of real wilderness as an industrial farming world, if far prettier for the same detriment. There is a sense that even a vast uninhabited stretch on a Shaper world, possessed of some paradise-like qualities in its safety and provision as it may be, is just a carefully tended garden laying fallow for future inhabitants to paint. There is chaos allowed to taint the waiting land. Nature is not allowed to sully any canvas destined for Shaper hands.

The outside observer rarely tends to have their eyes drawn to the Shaper underachievers, both because of the higher standards of living (relative to Purist worlds, for instance), even on the low end, that the Shaper economy has (made possible, in large part, by limiting the population density on Shaper worlds), and the astounding beauty that the high end of the Shaper culture produces. There is a Shaper saying that, "It is no accident that the path to perfection travels through beauty." The functional and aesthetic are merged whenever tenable in Shaper society, and there is a significant place reserved for the aesthetic, even absent, though rarely in lieu of, the functional. To create more perfectly is the pervasive goal, and beauty is often aligned with the perfect for anything that must be seen. It should be noted that Shaper artists have produced works considered masterpieces in a plethora of genres, as is not unexpected given a population wherein even the dullest of healthy individuals would have been considered quite mentally

gifted in millennia past - however, within Shaper society itself, only the construction of life-art is held in meaningful esteem. Other venues for expression are welcomed, but reserved for hobbyists and amateurs, not professionals. To construct epic compositions in and of the human form is the highest art in Shaper society. As full of science and practical consideration as their genepool is, it is also their most holy of pieces of art, and those who have risen to operate upon it their idols.

There are three common Shaper forms. In decreasing order of population, these are females, males, neuters. A fourth form, the 'hulk', is only debatably a "Shaper form" and even more divergent from the human strain than the Shapers themselves - however as they are non-reproducing, few in number, have limited interaction with the rest of Shaper society, and are distinct in construction based upon their version and intended purpose, it is easier to consider them apart from the Shaper populace and group them with other designer human life forms, despite being of Shaper origin and mentality. The first females, males, and neuters are of the same height, and all beautiful by most standards, providing the lack of hair is not a deterrent to such a judgment being rendered, nor the lack of nipples on Shaper males and neuters found disturbing. Shapers are not muscle-bound, but neither are they in any way waifish, with toned and sleek muscles making their presence subtly known underneath taut skin - their physique sometimes evokes images of acrobats, swimmers, and dancers, depending upon which portions thereof were being used for the metaphor. All Shapers are in prime physical condition both for strength and endurance, although there exist plenty of custom bio-mods who are stronger or have higher endurance. Shapers remain in prime condition without need for exercise. Neuters carry both male and female genetic code, but do not express either set of reproductive organs or secondary sexual characteristics, earning them nicknames associated with old plastic dolls. Instead of physical features to distinguish Shapers from one another, with their near-singular skin and eye color and lack of hair to style, Shapers tend to use clothing and other symbiotic adornments when wishing to express their individuality. Even then, a non-Shaper would find it extremely difficult to identify which Shaper is which. Although much diverted genetically from most humans, they are still capable of producing fertile offspring with other human subspecies. Though a misnomer, as many of the genes require either a Shaper female's womb or a Shaper-compatible gestation tank to activate, "half-Shapers" arising from Shaper males fertilizing non-Shaper females are not uncommon among most human factions, as restrictions on Shaper procreation privileges do not extend to the production of non-Shaper children ("half-Shapers" are not eligible to become Shaper citizens and are subject to the same stringent residency requirements as any other non-Shaper wishing to settle on a Shaper planet). Far more rare are "incomplete-Shapers" - those born to a Shaper mother by a non-Shaper father, or otherwise gestated in a Shaper compatible tank. As the Shaper genes, when activated, tend to be dominant, "incomplete-Shapers" tend to much more strongly express their Shaper heritage, although they are still not legally considered Shapers. Those with Shaper ancestors are commonly recognizable for their generally gray to blue-black skin, often violet irises set in gray eyes, and sparse body hair, although it is difficult, if not sometimes nearly impossible, to distinguish between those with Shaper ancestors and those who are the product or progeny of the custom bio-modified.

