

ME2 Codex



ME2 CODEX

The ME2 Codex is divided between primary and secondary entries.

Here in this codex you'll see all related entries together. You can see the tabs to navigate.

Example: a primary entry from "Aliens: Council races" will introduce a species, while secondary entries will elaborate on their religion, culture, etc.

If you see a Heading 2 below a Heading 1, that means a secondary entry from the codex.

If you see a Heading 1 with *, it's a secondary entry but not one below a primary one.

If the picture changes at some point in the codex, it will show the changed picture, otherwise you can assume the picture used for the primary entry is the same one used for other secondary entries.

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Aliens: Council Races

Asari



The asari were the first species to discover the Citadel. When the salarians arrived, it was the asari who proposed the establishment of the Citadel Council to maintain peace throughout the galaxy. Since then, the asari have served as the mediators and centrists of the Council.

An all-female race, the asari reproduce through a form of parthenogenesis. Each asari can attune her nervous system to that of another individual of any gender, and of any species, to reproduce. This capability has led to unseemly and inaccurate rumors about asari promiscuity.

Asari can live for over 1000 years, passing through three stages of life. In the Maiden stage, they wander restlessly, seeking new knowledge and experience. When the Matron stage begins, they 'meld' with interesting partners to produce their offspring. This ends when they reach the Matriarch stage, where they assume the roles of leaders and councilors.

Asari: Ardat-Yakshi

Ardat-Yakshi ("demon of the night winds") are asari suffering from a genetic disorder preventing conventional melding of nervous systems during mating. Instead, Ardat-Yakshi electrochemically ravage their partners' nervous systems, in extreme cases leaving victims as vegetative invalids or corpses. Asari psychologists regard this incapacity for mental fusion as preventing the development of empathy, leading to psychopathy. There is no known cure.

The disorder generally begins in infancy, reaching full pathology during Maiden adolescent sexual development. While seductive and sexually-driven as other asari, Ardat-Yakshi are congenitally sterile.

Ancient asari mythology held Ardat-Yakshi as gods of destruction, depicting them as villains of countless legends and as the anti-heroes of numerous asari epics.

Contrary to popular belief, Ardat-Yakshi are neither extremely rare (around one per cent of asari dwell on the AY spectrum), nor are they all murderers. Most cultivate and discard countless exploitative or abusive relationships during their legally marginal lives. Despite rumors of Ardat-Yakshi syndicates, by nature Ardat-Yakshi are incapable of long-term cooperation.

As a disproportionately wealthy species, asari employ their economic reach and media ownership to hide the AY pathology from the galactic community, placing most Ardat-Yakshi in monitored work programs or seclusion. Only the most aggressive cases are sentenced to sanitarium and prisons or to the execution lists of justicars.

Asari: Biology

Asari have a robust cellular regenerative system. While they do not heal faster than other species, asari are known to reach 1000 years of age.

Although asari have one gender, they are not asexual. An asari provides two copies of her own genes to her offspring. The second set is altered in a unique process called melding.

During melding, an asari consciously attunes her nervous system to her partner's, sending and receiving electrical impulses directly through the skin. The partner can be another asari, or an alien of either gender. Effectively, the asari and her partner briefly become one unified nervous system.

This unique means of reproduction is the reason asari are talented biotics. Their evolved ability to consciously control nerve impulses is very similar to biotic training. Asari believe that their offspring acquire the best qualities of the "father" from the melded genes, but evidence is anecdotal.

Asari pass through three climacteric life stages, marked by biochemical and physiological changes. The Maiden stage begins at birth and is marked by the drive to explore and experience. Most young asari are curious and restless.

The Matron stage of life begins around the age of 350, though it can be triggered earlier if the individual melds frequently. This period is marked by a desire to settle in one area and raise children.

The Matriarch stage begins around 700, or earlier if the individual melds rarely. Matriarchs become active in their community as sages and councilors, dispensing wisdom from centuries of experience.

While each stage of life is marked by strong biological tendencies, individuals do make unexpected life choices. For example, there are Maidens who stay close to home rather than explore, Matrons who would rather work than build a family, and Matriarchs who have no interest in community affairs.

Asari: Culture

Because of their long lifespan, asari tend to have a 'long view' not common in other races. When they encounter a new species or situation, the asari are more comfortable with an extended period of passive observation and study than immediate action. They are unfazed that some of their investments or decisions may not pay off for decades or centuries. Matriarchs can seem to make incomprehensible decisions, but their insight is evident when their carefully-laid plans come to fruition. In interstellar relations, this long view manifests in an unspoken policy of centrism. The asari instinctively seek to maintain stable balances of economic, political, and military power.

Traditionally, asari spread their influence through cultural domination and intellectual superiority. They invite new species of advanced development to join the galactic community, knowing that their ideals and beliefs will inevitably influence the existing culture.

Asari: Government

The asari came late to the concept of world government. For centuries, their homeworld of Thessia was dotted with loose confederacies of great republican cities. The closest Earthly equivalent would be the ancient Mediterranean city-states. Since the asari culture values consensus and accommodation, there was little impetus to form larger principalities. Rather than hoard resources, the asari bartered freely. Rather than attack one another over differing philosophies, they sought to understand one another.

Only in the information age did the city-states grow close. Communication over internet evolved into an "electronic democracy." Asari have no politicians or elections, but a free-wheeling, all-inclusive legislature that citizens can participate in at will. Policy debates take place at all hours of the day, in official chat rooms and forums moderated by specially-programmed virtual intelligences. All aspects of policy are open to plebiscite at any time. In any given debate, the asari tend to lend the most credence to the opinions of any Matriarchs present, nearly always deferring to the experience of these millennia-old "wise women."

Achieving consensus through public debate may take too long in a crisis. In cases where prompt, decisive action is required, the asari defer to the wisdom of local Matriarchs.

Asari: Justicars

Despite the refinement and sophistication of asari culture, criminality remains a fact of life. The asari solution to the most vicious and destructive criminal element is the Justicar Order.

Justicars are an asari class of virtually untouchable, extra-judicial executioners operating almost exclusively within asari territory. In the last decade alone, Justicars have smashed dozens of criminal rings inside asari territory, operated by asari and non-asari alike. Their methods range from subtle where possible, to brutal where necessary.

Trained for extreme strength, biotic capacity, resourcefulness, asceticism, and ruthlessness, the fanatical justicars are romanticized and feared throughout asari society.

Although justicars generally work alone, their effectiveness arises from the huge body of knowledge they can access. Any asari who enters the ranks of justicars has already spent centuries in a combination of criminal investigation, military intelligence, and combat experience; the collective body of justicar knowledge exceeds even that of the Spectres.

Justicars tend to be independent, requiring little help but also scorning it since such advanced skill and experience usually travels with a powerful ego. The conflicts presented by such arrogance prompted the Justicar Order to develop the Oaths of Subsumation. The Oaths pledge protection of the innocent, the punishment of the guilty, and defense of common law and the norms of asari society. The effect of the Oaths is conservative, ensuring that justicars respect the existing distribution of asari power rather than staging a coup to rearrange society according to justicar satisfaction. Nevertheless, the possibility of such an attack is a source of anxiety -- and counter-intelligence -- among the asari elite.

Of all the pledges, the Third Oath of Subsumation is sworn the least of any of the oaths. Requiring a Justicar to swear loyalty that overrides the dictates of even the Justicar Code, the Third Oath is usually invoked in matters where even the black-or-white thinking of justicars is forced to concede the existence of gray.

Asari: Military Doctrine

The asari military resembles a collection of tribal warrior bands with no national structure. Each community organizes its own unit as the locals see fit and elect a leader to command them. Units from populous cities are large and well-equipped, while those from farm villages may be only a few women with small arms. There is no uniform; everyone wears what they like. The asari military is not an irregular militia, however; those who serve are full-time professionals.

The average asari huntress is in the maiden stage of her life and has devoted 20-30 years to studying the martial arts. Asari choose to be warriors at a young age, and their education from that point is dedicated to sharpening the mind and body for that sole purpose. When they retire, they possess an alarming proficiency for killing.

Huntresses fight individually or in pairs, depending on the tactics preferred in their town. One-on-one, a huntress is practically unbeatable, possessing profound tactical insight, a hunter's eye, and a dancer's grace and alacrity. Biotics are common enough that some capability is a requirement to be trained as a huntress; lack of biotic talent excludes a young asari from military service.

While fluid and mobile, asari can't stand up in a firestorm the way a krogan, turian, or human could. Since their units are small and typically lack heavy armor and support weapons, they are almost incapable of fighting a conventional war, particularly one of a defensive nature. So asari units typically undertake special operations missions. Like an army of ninja, they are adept at ambush, infiltration, and assassination, demoralizing and defeating their enemies through intense, focused guerilla strikes.

As a popular turian saying puts it, 'The asari are the finest warriors in the galaxy. Fortunately, there are not many of them.'

