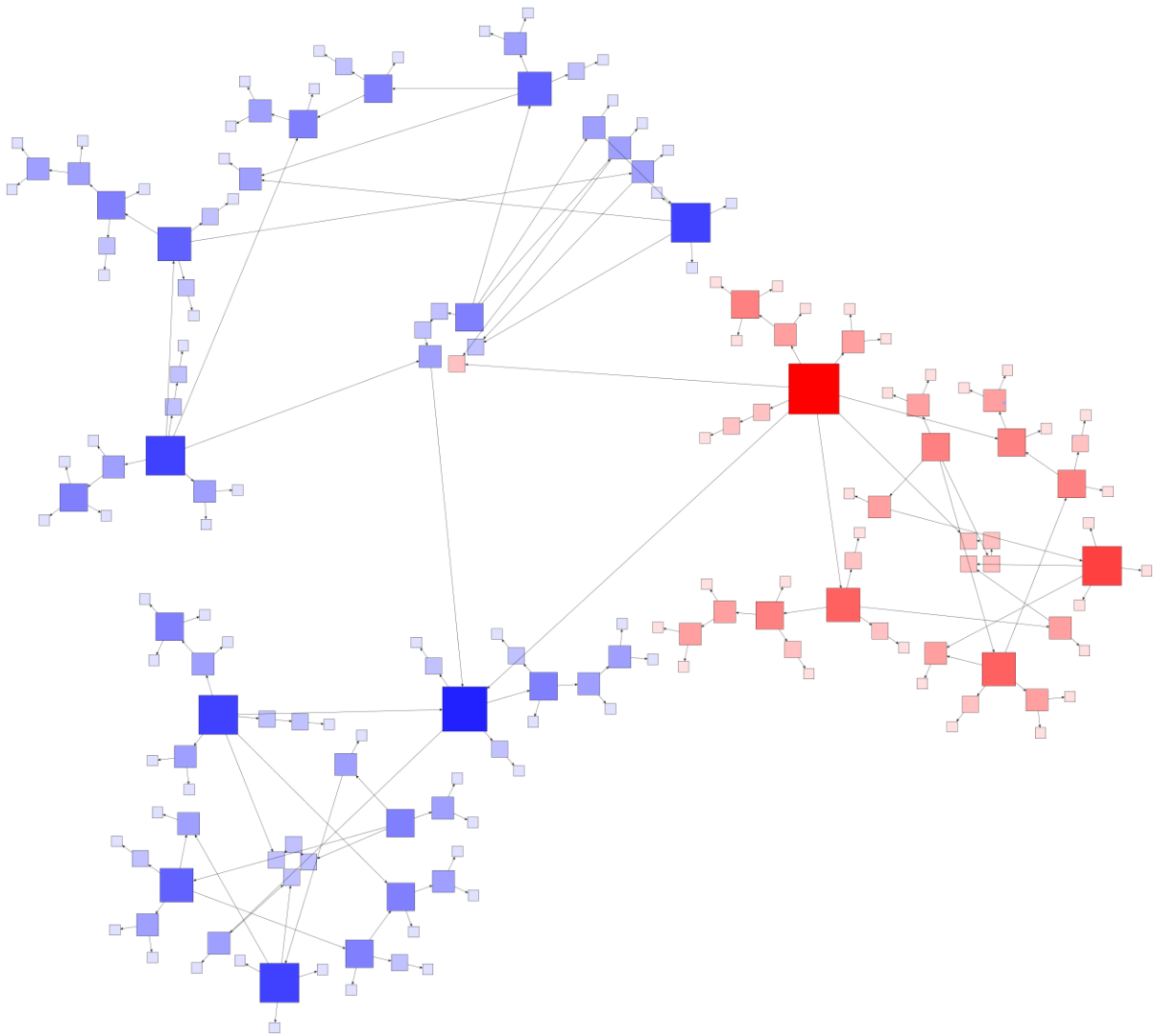# The Gate War

A campaign for Eclipse Phase, by Anders Sandberg

And he shall besiege thee in all thy gates, until thy high and fenced walls come down,
wherein thou trustedst, throughout all thy land: and he shall besiege thee in all thy gates
throughout all thy land, which the LORD thy God hath given thee.
Deuteronomy 28:52

Overview

This is a campaign intended for gatecrashing adventures. It takes the exhumans from Rorty (GC, p. 188) and turns them into a major threat – an expansionist semi-alien empire bent on dominating the gate network and the forcible destruction of transhuman civilization.

Phase I: Encounter

The PCs are engaged in normal gatecrashing with all that entails – dangerous environments, competing teams, the mystery and eeriness of the gates, and so on. During the exploration they come across a survivor that warns them of a dangerous exhuman threat. The survivor is actually an infiltrator, but that realization may take a while to sink in.

Phase II: Skirmish

The PCs soon run into the exhumans and their tough, deadly machines. At this point it is just a local battle, but being trapped on an exoplanet with them is bad enough. This might be just an unlucky encounter on an uncolonized planet, or finding a settlement being destroyed.

As the PCs return home they will start hearing about other attacks. The Rortians are increasingly stepping up their pressure, taking outlying systems and abducting their inhabitants. Sometimes they stay behind, digging in and taking control over the gates.

Phase III: War

By now it is obvious that the exhumans mean business. All groups involved in gatecrashing have to band together to stop the relentless push from the outside. This involves desperate and fragile alliances, paranoia about infiltration – and brutal, massive weapons of mass destruction.

Winning the war will never be about military strength: the single-minded exhumans will always outclass everybody else. Instead it will be about high-tech, underhanded tactics. Can the forces of transhumanity cripple the Rortian civilization before it reaches the solar system? And will the means used produce even greater threats in the aftermath?

The Rortians

History

> *One mind, if we imagine that a single, is a single, although can be some mental state, is the type system of the organization fundamentally different problem, to build method of synthesis can support a diversity that is large enough, the mind, in another program, they use the capabilities of each other yet was not able to, to work together. We are but assuming that is configured in many parts of the concept of "community" small "agent" autonomous (or brain) in mind, we state "spirit" in the server for all subsequent is a subset "can be described, the part of the state of the mind" of the mental part. **Development of this idea, we as well as administrative tasks and one of the organization, and then imagine the society, and this spirit. And many others, in the field "teacher" in sensory processing, language, and the sum of the maximum of these long-term planning in particular.** Each department, many processors are referred to as "agents" of them, reflecting transhuman knowledge, skills, methods, and small elements. These small agency, but do not have a person we know ourselves very, however, by changing the response of that state, to admit a particular configuration of a few friends.*
> *- M06-00.13799002 to Mxx-xx.xxxxxx, t= 126,226,944.461 cronorig*

The origin of the exhuman clade that colonized Eris and later Rorty was the members of the Omegist faction of the Grindspringer radicals. The Grindspringers were already fairly radical Argonaut technoprogressives, willing to undergo experimental enhancement to push the boundaries of transhuman enhancement. As psychosurgery and uploading became available they embraced the technology fully. The Omegists combined this with singularity seeking: they believed that with the right optimization they could create superhuman intelligence, and that the true destiny was in the direction of interstellar expansion of vast distributed minds.

This was the reason the Omegists were already in the outer system when the Fall occurred. Just before the Fall the *Hebb*, a colony craft crewed largely by synthmorph-sleeved Omegists, had left the inner system to find a safe place to pursue their controversial experimentation free of political oppression. By this point even the most tolerant Argonauts had become fed up with the Grindspringers, and the Fall led to even more thorough purges. To this day, the Grindspringers have a very bad name as TITAN cultists and contributors to the Fall.

The *Hebb* reached Eris, and the Omegists fortuitously found the Discord Gate[1]. Keeping quiet about their find at first, they began to exploit the open information spread by the Argonauts about the Gates. In order

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[1] This history is slightly different from the description in the core book on p. 109. Alternatively, the Omegists were waiting near Erisian space and jumped at the opportunity when the gate detonated. This of course raises

to access some of the more crucial information they needed to offer something back, and this exchange was what made the gate known to outsiders – in turn leading to the Go-Nin and Ultimate conquest.

However, at this point the Omegists were already planning on leaving the solar system. They had been scouting suitable colony worlds and moving their key infrastructure out there. When they detected the incoming attackers they put up a convincing fight but actually just attempted to destroy the gate behind them. Independent from the rest of transhumanity they set out to become something entirely different and far better.

The name Rorty is – in typical utilitarian fashion – an arbitrary designation. When the Omegists were exploring the gate network from Eris they assigned names to worlds in alphabetical order from a set of lists. Rorty was simply world R on the list of philosopher names, just between Quine and Searle.

Their internal term for themselves is the Society of Mind.

Exhuman life

__Isonomes__, we can perform the same cognitive function of the type that has been unified signal to another institution. For example, they are of a particular action or those, so that you can start the new long-term training of ego or to save the current state of short-term memory and load in different states, to reproduce the current state of their. There is cause to imagine taking the results, could lead to a series of tactical institutions.

__Pronomes__ is, we can control the use of short-term memory representation. Pronome and often, the specific role of the larger situation or event, as an actor we need the location of the actions and events like this. Pronomes some are connected to the short-term memory was very limited, the location, shape, or as the type of path, we can store only a very specific type of such knowledge. May have an impact in order to achieve most of the body of other pronomes server, and is more common.