Shaper clothing tends to fall into one of two very distinct categories. Shapers have exceptionally minimal body modesty, and any wearing of clothing whose primary purpose is to keep portions of the body hidden from sight is done so on account of the modesty of non-Shapers with whom they must interact - after all, the Shaper body is a work of art and science they are proud to display. Shaper work/functional clothes, therefore,

act primarily to protect more sensitive surfaces, to keep softer tissues in place during motion/exertion, and to provide convenient places to store objects being used. Such clothes are considered artful to the degree that they do not interfere with the natural Shaper form and movement thereof. On the other hand, as Shaper mastery both of their own body and their environment is very advanced, with clothing for them somewhat superfluous save for statement anyway in most climes and many conditions, Shaper art-wear is something else entirely. High-end Shaper art-wear often takes the form a living, generally translucent expanse of vegetation designed at the protein and genome level by the wearer - anything from a thin film, to a sheet-like wrap, to a crawling expanse of vines, flowering if watered. Those less talented, but financially equipped, will pay top credits to be similarly designed for and decorated. Those in neither situation may opt to obtain a license to perform minor customizations on existing designs, or, for the even lower social rungs, to simply wear something mass marketed - the Shaper equivalent of a cheap suit. Less common, but far from rare, are non-vegetable incarnations of the above. Also common in Shaper fashion are full-body markings and bioluminescent symbiotes worn in lieu of jewelery. Full-body markings are normally applied by developing pore patterns in body-sized engineered leaves that will leave temporary colorations when wrapped around the body. Shaper art-wear, though itself only exported as a luxury item, has become very influential to Highborn fashion. Luxury items such as art-wear and living rugs account for a noteworthy portion of Shaper exports, in keeping with the unmatched tangible beauty of Shaper art. This tangible and enduring nature, and it's profitable export, stands in stark contrast to the only other major society with a comparable number of artists, the Andolians, whose art the link-blind cannot even sense, and whose works come and vanish on whim.

The Shapers are quietly contemptuous of most other meme-groups. They find the Purists shameful, the Unadorned defective, the Highborn arrogant and outmoded, the Merchants merely an unfortunate necessity, and the Mechanists downright repulsive. Though they disagree vehemently with the Andolians on a number of fundamental premises and future directions, they respect them for their accomplishments. The Shapers find the Rlaan interesting, the Uln pitiful, and the Aera worthy, if unsympathetic, adversaries, if hopeless materialist aesthetes incapable of appreciating life in any way valuable to the Shapers.

The Shapers, with their superhuman aims, were a pre-Diaspora offshoot of what later became the larger, supra-human aiming Lightbearer meme-group. The two groups had wildly diverging goals and methodology, despite both seeking a sort of embodied human perfection. Expedience, however, makes strange bedfellows. Through location and shared technological expertise, each group had something to offer the other, even if each found the other ideologically perverse. Thus, what began as a minor Shaper investment into a Lightbearer mission that would bear closer to Shaper than Lightbearer space blossomed into a wary partnership when the discovery of the ancestral Dgn made the Shaper experience with non-human genetics immediately more valuable. However, the partnership with the Lightbearers was not particularly long-lived, as ideological differences made it exceptionally difficult for either side to continue to operate in good faith absent obvious mutual advantage, and by the time the aptly named Beckett's Murky Venture had been exploited, there was little obvious advantage to continued pretense of cooperation. Initial Shaper political, financial, and resource support for the Lightbearers during the Fraternal War was linked not to political or ideological support of the Lightbearers, but a firm opposition to what they felt to be Andolian Imperialism and the desecration of the natural sovereignty of the Lightbearers - clearly, it didn't help that

the Shapers thought the Andolians to be even more ideologically disturbed than the Lightbearers; while the Shapers thought the Lightbearers perversely misguided in their vision of embodied human perfection, it was at least a goal that resonated with their society, whereas the Andolian lust for abstract and vaporous group progress that would somehow lead to a "bettering" of mankind and thereby the individuals thereof struck the individualist Shapers as a demented non-sequitur that was downright unintelligible. The interjection of an expanding, and, if human, foreign in an almost alien sense entity into a neighboring polity was clearly cause for alarm, never mind the Klk'k - they, after all, weren't human. That the Shapers cut off all support for the Lightbearers after the revelation of the existence of the Spaceborn indicates, importantly, that, at the time, they either thought us, or themselves (depending upon one's perspective) to still be human, and thus deserving of the fundamental human rights that run through the core of their belief system. While some Lightbearers did flee to some degree of protection within Shaper systems toward the end of the war, it was that same sort of protection offered Nazi scientists captured by the Russians after World War two - protection of ones life, but not an opportunity to live, only an opportunity to be worked until whatever useful knowledge you had could be extracted and you yourself forgotten. Much has been rumored, but little ever confirmed about what exactly occurred when the Simons later conducted raids into labs believed to be housing unaccounted for Lightbearers in Shaper space. It is well known that the Shapers were absolutely livid over the Lightbearers' use of human slaves, and it is suspected that a far darker hell awaited those who fled to Shaper space than they expected.