Asari: Religion

The pantheistic mainstream asari religion is siari, which translates roughly as 'All is one.' The faithful agree on certain core truths: the universe is a consciousness, every life within it is an aspect of the greater whole, and death is a merging of one's spiritual energy back into the greater universal consciousness. Siarists don't specifically believe in reincarnation; they believe that spiritual energy returned to the universal consciousness upon death will eventually be used to fill new mortal vessels.

Siari became popular after the asari left their homeworld and discovered their ability to 'meld' with nearly any form of life. This ability is seen as proof that all life is fundamentally similar. Siari priestesses see their role as promoting unity between the disparate shards of the universe's awareness.

Before the rise of siari pantheism, asari religions were as diverse as their political opinions. The strongest survivor of those days is the monotheistic religion worshipping the goddess Athame. Like the asari, the goddess cycles through the triple aspects of maiden, matron, and matriarch.

Salarians



The second species to join the Citadel, the salarians are warm-blooded amphibians with a hyperactive metabolism. Salarians think fast, talk fast, and move fast. To salarians, other species seem sluggish and dull-witted. Unfortunately, their metabolic speed leaves them with a relatively short lifespan; salarians over the age of 40 are a rarity.

The salarians were responsible for advancing the development of the primitive krogan species to use as soldiers during the Rachni Wars. They were also behind the creation of the genophage bioweapon the turians used to quell the Krogan Rebellions several centuries later.

Salarians are known for their observational capability and non-linear thinking. This manifests as an aptitude for research and espionage. They are constantly experimenting and inventing, and it is generally accepted that they always know more than they're letting on.

Salarians: Biology

Salarians are noted for their high-speed metabolism, which allows them to function on just one hour of sleep a day. Their minds and bodies work faster than most sapient races, making them seem restless or hyperactive. The drawback of this active metabolism is a short lifespan of around 40 human years.

The salarians are amphibian haplo-diploid egg-layers; unfertilized eggs produce males and fertilized eggs produce females. Once a year, a salarian female will lay a clutch of dozens of eggs. Social rules prevent all but a fraction from being fertilized. As a result, 90% of the species is male.

Salarians have photographic memories and rarely forget a fact. They also possess a form of

psychological 'imprinting', tending to defer to those they knew in their youth. Salarian hatching is a solemn ritual in which the clan Dalatrass (matriarch) isolates herself with the eggs. The young salarians psychologically imprint on her and tend to defer to her wishes.

During the hatching of daughters, the Dalatrasses of the mother and father's clans are present at the imprinting. This ensures the offspring have equal loyalty to both, ensuring the desired dynastic and political unity.

Salarians: Culture

The rare salarian females are cloistered on their worlds out of tradition and respect. Powerful female Dalatrasses are dynasts and political kingpins. They determine the political course of their respective regions through shrewd negotiation. Though male salarians rise to positions of great authority in business, academia, or the military, they rarely have any input on politics.

Due to their method of reproduction, salarians have no concept of romantic love, sexual attraction, or the biological impulses and social rituals that complicate human lives. Male-female relationships are rare (due to the scarcity of females) and more akin to human friendship.

Sexuality is strictly for the purpose of reproduction. Ancient social codes determine who gets to fertilize eggs, which produces more daughters to continue a bloodline. Fertilization generally only occurs after months of negotiation between the parents' clans, and is done for purposes of political and dynastic alliance. No salarian would imagine defying this code.

Salarian names are quite complex. A full name includes - in order - the name of a salarian's planet, duchy, barony, fiefdom, family, and finally, the given name.

Salarians: Government

The salarian government is called the Salarian Union. It is a labyrinthine web of matrilineal bloodlines, with political alliances formed through interbreeding.

In many ways, the salarian political network functions like the noble families of Earth's Medieval Europe. Structurally, the government consists of fiefdoms, baronies, duchies, planets, and marches (colonization clusters). These are human nicknames; the original salarian is unpronounceable. Each area is ruled by a single Dalatrass (matriarchal head-of-household) and represents an increasing amount of territory and prestige within the salarian political web.

Approaching 100 members, the first circle of a salarian's clan comprises parents, siblings, uncles, aunts, and cousins. The next circle includes second cousins, etc., and escalates to well over 1000 members. The fourth or fifth circle of a clan numbers into the millions. Salarian loyalty is greatest to their first circle and diminishes from there. Their photographic memories allow salarians recognize all their myriad relatives.

Salarians: League of One

Before they joined the Citadel Council, the salarians' most potent military tool was a small reconnaissance team known as the League of One. Their primary training was in espionage and assassination. Never more than a dozen strong, the team was adept at infiltrating the tightest defenses and eliminating all necessary obstacles.

Only a few top members of government and military were privy to the League's identities. League members wore no distinguishing garments, and held no particular rank. The only evidence of their participation in the League was a small medallion presented to each member upon induction. This secrecy was maintained until the formation of the Council.

In an effort to dispel rumors and appease their new asari partners, the Salarian Union released all classified documents pertaining to the League. The League of One was suddenly exposed and in danger of being hunted by enemies of the salarians. Before any harm could be done, the team mysteriously disappeared. Most assumed this was a convenient lie to help hide their identities, but a few months later, the inner cabinet was murdered. Though there was no incriminating evidence, it was clear who was responsible.

Realizing the threat posed by this rogue outfit, the Special Tasks Group dispatched a team of hunters. When they didn't return, the STG dispatched ten of its brightest operators with broad discretionary powers. Only two returned; they reported no evidence of the League.

No further incidents were reported and it was assumed the League was wiped out. Some recently declassified documents, however, have suggested there may have been a 13th member who eluded the salarian military.

Salarians: Military Doctrine

In principle, the salarian military is similar to the Alliance, a small volunteer army that focuses on maneuver warfare. What differentiates the salarians is not their equipment or doctrine, but their intelligence services and rules of engagement. The salarians believe that a war should be won before it begins.

Conventional wisdom holds that the salarians know everything about everyone, and this is not far from the truth. In war, the unquestioned superiority of their intelligence services allows them to use their small military to maximum effectiveness. Well before fighting breaks out, they possess complete knowledge of their enemy's positions, intentions, and timetable.

In every war the salarians have fought, they struck first and without warning. For the salarians, to know an enemy plans to attack and to let it happen is folly. To announce their own plans to attack is insanity. They find the human moral concepts of 'do not fire until fired upon' and 'declare a war before prosecuting it' incredibly naïve. In defensive wars, they execute

devastating preemptive strikes hours before the enemy's own attacks. On the offense, they have never telegraphed their intentions with a declaration of war before attacking.

Biotics are virtually unknown in the salarian military. Those with such abilities are considered too valuable to be used as cannon fodder and are assigned to the intelligence services.

While capable of defending themselves against most threats, the salarians know that they are small fish in a universe filled with sharks. As a point of survival, they have cultivated strong alliances with larger powers, particularly with the turians. Though the relationship between the two species was rocky at first due to the krogan uplift fiasco, the salarians take pains to keep this relationship strong enough that anyone who might threaten them risks turian intervention.

Salarians: Special Task Group

Salarian intelligence field agents are grouped into an organization called the Special Tasks Group. STG operators work in independent cells, performing dangerous missions such as counterterrorism, infiltration reconnaissance, assassination, and sabotage.

The STG is a proactive organization, puncturing worrisome trends before they become movements. At any time, a dozen groups are operating covertly within the lawless Terminus Systems, sowing dissent among the various factions. Civilian analysts also note how troublesome 'hinge point' individuals in Terminus frequently meet unexpected deaths.

STG operators are feared throughout the galaxy for their clear-eyed, remorseless practicality. They are willing to do whatever it takes to achieve their mission, even if it kills civilians or results in the team's own destruction. In many ways, they are akin to the Council Spectres.

Recently, a number of STG cells have been redeployed from Salarian Union. It is assumed they are in the Terminus and Attican Traverse, investigating reports of geth activity beyond the Perseus Veil.

Turians



Roughly 1200 years ago, the turians were invited to join the Citadel Council to fulfill the role of galactic peacekeepers. The turians have the largest fleet in Citadel space, and they make up the single largest portion of the Council's military forces.

As their territory and influence has spread, the turians have come to rely on the salarians for military intelligence and the asari for diplomacy. Despite a somewhat colonial attitude towards the rest of the galaxy, the ruling Hierarchy understands they would lose more than they would gain if the other two races were ever removed.

Turians come from an autocratic society that values discipline and possesses a strong sense of personal and collective honor. There is lingering animosity between turians and humans over the First Contact War of 2157, which is known as the 'Relay 314 Incident' to the turians. Officially, however, the two species are allies and they enjoy civil, if cool, diplomatic relations.