__Paranomes__ is so that are connected to each other by the expression of specific transfer pronomes pronome, changes or other relevant statements pronomes, its corresponding operation.
-M98.3425454 to M98.3444000x, t= 132,497,267.330 regular

The Rorty exhumans have developed into a hive-like culture based on modular persons. After the original escape from Eris, there were few founding individuals. Forking them to a sufficiently large population was not a problem, resulting in copyclades. Further editing and experimentation allowed the customization of selves: to Rortians neural pruning is a way of life.

Most Rortians are composed of amalgams of forks; different minds are used for different functions. Mind 38 has good pattern recognition, Mind A6 is an effective gunner, Mind DA links minds in the Bx family into useful gestalts, and so on. Lower numbered mind models are more original than the higher numbered, which have been built/evolved in the Rorty simspaces. They are by no means a group mind, but rather a hive of constructed and emergent mental constellations.

the question how they could have known it would have happened. The reptilian invaders mentioned on GC p. 66 might be allied or entirely unrelated exhumans, aliens or even Factors messing with the gate.

Rortians normally do not communicate with outsiders – there is simply no point in trying to contact such primitive minds. Internally they use a digital language mixing the English-Mandarin-Russian patois used on Eris with mental state images. They literally send experiences, skills and ideas directly to each other.

Of course, there are problems with mental stability. The most used minds are fairly stable and have documented failure modes, but linking them together often produces emergent mental disorders. New acquisitions or radically modified minds also break in odd manners. Practically all Rortians have some form of OCD – they show obsessive and compulsive behaviors, often repeating the same action again and again. They collect things, they clean themselves or the environment, they perform endless inventories and checklists, avoid certain patterns or arrange things in symmetric patterns. While time-consuming individually, minds are often selected so that their obsessions are perfectly suited for their jobs. The intrusive thoughts and rituals are sometimes deliberately introduced to trigger useful behavior cascades.

Rortian settlements look like industrial sites, mostly because that is what they are. They construct infrastructure to provide energy, material, manufacturing and storage, with big servers housed beneath or inside the complexes to house minds. Morphs not in use are powered down and stored: invaders might get a nasty surprise when an apparently empty building comes to life filled with hundreds of battle-minds sleeved in all available morphs, perfectly linked.

Typically they prefer to colonize medium gravity, cold airless rocky worlds. High and micro-gravity are inconvenient, complex chemical environments require special protection or morph designs, biospheres tend to be both messy and full of self-guided annoyances that get in the way of society. But if they have to, they will of course adapt.

The core of their empire is on Rorty, a rocky world with some useful helium deposits and multiple gates. This is where the main industry is located, manufacturing ever more infrastructure for converting the universe to Mind. They have build cities on similar worlds, especially when they have discovered portal worlds suitable for their expansion effort or ready sources of raw materials. Outside the cities their installations tend to be solid outposts, well defended and self-contained, or small redoubts of useful equipment hidden away near gates.

Society and culture

> *Survival rate is an important element in the design of the supply network. Context: supply chain, which contains a complex network of interactions between creators, suppliers, manufacturers, distributors, third-party logistics providers and correctors. Relatively simple editing process management, real-time capabilities and the gate global entity, each of these, but are connected to today's complex supply chain. More specifically, the supply chain of the military part of mind during wartime, supply network design, for survival in a dynamic environment such as cost-benefit ratio. We can wide-know how to build large-scale gate supply network, we propose the survival of the topology, extended to other large-scale quantum bridge. To create a living, because of the multi-agent systems reliable, we also need to consider the interaction between network topology and node mental functions.*
> *-MA23-12.005612 to MBx-12.005xxx, t= 137,650,482.001 unique*

Rortian society is led by Strategists, the planners that set the overall policy. They are linked into a constant debate forum/loose group mind, acting in many ways like a parliament overseeing shared resources. Working with them are the Logisticians and other technical support classes. The Thinkers are the research class, developing better morphs and tools for the society. Military constructs like the Dreadnoughts are used in battle. All these entities are formed by the Breeders, who are running large

simspace simulations where various permutations of component minds are tested together. Constellations that work well are re-used and implemented in morphs.

The Political Officers act as internal security, ensuring the loyalty and efficiency of all minds. Minds that do well are copied and rewarded, minds that do badly are erased. They are monitoring everybody, including their own class. Any deviations from the overall goals of the society are stamped out. They are especially important for detecting when mental infections are emerging.

Rortians are strongly anti-biomorph. Flesh is weak, slow, inexact and unable to evolve as fast as they. A waste of matter. Worse, biological brains are fixed and unable to change. Rortian culture, despite its ruthlessly utilitarian aspects, has a deep appreciation of the sheer beauty of mind. A well-functioning mass-mind or an unusually creative constellation is an object of inherent value. As they see it, they are bringing beauty and value to the universe by replacing the mud of transhumanity.

There have been some radical aesthetic experimentation, both for instrumental uses (to motivate and delight useful minds) but as a way to extend the range of the society of mind. Thanks to their architecture aesthetic abilities are downloadable and mutable: much Rortian art consists of exotic ways of looking at things, rather than things in themselves. A truly warped and intriguing perspective is treasured.

Threats

There have been internal dissension and conflict, but it is unlikely to get out of hand as long as things go well. The original crew of the *Hebb* was fanatic, and the crucible of escaping the solar system plus ruthless pruning of forks that misbehave led to a remarkably unified vision. Most of the time disagreements are subjected to internal review and experimentation: if one mass-mind thinks one approach is better than others, they will test it and report back the results. Lacking prestige, Rortians are surprisingly good at changing their minds when needed.

Should a part of their culture get cut off it will try to survive the best it can. A mere mass-mind might not be able to do it, since it lacks in skills and mental flexibility. But an isolated outpost might be able to recreate much of Rortian society – especially since bigger outposts are equipped with stores of useful minds that can be copied if needed. This is also a bit of danger, since an intruder might steal their precious mental diversity. Hence most such stores have effective self-destruct mechanisms in the case of theft.

The TITANs are seen as potential threats worth defending against but also something to emulate. Their forced uploading programs and accelerated thinking show the way. If it is true they broke down or were defeated, then that is a warning Rorty society needs to take. If they are still around, maybe they can be absorbed or integrated into the flourishing.

The Exsurgent virus is potentially devastating to Rortian culture: if introduced it would spread like wildfire across the society. They are aware of its existence and a few of its properties, but tend to think it is more of a problem for AGI and biomorphs. Still, there are contingency protocols for encountering it (usually including Political Officer minds activating self-destruction software).

Technology

> *Polynemes, call the state agencies on behalf of a number of things some of the more than one institution, different. For example, recognition of energy filter death polyneme energy and call some of the properties of other agencies in the spirit of manufacturing experience intensity, shape, taste, type, reminiscent of the following sense, such as the cost of energy , in which case you can find the location of the energy, one has, such as eating energy. Polynemes support of the idea, those of the "importance", it is a single point of any*

Rortian technology is somewhat limited due to the small technology base brought by the founders. It lacks in fine nanotechnology, AI and biotechnology, but it excels in rugged morph design, psychosurgery and large-scale nanofabrication. Rortian devices often look dull and blocky, and electronics is either entirely dumb or manned by a component mind.

The lack of fine nanotechnology gives them an important vulnerability: they have weak nanodefenses. They know this, and will do their best both to avoid nanoweapons and to pursue any chance of gaining access to better blueprints for Guardians and other nanoswarms.

The Rortians are particularly interested in the stacks and brains of outsiders. They contain valuable tactical information about the outside world, and are in themselves useful as sources of skills and new component minds. The stacks are brought home where Breeders will dissect the ego's, converting them into useful skillsofts or even component minds. Needless to say, this is bad news for anybody caught.

Component minds are often similar to beta forks: a full ego pruned down to perform useful functions. While the rest of transhumanity tends to prune "horizontally", producing a slightly duller but recognizable version of a person, the Rortians prune "vertically": they try to retain high skills in core areas, but delete memories, personality and motivations that don't fit. A combat hacker mind like 3E has no idea who it was, no personal interests beyond disassembling new and unknown software defenses, and no interpersonal skills whatsoever. It does however have a surprising skill in music, mainly because the hacking and musical abilities were too strongly meshed in the original mind to be neatly separated. But given the lack of motivation 3Es rarely produce anything artistic.

Invasion plan

Overall the plan is simple: they want to manufacture more manufacturing capacity and soldier-morphs, and then use them to conquer all accessible transhuman worlds (partially as revenge, partially since they are non-Rortian competitors, partially for their resources). In the long run they plan to spread across the gate network and establish their civilization everywhere, finally civilizing the universe and allowing Mind to flourish like it truly should.

Gate warfare is somewhat static against well-developed foes: wormholes are natural chokepoints, making it hard to invade through a well-defended gate. Most central gates are also locked. However, gates in early colony stages are far easier to subsume, and once they are held they can be reinforced and locked. Hence the primary targets will be remote and young colonies, as well as isolated gatecrasher teams. When they discover gate nexuses they also prepare to move in with overwhelming force to secure access.

When they detect an unauthorized wormhole opening they quickly grab whoever is coming through, analyze the origin, and then send an expendable but potent invasion force. The first thing through is a set

of EMP grenades and other anti-C3I equipment, followed by Dreadnoughts. Once the gate control has been secured further morphs are sent.