Notably, the Shapers never gave any indication that they were incensed by the detailed descriptions of what the Lightbearers had subjected the Shmrn to, and it is generally conjectured that they were privy to that information long prior to its distribution by the Andolians. Apparently, giving the Shmrn a strongly defined sense of self, dignity, modesty, and a mind muddled by the introduction of human derived genetic codes for brain development, all in the name of allowing the Shmrn to truly appreciate and understand the physical and emotional torture and suffering being inflicted upon them by the Lightbearers in a way that the Lightbearers themselves could understand, was not cause for outrage in the Shaper population because the Shmrn weren't human. This lack of response, though attributed by some as merely arising from their part in creating the Shmrn, led many to believe that, if and when the Shapers considered themselves or the rest of humanity to no longer be human, similar indifference could be expected to follow were anything to come to affect the rest of humanity differently than the Shapers. The topic of rights for associated non-human species has continued to be a topic of contention between Confederation factions, with the Andolians and the Shapers tending to lead very different camps in such discussions. Likewise, even on the topic of human rights, the different principles held by the Andolians and Shapers has led to rather different stances being taken on a number of policy decisions. On the topic of human slavery, however, the two groups stand united, a unity that was formative in the early Confederation.

Human slavery, as a viable economic pillar, died with the industrial revolution. Human slavery, for personal pride, amusement, or perversion, was reborn with mastery over the genome. No longer was it necessary to steal away random human flotsam and unprotected child assets, instilling fear and bringing hatred upon the slave trader - instead, human flesh could be molded into whatever form the customer desired, and raised from birth into servitude, birthed from a machine without commentary on the subject. It became difficult in some places to distinguish between slavery and child abuse. Such undertakings remained quiet

sorts of enterprises until after humanity had finally ridden nano-technology and genetics to a post-sufficiency economy. In the introverted, contented meme-group world of that past, the only objection to someone outside one's meme-group raising slaves was one of purely moral basis - it was simply unlikely to affect those outside the participating meme-group. As SuSims, human-derived PAIs, and other genetically engineered servant species became more increasingly prevalent, it was increasingly difficult to gain a motivating consensus on the issue when, despite many believing that human slavery was over some line, agreement on where in the gray murk such a line existed was not forthcoming.

It was not until the formation of the Confederation that such things truly changed. All were free to not do business with polities allowing behavior deemed "objectionable", but with the Confederation, a sufficiently forceful hand could be put upon the hilt of a very sharp dagger that could be aimed, if in unwieldy and cacophonous fashion, at those sufficiently outside the mainstream of the relevant political bodies. Human slavery was outlawed. Certain forms of indentured servitude, especially as concerned AIs, were not outlawed, given certain contract conditions, much to the dismay of the Andolians and the relief of other parties unwilling to emancipate their few AIs that survived the nano-plague. Vagaries in defining both "consenting" and "adult" as they were framed in the stipulations concerning indentured servitude - the Shapers being appeased by such, as they believed it the right of any adult to enter into any contract that did not permanently disenfranchise them, if the contract was entered into in an informed and free fashion - have continued to allow fringe operators to continue practices against the spirit if not the letter of the laws. However, those who are foolish enough to flagrantly flaunt their slim loophole existence generally find themselves ruthlessly and utterly squashed by Andolian and Shaper forces comprising the military wing of the Confederation taskforce on human slavery - which often delights in opportunities to expand the operations slightly to associated enterprises, which often are subsidiaries of otherwise difficult to legally attack organized criminal undertakings (especially those with good standing with CMT). Even those guileful and careful enough to stay within the loophole lines are sometimes paid visits by the Simons. Strangely, there aren't as many complaints as one might expect - some things just become a cost of doing business. Indeed, in polities where the Simons can move freely, human merchandise tends not to move much at all - but then again, in places where the Simons can move freely, human merchandise tends to not be much desired.