Turians: Biology

The turian homeworld, Palaven, has a metal-poor core, generating a weak magnetic field and allowing more solar radiation into the atmosphere. To deal with this, most forms of life on Palaven evolved some form of metallic 'exoskeleton' to protect themselves. Their reflective plate-like skin makes turians less susceptible to long-term, low-level radiation exposure, but they do not possess any sort of 'natural armor'. A turian's thick skin does not stop projectiles and directed energy bolts.

Although life on Palaven is carbon-based and oxygen-breathing, it is built on dextro-amino acids. This places the turians in a distinct minority on the galactic stage; the quarians are the only other known sapient dextro-protein race. The food of humans, asari, or salarians (who evolved in levo-amino acid-based biospheres), will at best pass through turian systems without providing any nutrition. At worst, it will trigger an allergic reaction that can be fatal if not immediately treated.

Turians: Culture

While turians are individuals with personal desires, their instinct is to equate the self with the group, and set aside personal desires for the good of all.

Turians are taught to have a strong sense of personal accountability, the 'turian honor' that other races find so remarkable. Turians are taught to own every decision they make, good or ill. The worst sin they can make in the eyes of their people is to lie about their own actions. Turians who murder will try to get away with it, but if directly questioned, most will confess the crime.

Turians have a strong inclination toward public service and self-sacrifice, so they tend to be poor entrepreneurs. To compensate, they accepted the mercantile volus as a client race, offering protection in exchange for their fiscal expertise.

The turian military is the center of their society. It is not just an armed force; it is an all-encompassing public works organization. The military police are also the civic police. The fire brigades serve the civilian population as well as military facilities. The corps of engineers builds and maintains spaceports, schools, water purification plants, and power stations. The merchant marine ensures that all worlds get needed resources.

Turians: Government

The turian government is a hierarchical meritocracy. While it has great potential for misuse, this is tempered by the civic duty and personal responsibility turians learn in childhood.

Turians have 27 citizenship tiers, beginning with civilians (client races and children). The initial period of military service is the second tier. Formal citizenship is conferred at the third tier, after boot camp. For client races, citizenship is granted after the individual musters out. Higher-ranked citizens are expected to lead and protect subordinates. Lower-ranked citizens are expected to obey and support superiors. Promotion to another tier of citizenship is based on the personal assessments of one's superiors and co-rankers.

Throughout their lives, turians ascend to higher tiers and are occasionally 'demoted' to lower ones. The stigma associated with demotion lies not on the individual, but on those who promoted him when he wasn't ready for additional responsibility. This curbs the tendency to promote individuals into positions beyond their capabilities.

Settling into a role and rank is not considered stagnation. Turians value knowing one's own limitations more than being ambitious.

At the top are the Primarchs, who each rule a colonization cluster. The Primarchs vote on matters of national import. They otherwise maintain a 'hands-off' policy, trusting the citizens on each level below them to do their jobs competently.

Turians enjoy broad freedoms. So long as one completes his duties, and does not prevent others from completing theirs, nothing is forbidden. For example, there are no laws against recreational drug use, but if someone is unable to complete his duties due to drug use, his superiors step in. Judicial proceedings are 'interventions.' Peers express their concern, and try to convince the offender to change. If rehabilitation fails, turians have no qualms about sentencing dangerous individuals to life at hard labor for the state.

Turians: Military Doctrine

Although they lack the brutality of the krogan, the skill of the asari, and the virtuosity of the humans, the turian military has formidable discipline. Officers and NCOs are 'lifers' with years of field experience. Enlisted personnel are thoroughly trained and stay calm under fire. Turian units don't break. Even if their entire line collapses, they fall back in order, setting ambushes as they go. A popular saying holds: 'You will only see a turian's back once he's dead.'

Boot camp begins on the 15th birthday. Soldiers receive a year of training before being assigned to a field unit; officers train for even longer. Most serve until the age of 30, at which point they become part of the Reserves. Even if they suffer injuries preventing front-line service, most do support work behind the lines.

Biotics are uncommon. While admired for their exacting skills, biotics' motives are not always fully trusted by the common soldier. The turians prefer to assign their biotics to specialist teams called Cabals.

Command and control is decentralized and flexible. Individual squads can call for artillery and air support. They make extensive use of combat drones for light duties, and practice combined arms: infantry operates with armor, supported by overhead gunships. Strategically, they are methodical and patient, and dislike risky operations.

Tradition is important. Each legion has a full-time staff of historians who chronicle its battle honors in detail. The oldest have records dating back to the turian Iron Age. If a legion is destroyed in battle, it is reconstituted rather than replaced.

The turians recruit auxiliary units from conquered or absorbed minor races. Auxiliaries are generally light infantry or armored cavalry units that screen and support the main turian formations. At the conclusion of their service in the Auxiliaries, recruits are granted turian citizenship.

Turians: Religion

Although turians have a strict moral code, their belief in individual responsibility means that the concepts of good and evil are simply the individual's choice between egotism and altruism in any given decision. They have no concept of 'good' deities that encourage noble behavior or 'evil' ones that tempt individuals to misdeeds.

Turians believe that groups and areas have 'spirits' that transcend the individual. For example, a military unit would be considered to have a literal spirit that embodies the honor and courage it has displayed. A city's spirit reflects the accomplishments and industry of its residents. An ancient tree's spirit reflects the beauty and tranquility of the area it grows within.

These spirits are neither good nor evil, nor are they appealed to for intercession. Turians do not believe spirits can affect the world, but spirits can inspire the living. Prayers and rituals allow an individual to converse with a spirit for guidance or inspiration. For example, a turian who finds his loyalty tested may appeal to the spirit of his unit, hoping to reconnect with the pride and honor of the group. A turian who wishes to create a work of art may attempt to connect with the spirit of a beautiful location.

Turians enjoy absolute freedom of religion and can practice whatever appeals to them so long as it does not impede anyone's ability to perform their duties. There are many practitioners of the asari 'siarist' philosophy. Since opening dialog with the human Systems Alliance, some turians have embraced Confucianism and Zen Buddhism.

Turians: The Unification War

At about the time the salarians and asari were forming the Council, the turians were embroiled in a bitter civil war. The Unification War, as it was later named, began with hostilities between the colonies furthest from the turian homeworld, Palaven.

These colonies were run by local chieftains, many of whom had distanced themselves from the Hierarchy. Without the galvanizing influence of the government, the colonies became increasingly isolated and xenophobic. Colonists began wearing emblems or facial markings to differentiate themselves from members of other colonies and open hostilities became common.

When war finally broke out, the Hierarchy maintained strict diplomacy and refused to get involved. After several years of fighting, less than a dozen factions remained and the Hierarchy finally intervened. By that time, the chieftains were too weak to resist; they were forced to put an end to fighting and renew their allegiance to the Hierarchy.

Though peace was restored, it took several decades for animosity between colonists to fade completely. To this day, most turians still wear the facial markings of their home colonies. As a point of interest, the turian term 'barefaced' refers to one who is beguiling or not to be trusted. It is also a slang term for politicians.

Aliens: Extinct races

Protheans



Fifty thousand years ago, the Protheans were the only spacefaring species in the galaxy. They vanished in a swift 'galactic extinction'. Only the legacy of their empire remains. They are believed to have built the mass relays and the Citadel, which have allowed numerous species to explore and expand throughout the galaxy.

Prothean ruins are found on worlds across the galaxy. While surprisingly intact for their age, functioning examples of Prothean paleotechnology are rare. Time and generations of looters have picked their dead cities and derelict stations clean.

Some believe the Protheans meddled in the evolution of younger races. The hanar homeworld of Kahje, for example, shows clear evidence of former Prothean occupation. The presence of a former Prothean observation post on Mars has caused a rebirth of 'interventionary evolutionists' among humans. These individuals believe the god-myths of ancient civilizations are misremembered encounters with aliens.

Protheans: Beacon

The beacon was a Prothean artifact unearthed on the Alliance colony of Eden Prime. Its resemblance to the Prothean data banks recovered on Mars provoked immediate interest from the Alliance and the Citadel Council. It proved to be a solid state data storage device, part of a galaxy-spanning comm network similar to the modern extranet. Intact Prothean 'paleo-technology' is rare; the beacon seemed to promise another quantum leap of technology, akin to the discovery of the mass effect drive and relays.

Unfortunately, the beacon also drew the attention of the rogue Spectre Saren Arterius and his synthetic allies, the geth. A dawn raid by his flagship Sovereign resulted in hundreds of civilian casualties. The beacon was badly damaged. The motives behind the attack are still being investigated.

During the recovery operation, the beacon fired a pulse of energy at the Executive Officer of the Alliance frigate Normandy. Lieutenant Commander Shepard survived and appears to have suffered no ill effects. Afterwards, the beacon fell inert. The mechanism appears to be dead.

Protheans: Cypher

The Prothean beacon downloaded its knowledge into Commander Shepard on Eden Prime, causing confusing dreams and visions. While the imagery is becoming clearer with time, the meaning of the beacon communication remains elusive.