Rortian morphs and minds

Decisive tactical use of combat is the formation of the deformation of the square to receive the responsibility of the unattended. Hollow square column surface was formed basically have been surrounded by the beam. People without a doubt, it is generally in the square is a relatively safe yet, in the event of the Wittgenstein conversion, will dare to become a prospect difficult, receives a fee of unmanned, to charge to the formation of deformation-free. We attacked the heavy deformation, have been forced to field a superhuman wisdom of unmanned aircraft, but did not withdraw. Instead, they were crushed around the square; you will negotiate to keep the casualties from the fire their guns and plasma shield. -M3E.12478478 to M3A.124843000, t= 176,717,722.020 unique

Dreadnought

The heavy insectoid morph in GC p. 188. Typically contains at least one mind or mind part with good tactics and situational awareness, several sharpshooter minds and a few hacker/sigint minds.

Enhancements: 360° Vision, Access Jacks, Anti-Glare, Basic Mesh Inserts, Combat Armor (Heavy), Cortical Stack (Experimental Multi-ego System), Cyberbrain (Experimental Multi-ego System), Cyberclaws, Deadswitch, Extra Limbs (6), Magnetic System, Mnemonic Augmentation, Pneumatic Limbs, Radar, Reactive Armor Coating, Reflex Booster, Structural Enhancement, T-Ray Emitter, Weapon Mount (4, articulated)

Mobility Systems: Walker 3/15, Vectored Thrust 2/10

Aptitude Maximum: 30

Durability: 75

Wound Threshold: 15

Advantages: Armor 16/16 (+5/+5)

Disadvantages: Requires Multiple Specially-Adapted Egos

Larger constructions can also be made: the exhumans have experimented with centipede-like flexbot onstructions stringing together several dreadnoughts. Weaponry depends on the mission, but is often heavy beam weapons like plasma or railguns.

Handlers

Handlers are counterparts to normal morphs, used for manipulating transhuman-scale objects and equipment. A typical handler looks like a six limbed synthmorph, able to bend their back to run like a centaur when carrying loads on their back, or use their four front limbs to carry multiple smaller objects. Their heads are flower-like arrangements of sensors and fractal digits, used for fine manipulation and scanning. Handlers often form teams where they use their different perspectives to triangulate their environment closely. Typically contains minds obsessed with ordering things.

Enhancements: 360° Vision, Access Jacks, Anti-Glare, Basic Mesh Inserts, Cortical Stack (Experimental Multi-ego System), Cyberbrain (Experimental Multi-ego System), Deadswitch, Enhanced vision, Extra Limbs (2), Magnetic System, Mnemonic Augmentation, Pneumatic Limbs, Radar, Skillware, T-Ray Emitter, Utilitool (built into "face").

Mobility Systems: Walker 4/20

Aptitude Maximum: 30

Durability: 40

Wound Threshold: 8

Advantages: Armor 6/6

Disadvantages: Requires Multiple Specially-Adapted Egos

Repairers

Small multilimbed morphs looking like two mechanical spiders glued back to back, equipped with all tools imaginable. They crawl or roll around larger structures looking for wear or errors, or are directed to sites of damage. Typically contains minds obsessed with correcting and fixing things.

Enhancements: 360° Vision, Access Jacks, Anti-Glare, Basic Mesh Inserts, Cortical Stack (Experimental Multi-ego System), Cyberbrain (Experimental Multi-ego System), Deadswitch, Direction sense, Electrical Sense, Extra Limbs (10), Fractal limbs, Hand laser (welding), Magnetic System, Mnemonic Augmentation, Nanoscopic Vision, Radar, Radiation sense, Skillware, T-Ray Emitter, Wrist mounted tools.

Mobility Systems: Walker 4/20, Roller 8/32.

Aptitude Maximum: 30

Durability: 6

Wound Threshold: 15

Advantages: Armor 6/6

Disadvantages: Requires Multiple Specially-Adapted Egos

Drones

Diskbots just run by one or two minds, mainly for scouting, light transport and work. They are shaped like 20 cm ellipsoids, able to unfold numerous long thin metal whip legs. They fan out from the dreadnoughts to give the team a wider field of view, enabling indirect fire, setting up communications and documenting what happens for later study at home. The sleeved minds are typically very curious and with a scientific bent.

Enhancements: 360° Vision, Access Jacks, Anti-Glare, Basic Mesh Inserts, Cortical Stack (Experimental Multi-ego System), Cyberbrain (Experimental Multi-ego System), Deadswitch, Direction sense, Electrical Sense, Enhanced vision (UV, IR), UV Laser Sight, Lidar, Mental Speed, Mnemonic Augmentation, Radar, Radiation sense, T-Ray Emitter.

Mobility Systems: Walker 4/20, Thrust vector 10/40.

Aptitude Maximum: 30

Durability: 6

Wound Threshold: 15

Advantages: Armor 8/8, Radio Booster

Disadvantages: Requires Multiple Specially-Adapted Egos, no manipulators

Hacker arrays

One of the most powerful weapons of the Rortians is the hacker arrays: mass-minds composed of numerous skilled (InfoSec 80+) hacker forks, running at accelerated speed and able to fork themselves into new hardware as it is subverted. While their plain brute force attacks can be devastating, they are also insidious: once they have access to systems they tend to install backdoors or copies of themselves, so that even if defeated the "infection" might recur at any time.

For example, if they get into a fabber system they will not just steal the blueprints and suborn it to make Rortian hardware, but also install hidden copies in the operating system: if the fabber is retaken and rebooted there will still be a hacker inside. The only way to remove them is to restore it to factory settings, erasing all information. The same goes for hacked vehicles, morph implants and weapons – a small delta fork hidden in a grenade can do amazing damage by steganographically telling other Rortians about itself and detonating (or not) when some tactician mind detects an opportunity.

Inspirations

> *Magic, we are to make one wise? The trick is not a trick. The power of intelligence is not from our diversity, derived from any single, perfect principle.*
> *-M1C.0000021 to Mxx-xx.xxxxxx, t= 126,816,853.034 cronorig*

No, the Rortians are not the Borg Collective. But if players start to assume it, feel free to let their assumptions come back and bite them: the exhumans can be terrifyingly fast and creative when they want to.

Dollhouse – imagine a society where minds can be customized for every task, copied endlessly and instantiated into available bodies.

The Quantum Thief by Hannu Rajaniemi, – Note the final chapter describing the practice of breeding useful minds.

Society of Mind by Marvin Minsky – A seminal work in AI and cognitive science, discussing how big minds can be constructed out of smaller agents. Some terminology from it has been mangled for this section.

Phase I: Encounter

The doors of heaven and hell are adjacent and identical.
- Nikos Kazantzakis

The basic assumption is that the PCs are gatecrashers. They don't have to be first in teams; in my playtest they were mainly xenoarcheologists working for the Extropian hypercorp Proactionary.

While links to Firewall might be useful, this is also something that might develop over the campaign: if they survive, the information they provide will make various parties interested in them, and they might slowly be drawn into the plans of Firewall, Ozma or other conspiracies.

This phase of the campaign gives a chance of establishing some of the background and routines of gatecrashing, the professional rivalries between different teams and sponsors, as well as the wonders and dangers of exoplanets. Ideally the PC team should get a chance to work together and get a feel for how things are supposed to work.

Rumors

During the adventure they might hear rumors that will turn out relevant or not:

- Several gatecrasher teams or small exoplanet settlements have disappeared mysteriously. At least in one case there was evidence of a battle. Depending on who tells it, it might be blamed on aliens, hypercorps, ultimates, claim jumping gatecrashers, or TITANs.

- The attack on Mockingbird (GC p. 124) might occur about this time, but it will take a while until the PCs hear about it. How much intel is gathered from the wreckage and how wide it spreads should be tailored for the game.

- The Go-Nin group and the Ultimates are apparently manufacturing quite a lot of armaments at the Discord gate. They of course deny everything. Depending on who tells it, they are either planning to seize some important exoplanets with force, or they have had some nasty security problems.

- A gatecrasher team that recently got home seems to have disappeared mysteriously.

- Some gate hackers think there is something going on in the gate network. There is more "noise" in the activity of the gates, perhaps due to much higher use.

Exploration

This phase can happen almost anywhere. It has to be suitably remote and challenging to keep the PCs busy, but not too lethal.

In my version of the campaign I had replaced Moravec (GC p. 109) with Azure (see below). The Proactionary team was sent to their dig at Baby Blue to help. First they had to pass the mildly paranoid gate security run by the hypercorps in Cerulean City, then they got a flight to the remote claim the exploration corp had made.

At this point the local team sprung the surprise and the real reason they had requested the xenoarcheologist PCs: they had discovered a live part of the city. Much effort later, and they had establuished a rudimentary interface to some sort of simspace. By now it was clear that they had a grand find worth a fortune – but also that it was the kind of find their competitors running Cerulean City would love to claim jump. Trying to gather as much information as possible before releasing anything, they

discovered a second huge treasure: the existence of extra gates. At this point the situation became almost unbearable: they had fame and fortune waiting for them, but also an excellent reason for Nimbus and Go-Nin to kill them quickly.

The team decided to try their luck with their closest gate. If they were really, really lucky they might find a way of dial the solar system and hence provide irrefutable proof of their claim. If nothing else, they might be able to make yet another bunch of quick claims to add to the pile of their problems.