A note on the Dgn within Shaper society

The Dgn were never really emancipated, because the Shapers don't consider them to have ever been slaves as such - you have to be human first to be a slave in the Shaper mind. Dgn are just useful art that talks, and have been constructed to play particular roles in Shaper society - the Shapers view them in a way not dissimilar to how AIs are viewed by many LIHW, Forsaken, and some Purists: thinking machines, that do work on our behalf when properly treated and guided. The Shapers have no particular respect for the status of uplifts - somewhat more for those naturally arriving at sapience, and far less for AIs - but their quest for superhuman perfection has left them interested in themselves and what other species can offer them in terms of genes and understanding thereof, but not in other species, or even so much in other humans except as if furthers their goals or offends their tenets. The Dgn are treated with indifference to what others may believe their "rights" rather than cruelty in oppression.

Dgn

Faction data Dgn Species Dgn Homeworld (Origin) fixme Capital fixme

Need a desc for controlled space and space faction strength status/goals FIXME

B.2.10 Unadorned

Faction data Unadorned Species Human Homeworld (Origin) Earth Capital fixme

The Unadorned worship the cold logic of machines, and seek to abandon the limitations of human emotion and irrationality. Often referred to as the "mad monks of Myztheria", the fact that the other factions believe them to be somewhat insane has not stopped them from making use of their advances in AI and other computational fields. Indeed, the Unadorned find religious veneration of computational logic entirely... logical. Motto: Freed of noise, the mind will make true music.

Mishtali

Faction data Mishtali Species Mishtali Homeworld (Origin) fixme Capital fixme

Politically subserviant to the Unadorned, the Mishtali have significant control over affairs in their home system, but have little impact on external affairs.

B.3 Rlaan Assembly

Faction data Rlaan Species Rlaan Homeworld (Origin) 4th planet of Capital FIXME

B.3.1 Rlaan Enforcers

Faction data Enforcers Species Rlaan Homeworld (Origin) SCx9362 Capital probably not same

Vaguely analogous to a policing force, the Rlaan Enforcers keep are the armed group responsible for keeping order within the confines of the Rlaan Assembly's domain. Their most active utilizations are as customs/border patrol agents, anti-piracy patrols, and garrison duties. FIXME (more would be nice here)

B.3.2 Lmpl

Faction data Lmpl Species Lmpl Homeworld (Origin) fixme Capital 4th planet of SCx9362

Politically impotent members of the Rlaan Assembly, they are not considered citizens. Indeed, the Rlaan view them more as intelligent tools. They are, however, steadfastly loyal to their Rlaan masters, and not prone to complaining about their servitude, nor, for that matter, anything else unless it is disruptive to whatever task at hand they have fixated upon. They are heavily used throughout the Rlaan civilian sector in operations on Oxygen-Nitrogen worlds, crewing their own Oxygen variants of Rlaan civilian craft.

B.3.3 Nuhln

Faction data Nuhln Species Nuhln Homeworld (Origin) fixme Capital 4th planet of SCx9362

Unlike the Lmpl who have some degree of independent existence, working on worlds inhospitable to the Rlaan, the Nuhln are completely subsumed by the Rlaan culture they are surrounded by. Their existence, somewhere between pets and paper-pushers, is not one that can be readily disentangled from that of the Rlaan they serve. What self-governance they exert is more akin to a union than a government, existing primarily to ensure continued reasonable working conditions, and created by Rlaan edict rather than arising internally.

B.3.4 Rlaan Briin

Faction data Rlaan Briin Species Rlaan Homeworld (Origin) fixme Capital fixme

The Rlaan Briin are an anthropilic Rlaan subculture. Some are so interested in studying humanity "in the wild" that they perform full-body transplants into anthropomorphic self-contained encounter suits so as to live in human habitations.

B.3.5 Rlaan Hunters

Faction data Rlaan Species Rlaan Homeworld (Origin) 4th planet of Capital

Formed post contact with humanity and modeled on the human Hunter faction, the Rlaan Hunters are almost entirely composed of sterile Worker/Defender hybrids who failed in the political arena. Although Rlaan culture was too coherent to have had to deal the issues that plagued Human space, these Rlaan were quite happy to offer to try out their solutions - for a fee. Rlaan Merchants

B.3.6 Rlaan Merchant Steering Committee

Faction data Rlaan Merchants Species Rlaan Homeworld (Origin) SCx9362 Capital fixme

The Rlaan Merchant Steering Committee acts to coordinate various Rlaan merchant groups to supply the Rlaan worlds and military with needed and desired goods both local and foreign, although it only exercises notably active control over foreign trade. Like all Rlaan civilian craft, Rlaan merchant ships are entirely unarmed, though heavily armored and shielded, are crewed entirely by workers, and are protected via a convoy system.