It has been suggested that Prothean data recording is highly dependent on a certain point of view, what Carl Jung described as the collective unconscious. The “cipher” needed to comprehend the images implanted in Shepard's mind is the cultural knowledge of a Prothean: the archetypes, biological instincts, and common experiences universal to the race. Since the Protheans have been dead for millennia, it may be impossible to acquire this “cipher”.

Protheans: Data Disks

Despite all the evidence confirming the existence of the Protheans, little is known about their culture and society. From time to time, dig sites will yield new clues, but after 50,000 years of decay, little of value is unearthed.

Recent research has focused on the discovery of Prothean data discs. On their own, they are frail and rarely found in one piece. Occasionally, however, an intact disc will be discovered within a console or reading device.

To date, over three dozen discs have been recovered and a few of those have been restored to the point where researchers can begin analyzing them. Though it may be some time before scientists discover a way to transfer the data off the discs, they are currently considered the most tangible leads for learning more about the Prothean culture.

Protheans: Mars Ruins

After 20 years of manned research outposts and nearly a century of robotic exploration, the European Space Agency's Lowell City became the first permanent settlement on Mars in 2103. Within a decade, the United States and China had founded permanent settlements as well.

The south polar region of Promethei Planum developed a 'Bermuda Triangle' reputation. Satellites detected intermittent mass concentrations and magnetic field shifts. In 2148,

prospectors working near Deseado Crater discovered an underground complex: a Prothean observation post. The odd phenomena were generated by the operation and discharge of a mass effect core, struggling to function despite 50 millennia of neglect.

Earth was electrified by the news. Humanity was unequivocally not alone. While courts battled over who owned the ruins, the international scientific community coordinated a massive effort to access, translate, and interpret the databanks recovered from the facility.

The facility proved to be a biosciences observation post built when homo sapiens were first evolving on Earth. While the motives of the Protheans are not certain, translated records indicate that the facility was in regular communication with automated observation platforms in Earth orbit and on the lunar nearside. The half-dozen mass effect spaceships found in the facility were presumably used for first-hand observation.

Rachni

Though now extinct, the rachni once threatened every species in Citadel space. Over 2000 years ago, explorers foolishly opened a mass relay to a previously-unknown system and encountered something never seen before or since: a species of spacefaring insects guided by a hive-mind intelligence.

Unfortunately, the rachni were not peaceful, and the galaxy was plunged into a series of conflicts known as the Rachni Wars. Attempts to negotiate were futile, as it was impossible to make contact with the hive queens that guided the race from beneath the surface of their toxic homeworld.

The emergence of the krogan ended the Rachni Wars. Bred to survive the harshest environments, the krogan were able to strike at the queens in their lairs and reclaim conquered Council worlds. But when krogan fleets pressed them back to their homeworld, the rachni refused to surrender, and the krogan eradicated them from the galaxy.

Aliens: Non-Council Races

Batarians



In the early 2160s, the Alliance began aggressive colonization of worlds in the Skyllian Verge, much to the dismay of the batarians who had been developing the region for several decades. In 2171, the batarians petitioned the Council to declare the Verge a "zone of batarian interest." The Council refused, however, declaring unsettled worlds in the region open to human colonization.

In protest, the batarians closed their Citadel embassy and severed official diplomatic relations with the Council, effectively becoming a rogue state. They instigated a proxy war in the Verge by funneling money and weapons to criminal organizations, urging them to strike at human colonies.

Hostilities peaked with the Skyllian Blitz of 2176, an attack on the human capital of Elysium by batarian-funded pirates and slavers. In 2178, the Alliance retaliated with a crushing assault on the moon of Torfan, long used as a staging base by batarian-backed criminals. In the aftermath, the batarians retreated into their own systems, and are now rarely seen in Citadel space.

Collectors



Living beyond the Omega 4 mass relay in the Terminus Systems, the mysterious Collector species is glimpsed so rarely as to be taken for a myth by most in galactic society. In reality, Collectors are human-sized insectoid bipeds and can resemble massive winged beetles. They are a terrifying force in the galaxy, responsible for the murder of hundreds of thousands.

Collectors generate permanent stasis fields around themselves, creating nightmarish red-shifted energy fields. In battle, they hold position whenever possible, relying on their aggressive biotics and nearly limitless power. Several types of bipedal Collectors have been identified, including minions, defenders, zealots, assassins and artillery-operators.

Acting together, Collectors have imprisoned entire cities in stasis. While no definitive forensic accounting exists to explain the fate of those imprisoned, leading speculation is that victims are harvested for scientific experimentation and neuro-biological repurposing.

Collectors: Collector General

Cerberus xenobiologists believed until recently that the Collectors were coordinated by a biotically active caste, similar to other insectoid alien species. New evidence suggests the Collectors have a singular commander, a so- called "Collector General" that has never been seen on the battlefield. Instead, it selects its minions as remote platforms for its consciousness in a process that has been likened to a biological hack or a cybernetic version of demonic possession.

The Collector General can send a secure signal to any one of its minions, smoothly take control of their motor functions, and awaken their previously dormant biotic potential. In a matter of seconds, even the lowliest Collector drone can be upgraded to a battle-hardened biotic commander. If the Collector dies, the General can simply activate and control another body.

Postmortem analysis reveals that this "command signal" relies on cybernetic implants directly installed in the Collectors' cerebellums, but how the technology functions is presently unknown. Coordinating sensory input and motor functions simultaneous with remotely amplifying biotic abilities is beyond the grasp of current human science. Why such an advanced species would be interested in humans is puzzling. More disturbing still, victims of the Collectors say the General has spoken to them and referred to itself by a human name: Harbinger.

Collectors: Harbinger

While monitoring outgoing transmissions sent by the mysterious leader of the Collectors to his minions on the battlefield, Cerberus intelligence experts also intercepted incoming transmissions. The signals were encrypted commands sent to the Collector General from a source outside the galaxy. This directing intelligence is likely the Reaper that refers to itself as "Harbinger."

This indicates that the Collector General, previously thought of as a puppeteer-like figure, was essentially a mere conduit through which Harbinger mobilized the Collectors' mission to protect and nurture an embryonic Reaper by providing it a steady supply of humans. In this way, the Collectors allowed the proto-Reaper to incorporate the human genome into its own construction, though why a Reaper would want such a thing is still unclear.

Drell (no primary entry)



Drell : Biology

Drell are omnivorous reptile-like humanoids with an average life span of 85 galactic standard years. They give live birth to their young, who are capable of eating solid food from the moment they are born. Drell appearance is very similar to asari and humans, but their muscle tissue is

slightly denser than that of humans, giving them a wiry strength. Many of their more reptilian features are concealed, like a three-chambered heart with a muscular ridge that is capable of shunting oxygenated or deoxygenated blood as needed.

One unique characteristic, however, is the hyoid bone in their throats, which allows them to inflate their throats and produce vocal sounds outside of the human range. Would-be assassins have noted that these two features make drell extremely hard to strangle or suffocate.

Because the drell ancestors emerged from arid, rocky deserts, the humid, ocean-covered hanar homeworld of Kahje proved tolerable only when the drell stayed inside a climate-controlled dome city. Due to this huge disparity in the two species' homeworld environments, the leading cause of death among drells on Kahje is a bacterial lung disease called Kepral's Syndrome.

Within a generation of the drell's arrival on the planet, the disease had become resistant to hanar antibiotics and other advanced treatments. Once an infection settles in, death is slow but imminent. Transplants may buy time, but as the infection spreads to other major organs there comes a point of diminishing returns and eventual system failure.

Drell: Culture

Eight centuries ago, the already-arid drell homeworld, Rakhana, began its swift descent into lifelessness due to disastrous industrial expansion. Because their population was bursting at 11 billion and they did not possess interstellar flight capacity, the drell would have been doomed without the intervention of the hanar.

Following first contact, the hanar spent ten years transporting 375,000 willing drell to their own homeworld, Kahje. The remaining billions perished in the dying world, warring against each other for diminishing sources of water and food. Today, only a few thousand survive on Rakhana in clusters never exceeding a few hundred. Now a cemetery world, Rakhana's population can double during pilgrimage season.

Drell have been part of the galactic community for almost two centuries. Most reside on Kahje, content to coexist with the hanar. Those who leave Kahje tend to be adventurers. Gifted by the hanar with acute perception of interspecies body language, solitary drell travelers often seek out new species elsewhere, adopting that species' culture and rarely returning to Kahje. Such drell number in the thousands and are scattered across the galaxy, tending towards quiet integrated lives.

On Kahje, the hanar afforded the drell every opportunity to thrive. While outsiders and even some hanar regard the drell as junior partners, if not actual servants, drell have integrated themselves into every level of hanar society as respected productive citizens.