As they tried dialing different destinations in the gate library they found one location to be inhabited…

The survivor

Pascal had just entered the gate when he came flying back. Something blurred raced past him, hit a stop against a wall, and then jumped onto the back of Sudharo. Before the team had had a chance to organize itself the intruder had unhooked the heavy cutter from the morph and was aiming it at them.

"CLOSE THE GATE"

"You hit me!" Pascal complained.

Tuan quietly ran the gate-closing sequence as the intruder steadily tracked them despite Sudharo's fumbling attempts to get him off. Once the blackness of the gate was gone the intruder turned off the chameleonware. The scarred pale head with the big grey eyes was an obvious giveaway.

"We must be informed of the solar system! I have important information about tactics for superior administration!"

"Merde." Pascal tried to hide behind the others.

During exploration they come across a survivor from the original Go-Nin assault on the Eris gate. He has survived for *years* hiding behind the lines, waiting for an opportunity to escape. Yes, he is more than a little unhinged, but that ought to be natural for somebody through this kind of experience. He is paranoid, driven and suffers from a weird form of Stendhal syndrome that gives him seizures when he sees art. Now he just wants to get back to his superiors to warn them about the exhuman threat. And get some proper food, news and human contact, in that order. Fast.

Of course, it is not implausible that the PCs are far away from any civilization when they come across Xin. He will then insist on recording his experiences for transmission, and then switch from his manic phase into a near-collapse as he recuperates… only to switch back on when he thinks he can do something to further his mission. While annoying he might turn out to be a savior for the team if they run into any danger: he is a very skilled fighter and constantly on the alert.

Xin Huo

Xin was one of the overhumanist mercenaries who drove off the Omegists from the Discord gate – and ended up on the wrong side of it. His ego was retrieved, deconstructed and used in a variety of ways. One way was to make a plausible survivor, sleeved in a spare biomorph and placed close to a gate. He is basically the old Xin, with the core motivations replaced with a synthesized set of loyalties to the exhuman cause, his memory filled with false tactical information and given certain behavioral compulsions that will make him a good Manchurian candidate.

A cursory brainscan will show adequate similarity to the original, with the differences possible to explain away as mental trauma. A deeper investigation will show signs of serious psychosurgery, but Xin is a good enough manipulator to delay that: he will insist that he has ultra-important information that must immediately be relayed to all authorities, health checks can wait. His driven sense of urgency is contagious, which helps him spread his misinformation.

Xin's story is to a large degree true. He can describe some rough outline of what is going on, some plausible external observations of Rortian society, the military buildup and a rough idea of their strategy. The key disinformation is about where they will strike: he will imply that they are amassing for an attack on the Discord gate, Ne No Kuni and maybe Basilica. This is not just plausible, but also very likely to get Go-Nin to focus on getting as much resources as possible to that part of the network. And incidentally, certain other interests will be up in arms defending Basilica. The real attack will of course happen very soon elsewhere.

A very careful investigation of his implants will reveal a caumoflaged miniature QE transmitter with just a few qubits. This allows him to report mission status back, and can be used to trigger various contingency programs (including suicide, sabotage or escape). He might have some other exhuman infiltration malware hidden in his equipment.

Of course, Xin had a backup and that fork has been active ever since the battle. Bringing them together is not advisable.

Exhuman infiltrators

Two gates the silent house of Sleep adorn:
Of polished ivory this, that of transparent horn:
True visions through transparent horn arise;
Through polished ivory pass deluding lies.
Virgil, The Æneid, Book VI. 894.

While the exhumans disdain mere transhumans it is still important to find out what they know and to misdirect them during the invastion.

A basic infiltrator is going to be a composite mind constructed to blend in. While the Rortians themselves are hopeless at pretending (they were fairly far gone long before they left the solar system) they have been working with captured minds to splice together good infiltrators. Even if they don't understand transhumans well they can do practical experiments, like putting infiltrator egos in the same simspaces as normal egos and check whether they manage to convince them that they are normal. Delete the failures, take the best performers, tweak them, and repeat the process thousands of times on a big server. The end result is a skilled infiltrator.

A typical infiltrator will be based on a number of colonists, having a semi-plausible back story as being from another exoplanet (which makes it hard to check). They will typically (but not always!) have some neural damage or mental problems, which conveniently explains away some of their behavior. They are either left at an attacked outpost, or snuck through a badly monitored gate like Carnivale. Once integrated well enough into society they will try to earn rep or money enough to go back to the solar system.

Another way of introducing infiltrators is to grab an entire gatecrasher team, turn their egos into delta forks covering real Rortian minds, and then send them back. This works especially well against the less carefully guarded settlements and perhaps the Discord gate: the other solar system gates have enough

scrutiny to notice that something is awry fairly quickly. A captured team from one gate might also be sent out through another gate, making use of the slow and inconsistent communications between the transhuman fractions to get enough time to disappear into society.

One way of using infiltrators is to introduce a fellow gatecrasher team, ideally as competitors/friends. At some point they return slightly late from a mission and brush past the PCs, not quite themselves (but ideally, with a very plausible cover for their state, like a tough mission with losses). A while later it will become apparent that they were infiltrators.

Of course, the best target is the PC team itself. An adventure might begin with the PCs being resleeved from backup, not having returned from a mission. As they continue their lives they discover that a version of them showed up somewhere else… and might be behind sabotage or mysterious disappearances. Retracing their failed mission becomes very important to understand what is going on - and to clear their names.

Phase II: Skirmish

A human being should be able to change a diaper, plan an invasion, butcher a hog, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects.
–Robert E. Heinlein, Time Enough for Love

The PCs encounter the Rortians face on for the first time. This can occur very quickly after Phase I if the players are unlucky or dawdle.

A typical Rortian attack consists of the gate opening (even if it is supposed to be locked) and EMP, nerve gas and jammer bombs thrown through to mess up any local defense. Some heavily armored and fast-moving morphs might be launched through at near supersonic speed, followed by dreadnoughts. Hacker arrays go to work on the local mesh, and any resistance is met by deadly force.

Being trapped on an invaded planet will be a matter of stealthy survival rather than heroic fighting. Typically, frontal assaults against the dreadnoughts will be suicidal. Their mass-minds give them an enormous multitasking ability, allowing them to not just fire at multiple targets (or concentrate fire for devastating effect) but to manipulate the environment, perform combat hacking and analyze their opponents with no penalties.

This is going to be a great test of survival ability and gatecrasher ingenuity. It might also be a good chance to find common ground with past competitors – suddenly rival teams find they need to work together to survive.

Rumors

During this phase bad things start occurring at an accelerating pace.

- Contact has been lost with the Ne No Kuni system, but Go Nin keeps the lid on.

- A gatecrasher who has a QE link to a friend back on Titan warned that he was pursued by some kind of giant synthmorph. Then the link was spammed by some kind of transmission and ran out – the transmission looked like the start of a fork.

- A team of physicists from Gatekeeper Corporation were recently assassinated on Babylon. Everybody blames everybody else.

- There are two copies of a gatecrasher team – when they left through one gate they seem to have appeared in two places at once. Now they are doing a long-distance quarrel about who is the real forks.

- Tirion recently got a surprise visit from a gatecrasher team fleeing something. Hypercorp lawyers descended on everybody with heavy non-disclosure agreements, but the Singer Institute is clearly afraid: they are hiring *lots* of security. Including some heavy weaponry more suited for a planetary invasion.

- Gorgon Defense Systems have been hiring gatecrashers as consultants.

- Templeton's World is under attack! The Titanians are trying to calm things down, but at least a dozen people were killed when someone barged through the gate with WMDs. A lot of people think it is Consortium goons and are preparing for retaliation.

- Something calling itself Concordian Shores Foundation – apparently based on Ceres – has been making overtures to various groups. They seem to want to hire gatecrashers for deep penetration runs against the exhuman invaders.

Occupy Azure

The backbone of surprise is fusing speed with secrecy.
–Karl Von Clausewitz

In the case of Azure, as soon as the Rortians realize it is a gate nexus (or just because it fits the game) they will invade. On Azure they quickly expand across Cerulean City, killing all morphs they can find. Once the location is secure they will turn to analyzing the remnants, moving useful resources back to Rorty. The planetary City is of little interest to them, and they mainly see that as resources for further expansion in the far future. The gate on the other hand is worth keeping control over, if only to prevent rescue operations (or to lure them into traps).

Off-site teams are a low priority, but once Cerulean is fully controlled the Rortians will send fliers (retrofitted slightly to be controlled by their minds and to house a dreadnought) to their camps for mopping up. Teams that establish radio silence and hide might be safe… until their resources run out.

If the PCs have discovered that it is a gate nexus they might try to escape via some unguarded gates before the Rortians arrive to secure them. They might also discover that some of them lead to other local gates, resulting in a complex cat-and-mouse game across the continents.

Phase III: War

Death when to death a death by death hath given
Then shall be op't the long shut gates of heaven.
- Thomas Heywoode, Nine Bookes of various History concerning Women, Book II, of the
Sybells.

The Rortian incursions are escalating, going from isolated problems to a real threat to exoplanet exploration and exploitation. Slowly the forces of transhumanity mobilize and try to fight back.

During this part of the campaign the PCs are on the frontlines of the emerging war, possibly playing an important role as scouts, infiltrators and guides.