B.3.7 Saahasayaay

Faction data Saahasayaay Species Saahasayaay Homeworld (Origin) fixme Capital fixme FIXME

B.4 Forsaken

Faction data Forsaken Species Humans Homeworld (Origin) Earth Capital Ajani

Overview

The "Forsaken", as they are collectively known, are the descendents of various victims of one of the more tragic eras of Humanity's expansion into space. Six centuries ago, slowboats were made obsolete by the development of FTL travel. However, this didn't help those colonists already en route, who, upon

reaching their destinations, found the worlds slated for their colonization already inhabited by settlers that had leapfrogged them in humanities continued outward expansion. Arriving hopelessly out of synch with the rest of human society and finding themselves deprived of both their worlds and nanite-based technology, these groups found they had more in common with each other than anyone else, and set out to colonize the worlds no one else had wanted to.

A minor faction due both to the initial power gap and the consequent constant state of "playing catch-up", they were not asked to participate in the conferences that begat the Confederation, nor would they have accepted, having no love for the powers that had done nothing to stop the leapfrogging of colony worlds that had been slated them. Likewise, as the dominant strains of thought at the time within Forsaken space considered the Confederations's protection would be at best hollow, and at worst a pretense for tyranny, the Forsaken declined an offer to join the LIHW, and instead focused on settling the Diaspora sector, keeping their distance, to the best of their ability, from the developing Confederation.

See also : "On the origin of The Forsaken"

B.5 Shmrn

Faction data Shmrn Species Shmrn Homeworld (Origin) Beckett's Murky Venture Capital fixme FIXME

B.6 Uln (Sul-Gatwa Dynasty)

Faction data Uln Species Uln Homeworld (Origin) fixme Capital fixme FIXME

B.7 Interstellar Church of True Form's Return

Faction data Luddite Species Human Homeworld (Origin) Earth Capital Unknown

Originating as an extremist faction of what was then the growing Purist movement spawned by the nanoplague, the blatant intolerance of their doctrines and violent terrorist tactics have put them in poor standing with every governmental entity worthy of being called such. Often referred to in derogatory fashion by the misnomer 'Luddites' (it isn't directly applicable because they aren't directly anti-technologists - their beliefs revolve around returning from the distinctly altered forms of human existence that, enabled by technology, humans have explored) the members of this organization are hunted throughout civilized space, except where given shelter by extremist interests within the Purist faction.

B.8 Interstellar Socialist Organization

Faction data Interstellar Socialist Organization (ISO) Species Humans Homeworld (Origin) Earth Capital Somewhere in Forsaken space.

Undoubtedly one of the oddest memegroups, the Interstellar Socialist Organization (ISO) seeks to return back to the workers of the inhabited galaxy control over the means of production. Notwithstanding the fact

that this has more or less happened in some other memegroups, nor that some others no longer have an economy where this arrangement is coherent, the ISO still seeks to have everyone join their utopian dream.

What the ISO lack in numbers they attempt to make up for in determination. Unhappy with the dominant free-market capitalist process employed in the majority of human space, the ISO have turned to less savory methods to achieve their goals. Being primarily a paramilitary group, they now focus on industrial sabotage and political destabilization efforts. Although they heavily shy away from excessive civilian body-counts, never resorting to anti-civilian terrorism, they do try to suborn the citizens of the Confederation at every turn.

With no active control over any planets or industrial sectors, their resources have been limited. And although they do share a few co-dominant meme planets, mainly within Forsaken space, their infrastructure remains minimal and most of their equipment and ships must be acquired, purchased or stolen from outside suppliers (For example, the Sickle and Hammer ship designations are post-facto nicknames applied to ships formerly known as the Goose and the Toad respectively, before significant ISO acquisition and usage).

Economic backing, what of it there is, is believed to come primarily out of various ISO communities in Forsaken space and locally targeted resources funneled from other groups who benefit from destabilizations in various regions of Confed space. The ISO survives because they have been long perceived as more a nuisance than a dire threat, and because the Confed has been unwilling to expend the political capital necessary to undertake such large scale military operations in Forsaken space, especially considering the longstanding bitterness of the Forsaken has held for the Confed.

Due to prompting from major factions intensely opposed to their economic vision, the confederacy has banned membership in this memegroup.