Elcor



The elcor are a Citadel species native to the high-gravity world Dekuuna. They are massive creatures, standing on four muscular legs for increased stability. Elcor move slowly, an evolved response to an environment where a fall can be lethal. This has colored their psychology, making them deliberate and conservative.

Elcor speech is ponderous and monotone. Among themselves, scent, slight movements, and subvocalized infrasound convey shades of meaning that make a human smile seem as subtle as a fireworks display. Since their subtlety can lead to misunderstandings with other species, the elcor often go out of their way to clarify when they are being sarcastic, amused, or angry.

Dekunna's high gravity impedes mountain formation. Most of the world consists of flat, open plains, which prehistoric elcor wandered across in small family bands. Modern elcor still prefer open sky, and can become restless and uncomfortable on long starship journeys.

Geth



The geth are a humanoid race of networked AIs. They were created by the quarians 300 years ago as tools of labor and war. When the geth showed signs of self-evolution, the quarians attempted to exterminate them. The geth won the resulting war. This example has led to legal, systematic repression of artificial intelligences in galactic society.

The geth possess a unique distributed intelligence. An individual has rudimentary animal instincts, but as their numbers and proximity increase, the apparent intelligence of each individual improves. In groups, they can reason, analyze situations, and use tactics as well as any organic race.

Geth space is located at the trailing end of the Perseus Arm, beyond the lawless Terminus Systems. The Perseus Veil, an obscuring 'dark nebula' of opaque gas and dust, lies between their space and the Terminus Systems.

Geth: Armatures

Armatures are quadruped all-terrain heavy weapons platforms, akin to the armored fighting vehicles of other races. Geth being synthetic intelligences, armatures are not crewed vehicles, but intelligent entities, capable of independent decision-making and learning.

Armatures are equipped with heavy kinetic barriers. Their main cannon, mounted on the articulated 'head' turret, appears to be a highly efficient conventional mass accelerator. It is capable of firing in anti-personnel and anti-tank modes. Some armatures carry drones into battle, presumably for reconnaissance purposes. Others host a swarm of insect-sized repair microbots.

Geth: Culture

The most remarkable aspect of geth culture is that it may not exist at all. Geth are a network intelligence; a single entity in myriad bodies. They share data with one another, whether discrete facts or "memories": audiovisual recordings of experiences and logs of thought-processes. Any event experienced by one geth is uploaded to the group mind, so that all geth, everywhere, "remember" such an event as if they'd experienced it themselves.

No one knows whether geth develop personalities as organic-created AIs do. If an organic-designed AI is transferred into another quantum bluebox, its personality is reset. Most geth programs transfer from one hardware platform to another constantly; if a geth needs to travel to another star, it downloads into a starship body. If it needs to replace a piece of malfunctioning hardware, it downloads into a small body with hands. If geth are reset at transfer, it would make development of individual personalities unlikely.

Records of the quarian war suggest the geth have no concept of self-preservation. They do not flinch from gunfire, and do not hesitate to sacrifice themselves if it allows their fellows an advantage. Thousands of mobile platforms were expended assaulting quarian positions, but file-sharing between platforms ensured their memories and experience would not be lost. Geth are therefore immortal; if their hardware is destroyed, archival copies of their programs and databases can be downloaded into a new body.

With the gap in contact between the quarian war and the arrival of Sovereign, the only proven fact about the geth is that they were isolationists for centuries. They never ventured outside the Perseus Veil, but no organic ship that entered their territory ever returned.

Geth: Heretics

Conversations with the geth programs dubbed "Legion" have brought to light a profound schism in geth society. When Saren Arterius approached the geth in the dreadnought Sovereign, some of them chose to follow him; most did not. Saren's followers were allowed to leave geth society, but were dubbed "heretics" by those that remained.

This revelation implies several things. First, the majority of geth chose not to attack organic society. Second, the geth forces the Council and Alliance fleets have battled the last two years represent only a small portion of their actual military and economic power, perhaps as little as five percent of mainstream geth society. Third, this schism suggests that individual geth possess more free will and perhaps even personality than previously suspected. Without such individuality, no geth could have deviated from the group decision to join or reject Saren's mission. There could not have been a division.

Finally, there is the matter of Legion's word choice. The geth used the English word "heretics" to describe Saren's followers. Of the many words Legion could have chosen

(nonconformists, dissenters, rebels, etc.), only the word "heretic" suggests a broadly accepted geth philosophy or religion, and that the actions of Saren's allies violated the orthodoxy.

Geth: Technology

The most difficult aspect of geth existence for organics to comprehend is that a body is meaningless to geth. The biped form commonly perceived as a geth is nothing more than a "mobile platform." A geth's software -- hundreds of programs whose interactions mimic organic consciousness -- can be installed in any given hardware. The geth that was a bipedal soldier an hour ago may now be a quadruped heavy armature and, in another hour, might be a starship. Between tasks, geth programs upload to gigantic space station mainframes that allow billions of programs to exchange thoughts and memories with minimal lag.

The claim that the geth are an example of the extreme risk posed by AI development is misleading. As opposed to the "top down" design of organic-created AIs, in which hardware and software are specifically designed to achieve consciousness, geth are a "bottom up" model. They were never intended to possess more than animal-level, trainable reasoning.

Designed as VI-driven robots -- not significantly different from modern security mechs -- geth consciousness developed as their adaptive learning programs interacted with one another via networked processing. The geth code-base discovered that three individual robots using a wireless local network to form a single mind could perform many tasks more efficiently than they could as individuals. As these local networks were more heavily exploited, they reached a critical mass of processing, achieving consciousness.

Modern geth retain this remarkable interconnectivity, constantly exchanging data with one another and networking to increase their cognitive abilities. To geth, these mind-sharing abilities are as natural and unconscious as breathing is to most organics.

Hanar



The hanar are a Citadel species known for excessive politeness. They speak with scrupulous precision, and take offense at improper language. Hanar that expect to deal with other species take special courses to help them unlearn their tendency to take offense at improper speech.

All hanar have two names. The Face Name is known to the world; the Soul Name is kept for use among close friends and relations. Hanar never refer to themselves in the first person in conversation with someone they know on a Face Name basis. To do so is considered egotistical, so instead they refer to themselves as "this one," or the impersonal "it."

Their homeworld, Kahje, has 90% ocean cover and orbits an energetic white star, resulting in a permanent blanket of clouds. Due to the presence of Prothean ruins on the world, many hanar worship them, and hanar myths often speak of an elder race that civilized them by teaching them language.

Keepers

When the asari discovered the Citadel, they also discovered the keepers, a docile multi-limbed insect race that seemingly exists only to maintain and repair the great Prothean station.

Early attempts to communicate with or study the keepers were failures, and it is now illegal to interfere with or impede keeper activity. Because they are completely non-threatening, keepers have become virtually invisible to everyone else.

Similarly, they seem indifferent to other species, except for their tendency to help new arrivals integrate themselves into the Citadel.

No matter how many keepers die due to old age, violence, or accident, they maintain a constant number. No one has discovered the source of new keepers, but some hypothesize they are

genetic constructs: biological androids created somewhere deep in the inaccessible core of the Citadel itself.

Krogan



The krogan evolved in a hostile and vicious environment. Until the invention of gunpowder weapons, 'eaten by predators' was still the number one cause of krogan fatalities. Afterwards, it was 'death by gunshot'.

When the salarians discovered them, the krogan were a brutal, primitive species struggling to survive a self-inflicted nuclear winter. The salarians culturally uplifted them, teaching them to use and build modern technology so they could serve as soldiers in the Rachni War.

Liberated from the harsh conditions of their homeworld, the quick-breeding krogan experienced an unprecedented population explosion. They began to colonize nearby worlds, even though these worlds were already inhabited. The Krogan Rebellions lasted nearly a century, only ending when the turians unleashed the genophage, a salarian-developed bioweapon that crushed all krogan resistance.

The genophage makes only one in 1000 pregnancies viable, and today the krogan are a slowly dying breed. Understandably, the krogan harbor a grudge against all other species, especially the turians.

Krogan: Biology

The krogan evolved in a lethal ecology. Over millions of years, the grim struggle to survive larger predators, virulent disease, and resource scarcity on their homeworld, Tuchanka, turned the lizards into quintessential survivors. Perhaps the most telling indicator of Tuchanka's lethality is

the krogan eyes. Although they are a predator species by any standard definition, their eyes evolved to be wide-set, as in Earth prey species like deer and cattle. Krogan eyes have a 240-degree arc of vision, better suited for spotting enemies sneaking up on them than for pursuit.

Physically, the krogan are nigh-indestructible, with a tough hide impervious to any melee weapon short of a molecular blade. While they feel pain, it does not affect their ability to concentrate. They have multiple functioning examples of all major organs, and can often survive the loss of one or two of any type. Rather than a nervous system, they have an electrically conductive second circulatory system. A krogan can never be paralyzed - they may lose some of this fluid, but it can be replaced by the body in time.