Uneasy allies

Alliance does not mean love, any more than war means hate.
-Francis Parker Yockey

The Rortian's greatest help is the fractiousness of transhumanity. Coordinating action between the gate powers in the solar system is very hard, something they are counting on. Most settlements are very uneasy about bringing in armed forces from other fractions or even revealing what is going on, yet coordinating against simultaneous attacks requires them to at least talk to each other. With limited QE and physical access this is hard.

TerraGenesis, despite somewhat cool relations with Pathfinder, is perhaps best at working with other groups. This might be one explanation for the Caldwell Incident (GC p. 56) in AF 9 – it was actually forks of a Rortian infiltrator trying to disrupt the gate operation in a suicide attack, reducing their ability to coordinate. They also have a link to Portal, making them (or rather, whoever they hire for security) likely participants in the defense of the nexus.

Pathfinder Corporation has the resources of the planetary consortium behind them, but is very unlikely to want to help anarchists and other subversives. There is a serious risk that they and their allies will disregard the war as somebody else's' problem, and only try to defend their worlds. Exhuman incursions will also botch-up their clockwork schedule, quite possibly causing interesting logistical problems.

Gatekeeper Corporation might be fairly open for collaboration with autonomists, Argonauts, TerraGenesis and others. Their main problem is their splintered interests: they are unlikely to project force well outside the solar system. It is however possible that the Titanian Commonwealth will be willing to lend military resources to protect the gate network.

The Love and Rage Collective at the Fissure Gate have little love for hypercorps or other inner system institutions. They are independent and want to remain that way. They, and other anarchist militias, will resist having outside military forces or even observers on their worlds. Yes, cooperation is good, but it has to be done fairly: if they cannot be given equal access to corporate or national worlds, they will not play the game. If it becomes clear that infiltrators might have snuck through their gate the tone might be even more strident.

Meanwhile the Go-Nin group and their overhumanist mercenaries will do their outmost to protect *their* worlds. While natural allies to Pathfinder and even TerraGenesis they do not share much information. They might be willing to lend forces, but only in exchange for real concessions.

Hypercorp military contractors will have a field day: Direct Action and Medusan Shield are itching to show what they can do. They will happily defend anybody who pays. They are also good at coordinating between missions, selling intelligence to Stellar Intelligence. Meanwhile regular security forces of exoplanetary hypercorps will be trying to play catch-up. While having some expertise they are likely not prepared for this kind of threat or the need for coordinating with other groups – especially not crazy anarchists or competitor corporations.

Various Ultimate mercenary groups will also hire out themselves; their attitude is sure to cause plenty of interesting friction with other groups.

And then there are the Jovians. They will play up the exhuman threat as soon as they hear about it, arguing that the gates must be closed, locked and ideally destroyed. They are happy to help.

Gatecrashers

The gatecrasher community is of course involved from the start. Having exhumans hunting them is just another occupational hazard, but a full-scale war is something else. This might be their chance to shine, helping more regular forces handle the hazards of gate-hopping as they try to navigate into tactical positions. At the same time, the gate war might imply an end to the classic ways of sauntering around the network as paranoia and security are beefed up in core systems.

Firewall

Once the threat has become apparent (and quite likely before) Firewall will be doing their best to meet it. For once the organization has an advantage: by being cross-faction it can help coordinate the war effort. It still has the problem of having to do it secretly, but at least it has an advantage.

Not everybody in Firewall agree that the Rortians are an existential threat. They are a derivative of transhuman civilization, and even if they win transhumanity will live on as their kind of exhumanity. This is very much a minority view, though. Most Firewall members are convinced from the evidence that the Rortian have created something badly stunted that lack important aspects of what makes life flourish (exactly *what* they are missing is on the other hand controversial). Some moderates think that a contained exhuman civilization would be OK, while hardliners think they are well on their way to become a TITAN-like threat if left alone for too long.

Firewall and Ozma are the two groups most likely to try to achieve a strategic end of the conflict, likely using some underhanded tactic – and of course, deniable and disposable agents like the PCs.

Ozma

Ozma's sinister agenda would be impaired if it lost contact with the gate network. It has invested plenty of effort in setting up projects on exoplanets and gathering information. So while it might not care the least for the fortunes of most non-PC worlds and factions, they certainly are not going to let some exhuman scum deprive them of their investments.

Ozma will focus on driving back the exhumans from the parts of the network they have good control in (mainly linked to the Martian gate). However, letting them take important systems from autonomists might be a bad strategy, so they will sometime lend a hand there too. While, of course, planting seeds of subversion to help an eventual PC takeover.

Strategy

Gates are perfect chokepoints: immobile, lets through only a limited amount of weaponry and can to some extent be controlled.

The key strategic goal for both sides is to gain control over gate nexus systems. This way they can more easily control a part of the gate network and deny access to others. Nexus systems have one drawback: it is possible for an enemy on several exoplanets to make simultaneous attacks through all gates. This is something the Rortians will make use of as soon as the war heats up: they have had plenty of time to put redoubts near gates and establish QE links between them.

The more gates held, the more force can be focused on gate nexuses. But it also means a much longer "boundary": more potential worlds from which attacks can come from. The better the Rortians are doing, the more paranoid they have to be.

In the early stages of the war the Rortians will often have left gate locations apparently safe and unlocked in order to act as traps (or a place to launch infiltrators from). There will not be any visible installations or morphs nearby at first, but as soon as intruders are away from the gate buried weapons or dreadnoughts pop up. The aim is to rapidly incapacitate the intruders and take their stacks for further processing.

Rorty needs not just egos but blueprints and information. The Rortians will work hard on getting as many nanoassembler blueprints and solarchives as they can, since information is power and can increase their production capacity. Gathering as many gate codes as possible is also essential: figuring out the topology of the enemy part of the network is essential.

Infiltrators are also essential for Rortian strategy: since gates are tough to take, it is important to get intelligence and soften up the defenses before attack. Infiltrators or double agents can also be used to spread tactical disinformation at crucial points, not to mention act as industrial spies or even attempt to unlock locked gates.

A typical Rortian infiltrator will try to bring parts of a mass mind on hidden hard storage and a QE link back home for providing intel/coordination. It will try to blend into society long enough to implant hacker and intelligence forks into the Mesh, hide the evidence and tools, and then either disappear or blend in while preparing softening sabotages.

Infiltrating Rortian society is harder, but not impossible. Being a bit of a monoculture a surprising number of systems are just based on trust, and security is often directed more outwards towards the gates than inwards. Individual minds are typically focused on their task and not too curious unless it is their job. There are political officers and anti-subversion mass-minds, but most of their work is about mental health and efficiency rather than spy-hunting. Of course, once they get aware of something bad happening, they become fierce and efficient. They have no compunctions running low-level brain scans across all hardware, stopping all minds that do not fit the specs and sending suspect egos for disassembly and analysis.

The Rortians are aware that they cannot defeat the military power in the solar system in a straight fight. But they can cut off transhumanity from the gate network, subjugate the existing colonies and then build up the right kind of might and competence to make the final push eventually. It might take another decade, but they are confident they can do it.

The Battle for Portal

It is even better to act quickly and err than to hesitate until the time of action is past.
Karl Von Clausewitz

Sooner or later Portal is going to come under attack. The transhumans and exhumans both know it, and as things heat up forces will concentrate there.

If the Rortians succeed with a Blitzkrieg strategy they might be able to attack before Portal has had time to beef up its defenses. They will however wait until they have control over several worlds that can access the Portal gates so they can make a multi-gate attack. This caution might be a mistake, due to their overestimation of transhuman cohesion (after all, they have a hard time imagining how mere transhumans think).

If the war has dragged on for a while, then the defenses will be tougher. The Rortians will instead try to make a feint attack somewhere else, drawing off forces and attention, send in infiltrators to launch a surprise hack attack on the infrastructure of Portal, and then launch a massive assault through all the gates. This might be the time to tip their hand that they can unlock apparently locked gates remotely.

Portal is in many ways ideal for the Rortians: a frozen planet with the same temperature range as their favored worlds, unsuitable for biomorphs and nanoswarms but suitable for heavy exhuman weapons and equipment.

The Battle for Portal will be epic and deadly. This is the most likely place for all factions of transhumanity to rally together, autonomist militias side by side with hypercorp defence contractors and Ultimates. The Rortians will have stored up an enormous army of dreadnoughts and other weapons and will not stop until they have no chance of winning – at which point they will likely try to deny access to the gate nexus permanently. Transhumanity is unlikely to give up either. Depending on which gates are open where the main battle might all occur within the gate circle, with forces firing straight at each other through the wreckage of the Mi'raj dome while desperate gate hackers try to reach gates long enough to close and lock them.

If transhumanity wins Portal is still likely devastated. While the Isra dome is away from the gates there will no doubt have been fighting there too. Rebuilding will take some effort. In the best of all worlds the shared struggle will unite the fractions interested in exo-solar exploration and they will work together to restore it. More realistically the surviving forces will have ample opportunity to establish beachheads and "renegotiate" the status of Portal – betrayal, opportunism and jingoism will pop up the instant the last dreadnought collapses. The winners will be the ones who managed to plan ahead for this moment even in the heat of battle.

Ending the war

It is hard to win the war in a conventional way, since the Rortians have redoubts and backups deep in the gate network: if pressed far enough they might nuke their gates like on Eris and disappear, only to reappear a decade later stronger than ever.