B.9 Lightbearer

Faction data Lightbearer Species Lightbearer Homeworld (Origin) Earth Capital Cradle (defunct) (Defunct Meme-group comprised of members of the "suprahuman" strain of humanity)

From a planet discovered on a joint mission with the Shapers the Lightbearers cultivated some of the early Dgn, further twisting their development along their own designs until they settled upon what are now the Shmrn.

When later a Lightbearer exploratory group discovered the Klk'k homeworld they prepared to subjugate, and "correct" this species, whose somewhat anthropomorphic construction they viewed as a mockery of the divine human form. Fortunately for the Klk'k, the Andolians discovered them only some weeks after the first Lightbearer pacification vessel had arrived at the planet. The Andolians were outraged at the Lightbearers' actions against civilized sapients, and threw themselves against the Lightbearers in the first full-fledged human interstellar war.

The Andolian's greater manufacturing base outperformed the Lightbearer's economy. As the Lightbearer military-industrial complex collapsed, a secret was revealed that not even the Lightbearer allies had known about, namely, the existence of the Spaceborn a genetically engineered slave race of humans, designed to live their lives in zero gravity so as to prevent Lightbearer from having to deal with such a menial task as laboring in vacuum.

It is this revelation that is believed to bear primary responsibility for the lack of action taken by any other faction when the Andolians proceeded to eliminate not only the industrial capacity of the Lightbearer, but also the Lightbearers themselves.

Those that did not manage to escape to Shaper or Highborn space, or were not fortunate enough to be killed in the assaults on their worlds, had the dubious honor of being turned over to the Klk'k, the Spaceborn, and the Shmrn. The ensuing combination of sterilization and incarceration served to eliminate the Lightbearer meme from the realm of dominant thought.

Appendix C: Cinematic Scripts

C.1 VS PROMOTIONAL VIDEO SCRIPT

VEGA STRIKE TRAILER 1

(SHOOTING SCRIPT, 6th DRAFT)

1.

FADE IN:

1 INT. - BLACK BACKGROUND 1

Uniform black space, MOS.

TEXT: "BEFORE SUCCESS" in white FADES IN.

BEAT.

TEXT: "COMES SURVIVAL" FADES IN.

All text FADES OUT.

SOUND FADES IN. The MUSIC yields a feeling of
SUSPENSE--'the CALM BEFORE the STORM'.

A SILENT CASCADE OF GOLDEN COINS begins to fall FORWARD and
AWAY from the camera as if it were pointing down, in SLOW
MOTION. As the coins tumble down, they catch the light
briefly and send off FLASHES of growing intensity.

NARRATOR (V.O.)

Those who see in her all they
lust after, should not
forget...

As the NARRATOR speaks,

DISSOLVE IN (OVERLAY, SCREEN,
FADED EDGES, TOP-RIGHT CORNER):

1A EXT. - ALIEN WORLD - DAWN 1A

LONG SHOT of an ASTRONAUT planting a FLAG on the ground.
Beyond him, past the UNEARTHLY ROCK SHAPES, the STARRY SKY

is clearly visible through the THIN ATMOSPHERE, which becomes a tenuous band of light that meets the RAISING SUN in the horizon.

DISSOLVE IN (SIMILAR OVERLAY, BOTTOM RIGHT):

1B INT. - A LUMINOUS CHAMBER - DAY 1B

CLOSE UP ON MEDAL shining on an UNIFORMED CHEST, below HIGH-RANK INSIGNIA(s). Previous overlay DISSOLVES OUT. BEAT.

2.

DISSOLVE IN (OVERLAY, BOTTOM-LEFT):

1C INT. - TROPHY WALL - DAY 1C

SLOW TRACKING SHOT along a wall covered by FRAMED PICTURES of WELL-DRESSED characters and NEWSPAPER CLIPS, AWARDS and TROPHIES while the previous overlay DISSOLVES OUT. A place of honor is given to an ENLARGED MAGAZINE COVER that reads "SpaceTIME: MAN OF THE LIGHT-YEAR".

DISSOLVE IN (OVERLAY, TOP-LEFT):

1D INT. - IN FRONT OF FIREPLACE - AFTERNOON

CLOSE UP of TWO WINE GLASSES CLINKING. Previous overlay DISSOLVES OUT.

BEAT. Last overlay DISSOLVES OUT.

The coin flashes have become so intense that they're almost blinding now. A last coin causes a

BRIGHT-WHITE FLASH TO:

2 EXT. - PLANET ORBIT - NIGHT 2

HAND HELD/CLOSE UP of an AERAN FIGHTER'S HULL.