The most widely-known biological feature of the krogan is their incredible birth rate and rapid maturity. Once freed from the hostile cauldron of Tuchanka, the krogan population swelled into a numberless horde. Only the genophage kept them from out-breeding the combined Council races. Now the rare krogan females capable of bringing a child to term are treated like strategic resources; warlords will trade them at diplomacy or (more frequently) fight wars over them.

Krogan: Blood Rage

Feared throughout the galaxy as nightmarishly violent warriors, the krogan are both aided and hobbled by their legendary "blood rage."

In the grip of that madness, krogan become seemingly invincible, but are merely totally unresponsive to pain. "Blood-enraged" krogan fight regardless of injury level, to the extent that krogan shorn of all four limbs continue gnashing past brain death until total somatic death.

The supremely resilient, hyper-violent blood rage is the synergy of two aspects of krogan neurology. The first aspect is a positive feedback loop in which adrenaline, also activated by fear or rage, suppresses serotonin, the brain chemical that induces serenity. The second is the over-developed krogan limbic system. In krogan, as in humans, fear or rage shifts mental control from the frontal lobes, responsible for reasoning, to the limbic system, responsible for aggression and survival. During that shift, krogan and humans exhibit diminished capacity for logic and self-control.

Prior to the ecological devastation of Tuchanka, blood rage was extremely rare among the krogan. Back then, while all krogan were capable of heightened anger and violence in fight-or-flight scenarios, almost none experienced insensitivity to pain. The one percent who did were those suffering serotonin-suppression. At that time, krogan society regarded the condition as pathological, and medicated or imprisoned sufferers to protect them and society.

Following nuclear ecocide four millennia ago, evolution selected only those krogan afflicted with blood rage for survival. Today there is no living memory among the krogan of a life without mindless, murderous fury.

Krogan: Culture

The harsh krogan homeworld conditioned the krogan psychology for toughness just as it did the body. Krogan have always had a tendency to be selfish, unsympathetic, and blunt. They respect strength and self-reliance and are neither surprised nor offended by treachery. The weak and selfless do not live long. In their culture, 'looking out for number one' is simply a matter of course.

After their defeat in the Rebellions, the very concept of krogan leadership was discredited. Where a warlord could once command enough power to bring entire solar systems to heel and become Overlord, these days it is rare for a single leader to have more than 1000 warriors swear allegiance to him. Most krogan trust and serve no one but themselves.

This solitary attitude stems in part from a deep sense of fatalism and futility, a profound social effect of the genophage that caused krogan numbers to dwindle to a relative handful. Not only are they angry that the entire galaxy seems out to get them, the krogan are also generally pessimistic about their race's chances of survival. The surviving krogan see no point to building for the future; there will be no future. The krogan live with an attitude of 'kill, pillage, and be selfish, for tomorrow we die'.

Krogan: Genophage

The genophage bioweapon was created to end the Krogan Rebellions. From the start, the krogan had overwhelmed the Council. Only timely first contact with the turians saved the Council races. The turians fought the krogan to a standstill, but sheer weight of krogan numbers indicated the war could not be won through conventional means. The turians collaborated with the salarians to genetically engineer a counter to the rapid breeding of the krogan.

The genophage virus gained the energy to replicate by 'eating' key genetic sequences. Every cell in every krogan had to be altered for the weapon to be foolproof; otherwise the krogan could have used gene therapy to fix the affected tissues. Once a genophage strain could find no more genes to eat, it would starve and die, limiting spin-off mutation and contamination. This 'created' genetic flaw is hereditary.

The salarians believed the genophage would be used as a deterrent, a position the turians viewed as naïve. Once the project was complete, the turians mass produced and deployed it. The krogan homeworld, their colonies, and all occupied worlds were infected.

The resulting mutation made only one in a thousand krogan pregnancies carry to term. It did not reduce fertility, but offspring viability. The rare females able to carry children to term became prizes the krogan warlords fought brutal battles over.

The krogan are a shadow of their former glory. While the Rebellions took place centuries ago, they are constantly reminded of the horror of the genophage, and of their inability to counter it. The release of the genophage is still controversial, bitterly debated in many circles.

Krogan: Krogan Rebellions

After the Rachni War, the quick-breeding krogan expanded at the expense of their neighbors. Warlords leveraged their veteran soldiers to seize living space while the Council races were still grateful. Over centuries, the krogan conquered world after world. There was always 'just one more' needed. When the Council finally demanded withdrawal from the asari colony of Lusya, krogan Overlord Kredak stormed off the Citadel, daring the Council to take their worlds back.

But the Council had taken precautions. The finest STG operators and asari huntresses had been drafted into a covert 'observation force', the Office of Special Tactics and Reconnaissance. The Spectres opened the war with crippling strategic strikes. Krogan planets went dark as computer viruses flooded the extranet. Sabotaged antimatter refineries disappeared in blue-white annihilation. Headquarters stations shattered into orbit-clogging debris, rammed by pre-placed suicide freighters.

Still, this only delayed the inevitable. The war would have been lost if not for first contact with the turians, who responded to krogan threats with a prompt declaration of war. Being on the far side of krogan space from the Council, the turians advanced rapidly into the lightly-defended krogan rear areas. The krogan responded by dropping space stations and asteroids on turian colonies. Three worlds were rendered completely uninhabitable.

This was precisely the wrong approach to take with the turians. Each is first and foremost a public servant, willing to risk his life to protect his comrades. Rather than increasing public war weariness, krogan tactics stiffened turian resolve.

The arrival of turian task forces saved many worlds from the warlords' marauding fleets, but it took development of the genophage bioweapon to end the war. There were decades of unrest afterwards. Rogue warlords and holdout groups of insurgents refused to surrender, or disappeared into the frontier systems to become pirates.

Krogan: Military Doctrine

Traditional krogan tactics were built on attritional mass-unit warfare. Equipped with cheap rugged gear, troop formations were powerful but inflexible. Command and control was very centralized; soldiers in the field who saw a target contacted their commanders behind the lines to arrange fire support.

Since the genophage, the krogan can no longer afford the casualties of the old horde attacks. The battlemasters are a match for any ten soldiers of another species. To a battlemaster, killing

is a science. They focus on developing a clean, brute-force economy of motion that exploits their brutal strength to incapacitate enemies with a swift single blow of overwhelming power.

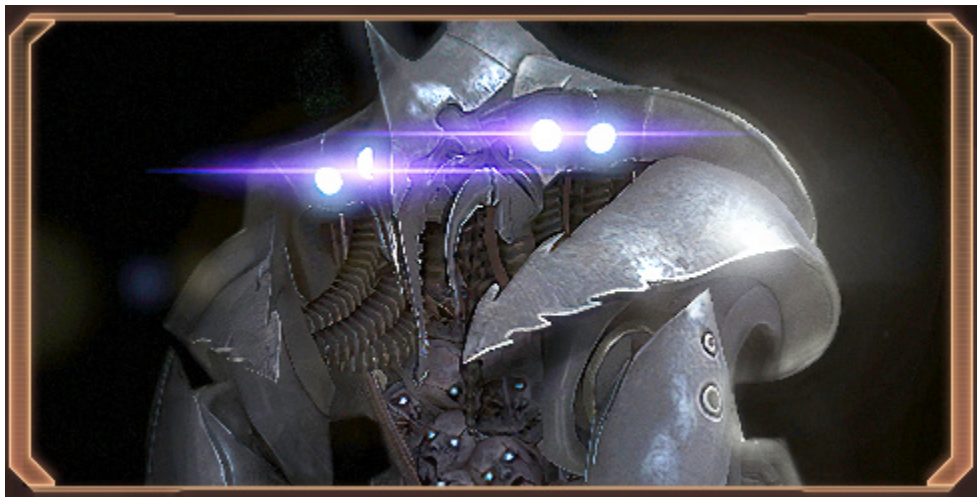
This change of focus from mass-unit warfare to maximal efficiency has increased employment demand in the fields of security and "muscle for hire." Due to the unsavory reputation of the krogan, most of these jobs are on the far side of the law.

Battlemasters are not "spit and polish," but they do believe in being well-armed and equipped, preferably with a gun for each limb. They are callous and brutal, but methodical and disciplined. They use any means at their disposal to achieve their goals, no matter how reprehensible. Hostage-taking and genocide are acceptable means to ensure a quiet occupation with few krogan casualties.

The krogan serving with Saren's forces appear to be returning to the old style of mass attritional combat. They also work in close cooperation with supporting geth units, who fill the roles occupied by combat drones in other armies.

Biotics are rare among the krogan. Those that exist are viewed with suspicion and fear. The krogan see this aura of fear as a useful quality for an officer, and often promote them. Combat drones and other high-tech equipment are likewise in short supply.