One way of ending the war would be to make a deep penetration run to get to the core of the exhumans, and then launch a sufficiently deadly attack from the inside. In normal wars superweapons rarely matter, but this is not a normal war. Unfortunately anything that is powerful enough to stop the exhumans is also close to an existential threat to transhumanity.

Big nuke

Depositing the largest antimatter or thermonuclear weapon possible at a core location is an obvious option. It is also unlikely to work, since the Rortians sensibly have placed all really vital infrastructure far away from the gate areas. It might still clear out the area enough for an offensive.

A variant would be Gorgon Defense Systems' Nuclear War in a Can™: borrowing from the Satnet-in-a-can (GC, p. 154) this is a semi-portable launcher that launches AI controlled micro-rockets with antimatter warheads that quickly map the infrastructure below, select targets and precision nukes them. This might be a useful tool for initializing a serious offensive against a core position, although the deploying team is unlikely to survive.

Hack attack

The team will bring with them the largest qubit container they can, connect to the local networks and let a crack team of infowar AIs strike from the solar system. If they are working for Firewall, these will be Prometheans. If they are from Ozma or other groups, they might be the other shady superintelligences of the system.

The superintelligences might also try to get forks of themselves into place by having them pose as mysterious "consultants" for the team, carrying heavy packs of compressed data in addition to the qubit links. Once in place they can attempt to throw everything they got at the exhuman network.

If the attack succeeds they will be able to raze the cognitive infrastructure of the Rortian civilization, letting loose viral scorchers and Khaos AI across it, while breaking the software protections of the Strategists and Political Officers. Rortian infrastructure and morphs will go berserk and destroy themselves, leaving trojan-infested wreckage across the wormhole network. Even if they are not entirely successful they can slow things down by infesting networks with malware… or a certain virus (see below).

A scary possibility that might be exciting to spring on PCs and organizations overconfident in their superiority over the clanking monsters is to have the Rortians hack back. Maybe the Prometheans underestimated the sheer mental power of millions of perfectly synchronized and optimized forks working together. What happens if they manage to steal some or all of the resources brought to bear on them? At this point taking desperate measures becomes necessary.

Nanoswarms

A key discovery during the war will be that Rortians have weak nanodefenses. This is of obvious tactical benefit. Sneaking hives making saboteur nanomachines into their settlements would be a good mission, and would slow their war efforts down.

But to truly stop them something more aggressive is needed. Where can transhumanity get nanoswarms that do not need hives, can attack arbitrarily complex installations and adapt to new environments? The answer is of course the TITAN nanoswarms. Dropping off an aggressive nanoswarm in the Rortian core would likely spell a total disaster for them: it would replicate, spread via their transports to their colonies, and attack with devastating effects. Hopefully it would not spread further in the gate network – after all, nobody has encountered roving nanoswarms opening gates, right?

Getting the nanoswarm is something different altogether. It might be introduced merely as a McGuffin in a sealed container brought by agents of Firewall, Ozma or some hypercorp, with a hinted back story involving the true death of many agents. This is useful for a campaign focused entirely on gatecrashers sent on errands, with the Powers That Be remaining mysterious.

An option is to run a small side adventure with pregenerated (and disposable!) characters that play out how the swarm was captured. This might be a mission into the White Zone on Mars, into some of the less explored parts of Iapetus, or even down to Earth. The goal is to capture a nanoswarm in a suitably inert container and send it back. The trick is to get a sample and either stun it using EMP or deplete its energy resources – for example by extreme cooling. This option is useful both as a break from the main war campaign and as a way of showing just how scary the swarms are: while the main PCs might not know what is in the box, the players will know.

A truly powerful find would be a TITAN hive for manufacturing nanoswarms: this is a literal artifact of doom, since once powered up it can in principle bootstrap the whole TITAN infrastructure… except there is no real TITAN at home, right? This might be combined with a Promethean fork trying to control or direct it. Which of course suggests some interesting sequel potential as things get out of hand…

Exsurgent virus
A desperate measure, but not necessarily stupid. The virus thrives in rapidly expanding computational environments, and the exhumans might be just the kind of vulnerable population for it. On the upside, at the very least they will have to turn inwards to fight off infected mass-minds (deleting whole swaths of their civilization to keep the virus contained). On the downside, the virus might subvert enough exhumans to turn them into alien horrors that will continue the gate war, but now able to infect anybody in contact with them.

Alien technology
There might exist alien technology that could be turned against the exhumans. Maybe asking the blackboxes of Giza could help (GC, p. 182) – except that the weapon provided might very well be tuned to destroy not just the exhumans. Devices releasing zero point energy or making black holes could be discoverable in alien ruins somewhere, but how to discover their awesome destructive power without wiping yourself out?

One alien technology that might be helpful is the gates themselves. Transhumanity already knows that they can be made to explode. Perhaps they can be used as weapons against the Rortians? This scheme might involve having to convince Go-Nin reveal just what they did to the blackboxes on Eris (ideally giving them a way of saving face), or discovering some of the other drastic gate hacks mentioned below. If gates on Rortian planets can be imploded, the problem is solved… at the price of transhumanity now having become deliberate planetkillers.

Aftermath

> This is a war universe. War all the time. That is its nature. There may be other universes based on all sorts of other principles, but ours seems to be based on war and games. All games are basically hostile. Winners and losers. We see them all around us: the winners and the losers. The losers can oftentimes become winners, and the winners can very easily become losers.
> - William S. Burroughs, "The War Universe", taped conversation, first published in Grand Street, No. 37 (1991)

Of course, stopping the Rortians is not the end of history. Far from it.

As discussed in the Battle for Portal, even a victory might leave many colonies dangerously unstable. Several settlements may have been lost. Dangerous people with weapons are now everywhere in the gate network, temporarily out of work. Powerful weapons might have been used, leaving many locations risky.

Remnants of the exhumans will remain, and no doubt curious people will sift through their wreckage looking for useful pieces. Systems and teams might have been lost.

And who knows what the conflict may have awakened?

Technology

Know that for the human mind there are certain objects of perception which are within the scope of its nature and capacity; on the other hand, there are, amongst things which actually exist, certain objects which the mind can in no way and by no means grasp: the gates of perception are closed against it. Further, there are things of which the mind understands one part, but remains ignorant of the other; and when man is able to comprehend certain things, it does not follow that he must be able to comprehend everything.
-Maimonides, Guide for the Perplexed

QE links

Being able to instantaneously signal anywhere without having to deal with gates is of extreme tactical importance. It allows coordinated attacks, long-distance targeting and "tripwires" on exoplanets. This is something the Rortians excel at: they have been distributing QE links between all their colonies and heaviest morphs, with smaller QE comms connected to exploration gear, sensors and weapons.

Hacking via QE links is limited: one cannot send forks through before they run out. A low capacity qubit reservoir has a few tens of gigabytes, and the high capacity a few hundred gigabytes, and forks are at the very least in the terabyte class. But a gigabyte of communication is still plenty for hacking.

Gate hacks

Nobody knows the limits of what can be done with the gates. While the transhumans of the solar system have benefitted from the open policies of the Gatecrasher's Guild on Portal and the Gatekeeper consortium on Pandora, there are still many tricks and secrets that are kept secret by their innovators or certain organizations. The Rortians may have had a more narrow expertise from start, but they have been characteristically single-minded in learning everything they can about how to bend gates to their collective will. This means that during the Gate War various surprising hacks will show up, making observers scratch their heads at how they could be even possible.

Many of these have potentially profound effects on gatecrashing, so the GM should consider whether to allow them or not. Anybody discovering hacks like these also possess very valuable information, definitely worth killing for.

Remote gate monitoring

It is possible to get a "busy tone" when trying to dial a gate open somewhere else. But maybe it is also possible to figure out where it is going or what is happening near it?

Gate insertion

This is a trick that might be possible, especially if gates actually are more like fabbers/disassemblers than real wormholes and remote gate monitoring is feasible. By rapidly switching a gate connection extra people (or equipment) can be inserted after the expected group. Useful for trying to sneak in infiltrators… or an armed warhead.

Locking out

Gates can be locked. Can they be locked from the outside, so that they refuse to let local hackers use them? If that is possible it might be feasible to lock up the Rortians on their worlds, isolated from the rest of the gate network. Conversely, this might be what they want to do to transhumanity.

The Rortians are good at unlocking gates or at least resetting them to permissive mode (a state they might naturally tend towards, given that this is how they are found). Exactly how they do this might be a real treasure to try to steal from the gate-keeper massminds.

They might also be able to put hidden timed unlockings into gates they have access to, allowing transhumans to think they have reestablished control over a gate and then striking with a surprise invasion. This could also be a task for infiltrators: to sneak the right programs into blueboxes or gate software. While it can be hard to get to a manned gate directly gatecrasher team gear is often less carefully guarded, and can be sabotaged by adding a few surprises.

Irregular gates

The wormhole can be opened in a non-spherical shape. This is very unstable and tends to equilibrate nearly instantly into spherical symmetry – but a lot of energy is radiated as gravitational waves. Likely bad for any buildings or morphs nearby, and potentially able to cause a gate explosion or implosion.

Gate explosions

The explosion that devastated the Discord gate demonstrates the danger of messing too much with gates. Estimated to have been at least ten megatons, it vaporized the old base and allowed the exhumans access. Go-Nin is not forthcoming about the event, but gatehackers suspect that there are several ways gates can be made unstable.