MUSIC KICKS UP suddenly into HIGHER GEAR. ZOOM OUT to HANDHELD RUNNING SHOT of a WING of AERA FIGHTERS speeding across a CONFED FLEET, which is composed of countless CAPITAL SHIPS and CONFED FIGHTERS darting past the camera. Nearby BLASTS of ARTILLERY FIRE SHAKE the frame violently. The Aera fighters climb, then dive as they dodge ARTILLERY FIRE and strike a CONFED CAPITAL SHIP, the hull of which FLASHES as it takes the hits.

CUT TO:

3 EXT. - PLANET ORBIT - CONTINUING ACTION 3

LONG SHOT, MOS. SLOW PAN TO THE RIGHT across the battlefield where the two fleets battle over the shining blue world. Capital ships in both sides seem to perform a slow yet complex choreography. Their dark shapes are only lit by ephemeral, SOUNDLESS FLASHES OF GUNFIRE and BLASTS. Endless streams of TRACER SHOTS fly in all directions. Fighters are mere fireflies rushing back and forth.

3.

SMASH CUT TO:

4 EXT. - ORBITAL STATION OVER PLANET - TWILIGHT 4

MUSIC has STOPPED. EXTREME CLOSE-UP of the MIRRORLIKE FACEPLATE of an EVA SUIT under a COLD LIGHT. The planet, FIRE and EXPLOSIONS are reflected upon its surface for a moment, then FADE OUT, leaving the faceplate BLANK while SCENE LIGHTING SHIFTS into HOT RED hues. MUSIC STARTS again, growing more and more OMINOUS. The HELMET is rotating away from the camera, revealing CRACKS in the glass and STREAKS and SPATTERS of DRIED BLOOD that flowed out from them.

5 FULL-BODY, CONTINUING 5

The suit is clearly meant for a humanoid occupant. Parts of it have been ripped away. The exposed FLESH appears FROZEN, its surface disfigured by DARK GAPING HOLES.

6 LONG SHOT 6

The suit is little more than a floating white speck near a DEVASTATED, DESERTED STATION. A ruined Confed CAPITAL of type seen in battle appears near the TWISTED FRAMEWORK of the DOCK surrounded by DEBRIS. Below, the GLOWING RED CRESENCT that is the planet appears as if on fire.

MUSIC STOPS.

NARRATOR (V.O.)

Space is a harsh mistress.

There's a DISTORTED, SHRILL ECHOING SCREAM.

CUT TO BLACK & DISSOLVE TO:

7 EXT. - BLACK BACKGROUND 7

MUSIC starts again, increasingly ADVENTUROUS and at the same time growing more and more MENACING. SLOW CONTINUOUS PULL IN into:

TEXT: "Venture into a vast dynamic universe"

BEAT.

TEXT: "where the rules are always changing."

4.

CUT TO:

8 EXT. - GAMEPLAY FOOTAGE 8

of different SPACE VISTAS is shown.

FADE TO:

9 EXT. - BLACK BACKGROUND 9

SLOW PULL-IN

TEXT: "Choose your mission. Choose your enemies."

BEAT.

TEXT: "Get the right gear for a killer job."

CUT TO:

10 EXT. - GAMEPLAY FOOTAGE 10

that showcases some appealing starship models in flight.

FADE TO:

11 EXT. - BLACK BACKGROUND 11

SLOW PULL-IN.

TEXT: "Become a tycoon, a pioneer,"

BEAT.

TEXT: "or a name feared in a thousand worlds"

CUT TO:

12 EXT. - GAMEPLAY FOOTAGE 12

demonstrating SPACE COMBAT in different scenarios.

MUSIC STOPS.

FADE TO:

13 EXT. - BLACK BACKGROUND 13

LOGO: "Vega Strike/Upon the Coldest Sea" FADES IN slowly.

BEAT

TEXT: "<http://vegastrike.sf.net>", small, FADES IN below
logo.

FADE OUT.

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Glossary

Aera

One of the primary VSU sentient species

Alphan

Of or concerning the first known species to achieve interstellar spaceflight in the post-Ancient era

Amakakt

Klk’k martial art featuring the Tklatl

Andolian

Human meme-group, primarily composed of Pluralis variants

Anthrophilic

Pleasantly disposed towards humans or human culture.