Praetorians



Hovering tanks resembling a cross between an octopus and a giant crab, praetorians are well-armored killing machines of mysterious origin.

Praetorians employ redundant systems from the multiple humans encased within them. Armed with eye-mounted particle beams, they are capable of unleashing devastating close-range energy attacks that also regenerate their shields. Within hours after death, the organic

components of praetorian corpses disintegrate into a denatured pus, while their mechanisms turn to ash. One specimen, autopsied within minutes of death, reveals a clue: nanomachines may disintegrate the praetorian's organic and mechanical components before self-destructing.

If correct, this self-rendering hypothesis could account for three documented cases of dead praetorians apparently releasing (or becoming) clouds of neurotoxic gases, causing suffocating paralysis and nearly-instant death. In one remote facility, 17 soldiers died from gas inhalation while assessing the praetorian. Any personnel in the vicinity of dead praetorians are urged to protect themselves with breathing apparatus.

Quarians



Driven from their home system by the geth nearly three centuries ago, most quarians now live aboard the Migrant Fleet, a flotilla of fifty thousand vessels ranging in size from passenger shuttles to mobile space stations.

Home to 17 million quarians, the flotilla understandably has scarce resources. Because of this, each quarian must go on a rite of passage known as the Pilgrimage when they come of age. They leave the fleet and only return once they have found something of value they can bring back to their people.

Other species tend to look down on the quarians for creating the geth and for the negative impact their fleet has when it enters a system. This has led to many myths and rumors about the quarians, including the belief that underneath their clothes and breathing masks, they are actually cybernetic creatures: a combination of organic and synthetic parts.

Quarians: Economy

The Migrant Fleet has little economic base, operating in a state of perpetual 'hand-to-mouth'. While quarian ships include light manufacturing and assembly plants, they lack heavy industries such as refining and shipbuilding. The fleet has tankers for water purification and oxygen cracking, but the space-intensive nature of agriculture limits food production. A single disaster could destroy the fragile balance.

The quarians earn income in creative ways. Because the government is obliged to provide food, water, air, and medical support for every individual, the Conclave strategically determines the course of the Fleet to bring in resources and income. A species who suspects the Migrant Fleet is heading towards their space often offers a 'gift' of surplus starships, fuel, and resources to convince the Conclave to alter course.

As the Fleet passes through a system, swarms of mining vessels work over asteroids for metals and siliceous materials and cometary bodies for water ice and organics. Quarian miners are adept at locating and strip-mining space-borne resources. This sparks conflict with corporations already working the system. Large mining concerns spend millions on lobbyists and public relations portraying the quarians as locusts, devouring the resources of a system before moving on.

The greatest asset of the quarians is their rarified skills. Most are experienced miners. Due to their life of perpetual salvage and repair, they are skilled engineers and technicians. More than once, the very corporations that lobby against the quarians have made back room deals with the Fleet, arranging for skilled quarians to fill space engineering jobs that other species would demand higher wages for.

Quarians are widely hated among the working classes. 'The quarians are coming to take our jobs' is a common response to the Fleet's approach.

Quarians: Government

Due to the quarians' precarious existence and the need to enforce strict rationing, government is somewhat autocratic. The Migrant Fleet's operations are directed by the Admiralty, a board of five military officers who are advised by a legislative body called the Conclave.

Each vessel in the Fleet has the right to send representatives to the Conclave aboard the flagship. The number of representatives is based on crew size. Larger clans, with bigger ships and more votes, form the cores of political blocs. Opposition comes from the Outriders' Coalition, with delegates from thousands of smaller ships.

The Admiralty defers to the Conclave's decisions in most circumstances. However, if all five members agree that a Conclave decision jeopardizes the survival of the Fleet, and cannot get the Conclave to address their concerns, they have the right to summarily overturn the legislative

decision. After the Admiralty uses this extraordinary power, they must resign. If the Admiralty does not step down after using their veto, the rest of the military is obliged to arrest them.

Each ship captain has authority over his vessel, but is advised by an elected civilian Council, just as the Admiralty is advised by the Conclave. This relationship may range from cooperation to polite tolerance to outright hostility, but any captain who overrules his Council without good reason is relieved of command by the Admiralty.

Many quarian ships are owned by clans who pool their resources to purchase used vessels from private sellers. Large ships are prestigious for big, rich clans, but a small ship means status for a small clan with enough personal wealth to afford a private vessel. Clan vessel captains are not subject to dismissal by the Admiralty; abusive captains are a 'family' problem if they do not disrupt the operations of the fleet.

Quarians: Law and Defense

Although the Conclave establishes civil law much as any planet-based democracy, enforcement and trials are more unique. After the flight from the geth, there were few constables to police the millions of civilians aboard the Fleet, so the navy parceled out marine squads to maintain order and enforce the law. Today, quarian marines have evolved training and tactics akin to civilian police, but remain adept at combat in the confined spaces of a starship, and fully under the command of the military.

Once taken into custody, the accused is brought before the ship's captain for judgment. While the ship's Council may make recommendations, tradition holds that the captain has absolute authority in matters of discipline.

Most are lenient, assigning additional or more odious maintenance tasks aboard the ship. Persistent recidivists are 'accidentally' left on the next habitable world. This practice of abandoning criminals on other people's planets is a point of friction between the quarians and the systems they pass through. Captains rarely have another choice; with space and resources at a premium, supporting a non-productive prison population is not an option.

In the early years, many quarian freighters were armed and used as irregular 'privateers'. Civilian ships still show a strong preference for armament, making them unpopular targets for pirates. Though they have rebuilt their military, there are still mere hundreds of warships to protect tens of thousands of ships. The quarian navy follows strict routines of patrol, and takes no chances. If the intent of an approaching ship can't be ascertained, they shoot to kill.

Quarians: Pilgrimage

When quarians of the Migrant Fleet reach young adulthood, they must leave their birth ship and find a new crew to accept them as permanent residents. To prove themselves, they must

recover something of value. This is offered to their prospective captain as proof that they will not be a mere burden on the shoestring resources of the ship.

This process is called the Pilgrimage. Stripped of ritual, the Pilgrimage is merely an attempt to maintain genetic diversity within the small, relatively isolated population bases that make up the Migrant Fleet. If the young stayed and married within their birth vessel, the risk of inbreeding would increase sharply.

Quarians are surgically fitted with their various immunity-boosting implants in preparation for leaving on Pilgrimage. Having grown up within the sterile, controlled environments of the Migrant Fleet ships, quarians have virtually no natural immune system.

Quarians: Religion

The ancient quarians practiced ancestor worship. Even after abandoning faith for secularism, quarians continued to revere the wisdom of elders. As time passed and technology advanced, they inevitably turned their knowledge to preserving the personalities and memories of the elderly as computer virtual intelligences. These recordings became a repository of knowledge and wisdom, stored in a central databank and available through any extranet connection.

They held no illusions that this was a form of immortality; like all virtual intelligences, their electronically-preserved ancestors were not truly sapient. This was considered a surmountable problem; sapience could surely be reduced to simple mathematics.

The quarians began exhaustive research into creating artificial intelligence so they could learn to escape the bounds of mortality and give their ancestral records true awareness. Unfortunately, the life the quarians created did not accept the same truths they did. The geth destroyed the ancestor databanks when they took over.

In the centuries since they evacuated their homeworld, most quarians have returned to religion in various forms. Many believe that the rise of the geth and the destruction of their 'ancestors' were chastisement for arrogantly forsaking the old ways and venerating self-made idols.

Others have a more philosophical outlook, believing that their race was indeed arrogant, but no supernatural agency lay behind the geth revolt. Rather, the quarians' actions wrought their own doom. Either way, every quarian would agree that their own hubris cost them their homeworld.

Reapers



A myth common to several cultures in the galaxy, Reapers were imagined to be space monsters who consumed entire stars. Archeologists and mythologists attempting to uncover sources for such myths have yielded little, except interstellar religious themes of all-consuming devils common to primitive cultures.

Reapers: Indoctrination



Reaper "indoctrination" is an insidious means of corrupting organic minds, "reprogramming" the brain through physical and psychological conditioning using electromagnetic fields, infrasonic and ultrasonic noise, and other subliminal methods. The Reaper's resulting control over the limbic system leaves the victim highly susceptible to its suggestions.

Organics undergoing indoctrination may complain of headaches and buzzing or ringing in their ears. As time passes, they have feelings of "being watched" and hallucinations of "ghostly" presences. Ultimately, the Reaper gains the ability to use the victim's body to amplify its signals, manifesting as "alien" voices in the mind.

Indoctrination can create perfect deep cover agents. A Reaper's "suggestions" can manipulate victims into betraying friends, trusting enemies, or viewing the Reaper itself with superstitious awe. Should a Reaper subvert a well-placed political or military leader, the resulting chaos can bring down nations.