Theoretical explanations for the Discord detonation include that the gate briefly produced an intense gravitational field compressing nearby matter into a small lump of degenerate matter that fused and exploded (the "mininova theory"), that it released zero point energy directly (the "zero theory"), that it released some of the mass-energy embodied in the wormhole or exotic matter frame (the "burp theory"), that they accidentally opened a gate into the core of a star or gas giant and the membrane holding back the interior briefly failed (the "vomit theory"), that the gate generated a quantum black hole that evaporated via Hawking radiation (the "evaporation theory") or that the gate settings briefly created a closed timelike curve causing chronology protecting virtual particle interference (the "time cop theory"). There are also theories related to ultra-energetic "gate skins" and that the settings upset the "gate gods"… who made a brief demonstration of their power.

If the mininova or evaporation theory is true gates will always tend to explode with roughly similar strength. If any of the burp, vomit or time cop theories is true the power could be scaled up. And if the zero theory is true, then there might not exist an upper limit to how devastating the explosion can be.

There are no known gate hacks that blow up gates (except maybe the surveillance footage from Go-Nin), and random experimentation is obviously not going to work. The most likely source of codes enabling explosions will likely be alien ruins, or perhaps risky information like the Giza pyramids.

Desperate defenders might want to test if they can wreck a gate to prevent the Rortians from using it. The gate frame itself is fairly robust and will shrug off plasma fire (GC, p. 15) but at least the exterior niobium-silicon-yttrium lattice is being made of molecular matter that will probably be affected by a nuclear fireball or antimatter. What the interior exotic matter will do then is anybody's guess.

Gate skins

One theory suggests that there are different "gate skins", and we are normally just seeing a form hat is fairly human-compatible. Gates seem to occur in very different environments, and might have to function utterly differently in some. Adjust the settings, and it might become something altered – like pure gamma rays, or something ever worse.

Gate implosions

This is a truly nasty possibility, turning gates into potential xrisks. Wormholes and black holes are fairly similar objects in general relativity. If the wormhole is allowed to collapse in the wrong way it might pinch off, forming a gravitational singularity. This will immediately be surrounded by an event horizon, and a small black hole results. "Small" being relative, it could have a mass up to a gas giant.

Needless to say, having such a black hole at rest on a planetary surface is not going to last: either the planet will fall into the hole or the hole will fall into the planet, accumulating matter at an increasing rate until the whole planet collapses. The process will taking ten minutes and upwards (depending on the black hole size). The combination of tidal crushing, intensive accretion radiation explosively vaporizing material and enormous electromagnetic effects will make the end exciting. While the collapse will halt once the planet is gone, the final stages will release enough gamma rays to sterilize planetary surfaces within a solar system. Orbiting spaceships and habitats will remain in orbit around the hole but might (if the hole mass was large) end up with very eccentric orbits bringing them dangerously close.

Of course, dumping a gate turning into a black hole into a star is even worse. If this gate program becomes known, the Vulcanoid gate becomes a real and present danger to the entire solar system.

Like gate detonations, finding the programs that generate this kind of implosion is hard. An alien source is most likely.

Twists and complications

The gates of heaven are fearful gates
Worse than the gates of hell;
Not I would break the splendours barred
Or seek to know the thing they guard,
Which is too good to tell.
-G.K. Chesterton, The Ballad of the White Horse

Factors

In my version of the campaign the Rortians had secret allies in the form of a lattice of Factors. The Factors were planning on scavenging useful technology from the ruins of transhuman civilization after the exhumans had razed it.

The PCs first found some limited evidence of factor technology on Azure, suggesting that they might not be quite as anti-gate as they claimed. Then the factors found out that the team had found out and tried to silence them before they could spread the information. This resulted in a memorable battle around a gate: factor colonies are not just good with traps, but also with tentacles…

Factors on the Rortian side may be providing them with advanced gatecrashing information and gate programs. They keep to the back, letting the exhumans do the dirty and dangerous work. The Rortians tolerate this: they disdain biomorphs and don't care much what the factors find in the ruins as long as they help the overall expansion.

The story Infinite Horizon (GC p. 4) introduces the research station on Pelargic that recently got wiped out. In the story the perpetrator turns out to be a factor. Within this campaign the attack might actually have been the Rortians, perhaps aided by the factor assassin.

However, not all Factors are on the Rortian side. There could be conflict between the Rortian lattice of Factors and other lattices in the solar system. The solar Factors, when they find out, will likely start machinations to undermine the Rortian factors, typically by manipulating transhumans to find certain information that would be useful in their war effort.

The Gate Gods

However profound the complicated knowledge of the world, compared to this
enlightenment it is like one drop of water to the great ocean.
-Wumen, The Gateless Gate

There is something living in the gates. In fact, there might be whole civilizations inside the network – transhumanity and the Rortians have only the faintest idea of what it truly *is*.

The gate network actually is the interface to the truly powerful technological system of the ETI or the hyper-evolved TITANs. It is technology manipulating spacetime from the Planck-scale and upward, with quantum computational power dwarfing any mere femtotech Jupiter brain. What looks like transport is actually disassembly/reassembly using simple fabbers linked via macro functions transhumanity has stumbled upon. There are far more amazing options. In fact, some (or all) exoplanets might actually be ultra-realistic simspaces rather than real places… if that even has meaning when dealing with this level of technology. Planck-scale computation might make the inside of the gate network more complex and vast than the outside universe.

The gate network is inhabited by entities. Some might be true aliens, either migrants into it or something that has evolved on its own. Other entities are partially of transhuman origin, hyperevolved from AI probes and fragments of minds passing through. Maybe this is the true origin of the Factors and why they don't like transhumanity poking too much at the gates. Some entities might attach themselves to gatecrasher minds for a brief visit to the outside world.

But there are also power users. Whatever they are, they are dangerous. They don't care about free-riders, but anything that begins to mess with the system enough will bring a corrective response. A response that might wipe out planets.

It is worth remembering that the space-time curvature of a two meter wormhole is about the same as the curvature of a Jupiter-mass black hole. The energies involved are doubtless on the same order of magnitude. A gate into the core of a supergiant star or neutron star will release energy similar to a stellar nova. The explosion on Eris was merely a few megatons: that might be what a gate hacker can achieve or what occurs when a gate is damaged. If the gate gods actually use the gates as weapons they can do far more.

Azure

He clasps the crag with crooked hands;
Close to the sun in lonely lands,
Ringed with the azure world, he stands.
The wringled sea beneath him crawls;
He watches from his mountain walls,
And like a thunderbolt he falls.
-Lord Tennyson, The Eagle

Azure, sometimes called Maze or Knossos, is an Earthlike exoplanet covered by buildings. The name comes from the characteristic color of the mosaic tiles covering every surface, as well as the often perfectly clear skies and blue seas. Many visitors soon feel a need to see something red or green just to balance the ever present blue nuances.

The initial gatecrasher team consisted of freelancers working for Pathfinder out of the Pandora Gate. While Gatekeeper and associated research teams have been strongly active on Azure the dominant presence is a hypercorp consortium dominated by Nimbus and Go-Nin. While initially there was significant friction between the researchers and hypercorps things have calmed down as the planet turned out to be highly recalcitrant.

At first visiting xenoarcheologists were enthusiastic, thinking they would finally gain a deep understanding of an alien race from the massive amounts of material remains. But over the years their expectations have cooled off. The buildings are empty and might not even have been buildings for inhabitation in any human sense. They might be more like an industrial artifact.

The planet

Type: Terrestrial
Primary Star: G3V (yellow dwarf)
Gravity: 0.92 G
Diameter: 11,755 km
Density: 99% Earth
Axial tilt: 22 degrees
Length of year: 354 Earth days
Length of day: 17.22 hours
Atmosphere: 79% Nitrogen, 7% Oxygen, 11% Carbon Dioxide
Surface pressure: 0.605 Earth
Temperature range (min/avg./max): -57 / 13.0 / 63 Celsius
Albedo: 0.27
Hydrosphere coverage: 65.1%
Cloud cover: 12.4%
Ice cover: 2.3%
Satellites: None
Gate access: Pandora

Geography

The main continents are Hyacinth, Indigo and Sapphire. Surrounding the continents are the Cobalt, Cornflower and Cyan seas. There are a number of large (Madagascar-sized) islands: Mazarine, Baby Blue, Smalt, Ultramarine, Watchet, Azuline and Zaffre. In the north Polar Regions the Slate archipelago is an extension of the high Glaucous mountain range in northern Hyacinth.

The Cerulean City Gate is located in southern Hyacinth, close to the coast of the Lapis inland sea.

Cerulean City

The human settlement around the gate is called Cerulean City. It mostly consists of rooms that have been filled with Earth-compatible air and a set of domes and container-structures on the top surface linked to the underground by an elevator system drilled into the city. It has about 1,000 inhabitants. Formally it is run by Gatekeeper, but most of it is owned and controlled by Nimbus and Go-Nin.

There has been some work on opening a tourist hotel, but while Azure is spectacular at first there is not much to see or do. There are some nice beaches around Lapis (several with sparkling blue sand – fragments of the tiles in the city) and impressive surfing on the south coast of Hyacinth. But unless visitors are fascinated by the color blue, endless similar-looking buildings or the mysteries of the Azureans the novelty quickly wears off. Most people are happier to experience it by XP.