APSWAK

The Andolian Protectorate Space Warfare Academy, Ktah

Beckett’s Murky Venture

The homeworld of the ancestral Dgn. Reference to a joint Lightbearer-Shaper exploratory mission

Betan

Of or concerning the primary rivals to the Alphans

Bifrost

Shaper homeworld

Bzbr

A client species of the Aera

CMT

Cherryh Mercantile Trust. Precursor to the ISMG

Coreward

In the direction of the galactic core

Cryoship

A sub-light colony vessel relying on cryogenic storage of its passengers or their genetic material as the primary means of carrying colonists.

Deucalion

The player character in UtCS

Dgn

Sentient species in the VSU. Shaper uplift of pre-sapient from Beckett's Murky Venture

Fraternal War

War primarily between the Lightbearers and the Andolians, circa 2988-2994 CE. First large-scale interstellar conflict between human factions post invention of SPEC drive

FTL

Faster Than Light

Ingatwa

Name associated with the Ulnish aristocracy

ISMG

Interstellar Shipping and Mercantile Guild

Kleptocracy

Literally, rule by thieves. Generally, an ostensible government that exists primarily to extend the personal wealth and power of the ruling class at the, often direct, expense of the population.

Klk'k

Vaguely anthropoid sentient species from Ktah. Autonomous clients of the Andolian Protectorate

Kt'tohta

A large aquatic predator native to Ktah, once prized for its hide

Ktah

Klk'k homeworld.

Kubernan

The Andolian homeworld

Lightbearers

Human meme group composed of Suprahomo variants. Cultural memes extinguished and gene-pool nearly exterminated as a result of Fraternal War

LIHW

League of Independent Human Worlds. A political umbrella group for assorted minor human meme-groups

Lmpl

Client species of the Rlaan. Oxygen breathers, generally deployed as planetside laborers

Mechanist

Human meme-group, primarily composed of Cyberis variants

Meme**Meme-group****Memetic**

Of or relating to memes

Mishtali

A client species of the Unadorned. The first sentient species to be encountered by humanity.

Nanite

An independent machine constructed and manipulating matter at nanometer scales. Not to be substituted for the broader field of nanotechnology, which deals with all operations and construction occurring at similar scales, not just nanites.

Nano-plague

The somewhat inaccurately named phenomenon of the activated immuno-defense systems left over from the fall of the TWHON disassembling nanites. Alternately, the immuno-defense systems themselves

Nanotechnology

The study, practice, and implementation of technology dealing with with construction and manipulation of structures at nanometer scales.

Nuhln

Client species of the Rlaan. Environmentally compatible with the Rlaan

Oolak'kl

A Klk'k beverage analogous to beer.

PAI

Pseudo-AI. A near-AI construct that performs complicated tasks and interactions while lacking actual sentience.

Purth

Massive, cybernetically enhanced uplifts developed by the Andolian Protectorate. Subservient clients of the Andolian Protectorate

Rimward

Generally, in the direction of the galactic rim. Alternately, away from the galactic core. The latter definition is more sensible when considering directions relative to extra-galactic locations.

Rlaan

One of the primary sentient species of the VSU. Ammonia-blooded methane breathers

Rlaan-Briin

An anthropilic movement of the Rlaan

Saahasayaay

Client species of the Rlaan.

Sheltersky

Homeworld of House Blythe

Shmrn

Sentient species in the VSU. Descendants of the Lightbearer derived variants of the ancestral Dgn.

Simons (the)

A paramilitary group operating with the tacit approval of the Andolian Protectorate, self-tasked with oversight of the remaining Lightbearer populations and the tracking and pursuit of war criminals and known terrorists.

Sofono

Emilio Sofono, inventor of the human variant of the SPEC drive. Alternately, any human produced SPEC drive (as 'Sofono drive'), or a class of Andolian warships named in his honor (as 'Sofono class').

Sul-Gatwa

The current and long ruling Uln dynasty

Terraforming

The process of transforming a planet in a manner that renders it more Earth-like

Tklatl

A body-length stick with bladed ends used in the traditional Klk'k martial art of Amakakt

TWHON

Acronym for "Those Who Have Only Names"

Uln

One of the VSU sentient species

UniServe

Andolian Universal Service requirement

UtCS

Upon the Coldest Sea. A time period in the VSU starting around 3276 CE. Also, a game using the Vega Strike engine set in said time period.

VSU

Vega Strike Universe

Xenocide

The deliberate and systematic destruction, in whole or in part, of an alien group

Xenolinguistics

The study of alien languages.

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