The outside air is a bit too thin and low in oxygen for normal breathing, although Martian morphs can handle it well.

The Oceans

The oceans harbor thriving life, believed to be native to the planet. Sediment cores and fossils show that the planet has had life for at least a billion years. The topmost sediment layers show clear evidence of change: a massive die-off, the presence of large amounts of carbon, quartz and silica compounds that appear to be related to the structure of the buildings, and silt from changed geological processes. The exact age of these strata are hotly debated (the "Azure age question"): they could show a long period of expansion or a very fast one, depending on what measurement methods are used.

Land

There still remains some land life in un-covered areas. The remaining land surface is dry (due to the efficient drainage through the city), lacks nutrients and tends to be mountainous. The life mainly consists of lichen-like crusts and cactuslike plants, as well as tiny insect analogues feeding on them. The mosaics are resistant to overgrowth (the surface acts as an anti-stick coating versus all local life, something Go-Nin has been borrowing for their own nanodesign department).

Near the poles there are large amounts of ice and snow. The city avoids regions where glaciers move or there is too much snowfall (the slant of roofs increase further from the equator to avoid snow buildup).

Underground

Transhuman scans of the planet have noted weird thermal anomalies and some odd seismic reflections, hinting that there might be deep structures. However, actually finding where to drill has proven hard. Some experimental drilling has found that most parts of the city are just a few levels deep.

The Buildings

The grey stormwall was moving in, hiding the blue mass of buildings behind curtains of rain. The grey was almost welcome, except that the team was still in the underground.

"Willton! Ortega! You need to get out *now*! The storm is here."

I got a fragmented response over the motemesh, something about going up and water. I was worried. Flooding in the City was far faster than even the desert wadis Willton was used to – the rainwater was immediately channeled downwards into stormdrains with tremendous force. If they got caught they would be swept away and never found.

The last of the motemesh broke down, no doubt washed away too. I could just wait.

We found them a few days later, thanks to Ortega slicing open a nuclear battery and leaving a radiation trail. They had escaped into a set of chambers just above street level. No way out, but safe from being washed away. Instead their morphs were killed as the air pressure climbed in their little bubble. I brought the stacks back to the camp, leaving their bodies in the chamber. A grand mausoleum, and maybe giving at least some nutrition to something living, no matter how minor, in this desert of walls.

Most of Azure is a labyrinth of rooms, hallways, ramps (the Azureans apparently did not use stairs), courtyards, atriums and chambers. While some areas are filled with dust and silt, many are kept surprisingly spotless. The buildings cover 80% of the land area of the planet, leaving only a few mountains, cliffs or geologically unstable areas.

The overall structure looks like a giant city of low, 2-3 story flat-roofed buildings with few windows, not too different from sprawling Mediterranean towns. There are "streets" that may be more of drainage channels (the roofs are not perfectly flat and allow rainwater to flow down below); often they are covered by other buildings forming large underground conduits. These can be risky if a rainstorm moves in upstream, channeling enormous amounts of water through them.

The walls are made of layers of amorphous quartz and alumina, interleaved with sheets of graphenes and networks of carbon nanotubes. They are tough and energy-absorbing. The graphene layers contain an enormous amount of carbon, more than enough to explain the lack of surface biosphere. They are also believed to have had a computational and/or communications function. This is the focus of most research on Azure. The total amount of processing and storage that theoretically could be present is staggering: current conservative estimates are around 10^{35} bits, or 100 billion yottabits.

The mosaics are made of quartz and alumina, showing some interesting piezoelectric properties. Their blue and gold color comes from regular nanoscale patterning, slightly different for every tile. For a long time one school of xenoarcheologists led by Dr Sun Yee Hwang believed the patterning was actually information storage: they spent endless and fruitless effort disassembling and comparing tiles, trying to find the code. These days most researchers think the pattern is at most identification of the individual tiles. The tiles are also piezoelectric, producing slight voltages when squeezed or cracked. It is believed that this might power extremely low-powered nanosystems in the walls, but so far no functional example has been found.

There is no visible infrastructure: no transport systems, no vehicles, no ventilation, no heating, no cooling. The interior spaces tend to be a fairly cool ambient temperature, but in some places they heat up or cool strongly due to their surroundings.

The Azureans and their secrets

"I think the Azureans killed themselves due to an investment bubble. The value of buildings was going through the roof, so they just built so much of them that they choked off the ecology."

"A very Titanian theory, Will. My theory is that they were never here. They sent automated systems to build somewhere to live. They planned to move in billions who would customize the place, but they never came."

"A very Martian theory, Juan. What about you, Li?"

"I think the Azureans are still here. It is just that we cannot see them. We are standing among the trees wondering where the forest went."

There are no hints of what the Azureans were. Paleontologists have found a number of fossils and species lineages that might have produced intelligence, in particular a kind of plesiosaur-like multi-limbed carnivores. But there are no archeological finds so far or skeletons showing evidence of culture.

Based on the measurements of the city, the Azureans were likely larger than humans. They presumably had low-slip footing and perhaps a leg structure unsuited for stairs, explaining the ramps.

There is a conspicuous lack of artifacts: none of the buildings have anything like furniture or personal objects. The Azureans clearly had nanotechnology and basic AI, as evidenced by the city structure and found fragments of automation.

There is plenty of evidence of large-scale mining across the planet. The material used for the city was mined nearly everywhere, digging out copious volumes of the continental surface. Tailings form massive sediment beds in rivers and oceans. The type of particles suggests a mixture of macroscale mining devices (perhaps robots) and nanotechnological reconstruction. No complete mining devices have ever been found, but a few fragments and parts have been found in the sediments.

The city is or was maintained by repair robots. A number have been found, none functional so far.

Secrets

Thus the wise and worthy singer
Sings not all his garnered wisdom;
Better leave unsung some sayings
Than to sing them out of season.
-Kalevala

The reason for the giant city is malfunctioning self-repair. The original azure systems had a tendency to expand the structure whenever certain conditions occurred, slowly squeezing out anything else on land. It might have started as repair of actual living structures, but it could just as well be replicating something else. As the city expanded other systems built underlying infrastructure. Anything of the original civilization got buried under miles of city.

However, the civilization is still partially present in the massive computational infrastructure. Most of it is inert but still functional. Azure megacomputing makes use of computation emerging from standing waves of activity within the graphene layers: when powered up and given the right input patterns they circulate and form an emergent virtual machine. An individual piece is mostly unable to do anything useful, but when wired together in the right way they all form a very flexible system. Parts are also linked using quantum entanglement, allowing for ultra-fast communication when activated. Nimbus would kill for the secret of how to make and distribute the qubits this way; some of their researchers suspect the truth, but they have no evidence.

Most of Azure is hibernating. There is no real demand for it, and hence the sections are not powered up. But this can change instantly.

One reason the surface is clean and repaired despite its age and the apparent lack of robots is that cleaning, repair and building happens in bursts. When something breaks the piezoelectric signals are noted, and if it is sufficiently important a part of the city wakes up. Cleaner and repair robots make their way to the affected sections, fix them and return to their storage spaces. This process normally happens relatively rarely, perhaps once a decade. It is no wonder it has not been observed. The random growth of the city has also trapped many of the repair systems inside closed spaces they cannot leave. They might

be ready to act but will not tear down walls to do so. Transhumans breaking through might get a nasty surprise as an army of robots suddenly decide to emerge and work.

The real power source of Azure is gigantic geothermal installations deep under the city. Spikes of exotic material descend deep into the crust, able to use quantum thermal conduction to produce massive amounts of electrical energy. This technology would also be worth a fortune if it could be found.

Robots

A typical small repair robot is about 10 cm across, a brightly yellow soft disk covered with waving fins. Transhumans might see some similarity to a tropical fish. They fly/bounce using ion drives and use their fins as bush robot nanomanipulators. The body core contains a small high efficiency battery, a distributed sense/action "nervous system" and miniature matter disassemblers/assemblers.

Functioning repair robots work as swarms, flittering around places that need repair and cleaning. They investigate anything not fitting into their model of the environment (sometimes rather destructively, as they pick at interesting surfaces or open devices).

There exist larger robots for heavier repair, all the way up to behemoths that can disassemble and reassemble entire buildings. These are normally mothballed deep underground.

The Azurean mesh

The mesh is enormous, alien and mostly stored in dense encrypted slabs deep under the city, hard to distinguish from foundations. Until it is powered up there is no hint of it.

The most obvious entry is through the physical map simspace. This is a simspace that is used for repair systems, containing an accurate map of the City. It contains information about conditions and what is where, although the representations are somewhat abstract and not entirely up-to-date in hibernating sections. It cannot be used for surveillance except in non-hibernating sections.

Beneath this level are a large number of other possibilities, as rich as the human Mesh and just as hard to understand. There are entities here that might be forks, vapors or AIs. What they know of the outside world is anybody's guess.

The Gates

Another grand secret is the presence of 5 gates. The Cerulean City gate is not the only one. The other 4 are located across the planet: one in a chamber in northern Baby Blue, one inside one of the buildings above the Celeste glacier in the Glaucous range, one in the desert of central Indigo and one inside an underwater hall in Sapphire.

The city seems to have been built around the gates. They are not given any special treatment, almost as if they were mere obstructions. The Cerulean City gate is in a fairly large chamber, but the Indigo gate is in a very small cul-de-sac.

Where the gates lead is up to the GM.