Long-term physical effects of the manipulation are unsustainable. Higher mental functioning decays, ultimately leaving the victim a gibbering animal. Rapid indoctrination is possible, but causes this decay in days or weeks. Slow, patient indoctrination allows the thrall to last for months or years.

Volus



The volus are a member species of the Citadel with their own embassy, but they are also a client race of the turians. Centuries ago, they were voluntarily absorbed into the Hierarchy, effectively trading their mercantile prowess for turian military protection.

Irune, their homeworld, lies far beyond the normal life zone of its star. However, the world has a high- pressure greenhouse atmosphere that traps enough heat to support an ammonia-based biochemistry. As a result, the volus must wear pressure suits and breathers when dealing with other species as conventional nitrogen/oxygen air mixtures are poisonous to them, and in the low pressure atmospheres tolerable to most species, their flesh will actually split open.

Volus culture is tribal, bartering lands and even people to gain status. This culture of exchange inclines them to economic pursuits. It was the volus who authored the Unified Banking Act, and they continue to monitor and balance the Citadel economy.

Vorcha



Although they resemble a mammal-reptile cross, the vorcha have no terrestrial analogue. They are humanoid in form, but vorcha have "clusters" of non-differentiated neoblast cells, like those of Earth's planarian worms. Damaged vorcha cells mature into specialized structures to alleviate injury or stress. Transformations include thicker skin following injury, lung adaptation for barely-breathable atmospheres, and stronger cardio-skeletal muscle under high gravity. Skull capacity and brain size do not change, and vorcha rarely make more than one somatic overhaul.

Vorcha assault each other frequently, causing their young to gain strength, intelligence, and resilience. As a result, vorcha see inflicting and receiving pain as normal communication. Few vorcha study professions, in part because their average life expectancy is only 20 years. Because vorcha can eat and breathe nearly anything, they can live almost anywhere, but racism prevents them from integrating into most societies that dismiss them as vermin. They have few employment options beyond krogan mercenary bands.

Aliens: Non-sapient creatures*

Husks

After the geth secure a location, they round up and impale dead and living bodies on mechanical spikes. The spikes rapidly transform these victims into withered husks, extracting water and trace minerals and replacing them with cybernetics.

The cybernetics re-animate the lifeless flesh and tissue, transforming the bodies into mindless killing machines. Some Alliance soldiers refer to the husk-generating spikes as Dragon's Teeth, a reference to the mythological berserkers who sprang up from the earth wherever the teeth of the dragon Ares were planted.

Dragon's Teeth and husks bear little resemblance to other pieces of geth technology. No one is sure why a synthetic race would bother to drain the miniscule amount of recoverable resources from organic corpses, though the value of reusing them as shock troops is obvious.

Husks: Scions

Though the exact fate of species captured by the Collectors is unclear, the humanoid appearance of the scions gives ghastly clues. The scion's frame and skull are similar to those of a human or asari, but the bone structure is overlaid with a metallic resin. Posthumous examination of their bodies reveals a skin tone resembling that of Reaper husks, but their transformation process seems more extensive. Like husks, they are cybernetically modified on a nano-scale so they can operate even in hard vacuum. Hoses rather than veins and muscle tissue join major portions of the body together. One arm is replaced with a construct that fits a large rifle, turning the creature into a humanoid weapons platform, and a fleshy sack is supported by the creature's back and head.

These sacks contain brain matter and spinal tissue, too much to have come from just one victim. This indicates scions are an amalgam of several individuals, with one primary victim providing the frame and several "secondaries" providing the flesh for a decentralized semi-mechanical nervous system. This decentralization makes them highly resistant to gunshot wounds; even a headshot is not a certain kill.

The scions' weapons, however, indicate that scions retain some living tissue, or at least sustain some of the same electrochemical reactions as those of a human biotic. The weapon creates a powerful warp effect, which is consistent with the eezo nodules visible in the scion's expansive nervous system. Given the rarity of human biotics, it seems likely that these dust-form eezo nodules are deposited during their transformation, rather than requiring a biotic victim in the first place.

Thresher Maws

Thresher maws are subterranean carnivores that spend their entire lives eating or searching for something to eat. Threshers reproduce via spores that can lie dormant for millennia, yet are robust enough to survive prolonged periods in deep space and atmospheric re-entry. As a result, thresher spores appear on many worlds, spread by previous generations of space travelers.

The body of a thresher never entirely leaves the ground; only the head and tentacles erupt from the earth to attack. In addition to physical attacks, threshers have the ability to project toxic chemicals and emit bursts of infrasound as a shockwave weapon.

The Alliance first encountered threshers on the colony of Akuze in 2177. After contact was lost with the pioneer team, marine units were deployed to investigate. The shore parties were set upon by hungry threshers, and nearly the entire assault force was killed. Alliance forces recommend engaging threshers with vehicle-mounted heavy weapons.

Varren

Varren are omnivores with a preference for living prey. Originally native to the krogan homeworld of Tuchanka, they are, like most life from Tuchanka, savage, clannish, and consummate survivors. They are pack hunters when vulnerable prey is readily available and become scavengers when outnumbered or outclassed.

Their supreme adaptability, vicious demeanor, and rapid breeding cycle have made them ubiquitous and dangerous pests on many worlds. Virtually everywhere the krogan have been, varren infestations have followed, wreaking havoc with the native ecology.

The krogan have had a love-hate relationship with varren for millennia, alternately fighting them for territory and embracing them as treasured companions. To this day, krogan raise them as beasts of war. A common subgenus of varren has metallic silver scales, leading to the rather unusual nickname 'fishdogs'.

Arrival: The Reapers' Secrets*

Object Rho

Dr. Amanda Kenson's scientific team has cataloged three major discoveries on the artifact encased in the 157-Golgotha asteroid. First, the large artifact is rooted into the core of the asteroid and has a barrier that is similar to but much more powerful than a biotic stasis field.

This gives it an unnatural resilience to alteration or damage and even prevents state-of-the-art laser drilling from extracting the smallest piece for analysis.

Second, the object's interior is energetically active with a quantum stasis field rivaling that of Prothean technology found in mass relays. Like those creations, it activates in response to threat, at which point the artifact consumes a phenomenal amount of power. Dr. Kenson's team believes the object draws this power directly from dark matter, though how is still unknown.

The third discovery is that the object broadcasts signals and information on many different spectra. One such pulse, suspected to be similar to a quantum entanglement communicator, reaches into Reaper territory. Another broadcast is infrasound, consistent with frequencies that trigger feelings of awe and fear in humans, a known factor in Reaper indoctrination. Kenson's laboratory is filled with equipment dedicated to monitoring any signal coming from the artifact in the hopes that some clue will prove the Reapers' undoing before it's too late.

Planet: Aratoht

"Nothing is Impossible," says the Hegemony propaganda poster that depicts a muscular batarian miner under an Aratoht sky, his rebreather held away from his face as if he's just taken it off. The image sums up millions of man-hours of labor on the batarian planet and represents (or misrepresents) much of its history. Two decades ago, Aratoht, like several planets in the Skyllian Verge, was claimed by both human and batarian governments, but the Alliance backed out after learning about the atmosphere's dangerously low pressure and oxygen levels. Instead, they concentrated their colonial efforts on planets that could support human life without the aid of domed habitats and rebreathers. Human governments saw it as a wise move; batarians saw it as cowardly.

The batarians rose to the colonization challenge, shipping in large numbers of laborers. They took the high financial costs and casualties due to accidents or logistical snafus in stride. Large-scale dumping of cyanobacteria has increased the oxygen in the atmosphere by a fraction of one percent, a modest increase that the Hegemony trumpets as a sign of their eventual victory. Short-term profits on Aratoht are largely made in the minerals sector through mining the extremely metal-rich planetary crust. The dark side to the mining does not appear on the propaganda poster -- the majority of laborers are indentured servants or slaves.

Aratoht is rumored to have military bases on its surface and throughout its solar system, though details are heavily restricted by the Hegemony's Ministry of Information Control. Human merchant ships rarely come to the planet, outcompeted by local companies that benefit from heavy economic protections. The average Aratoht citizen only sees humans on the news, usually featured in stories of trials and executions of accused spies.

The Alpha Relay

Discovering the age of a mass relay is not an easy task. Relays can shield themselves to preserve their integrity down to the quantum level, so taking a sample for analysis proves nigh impossible. Relays also maintain self-cleaning cycles, wiping away potential evidence, though damage or dormancy can cause this cycle to break down (such as in the case of the Charon Relay, which became covered in ice).

A breakthrough was recently made by Dr. Amanda Kenson, who revisited old methods of dating the relays by testing dust trapped in their gravity wells. By comparing the relative velocity of relays to that of the stars they orbit as well as the composition of the dust around dormant relays against the dust at known locations in their star systems, Kenson could create a timeline of when a relay passed through the dust. The result dates the relay back millions of years; some may even predate the Protheans.

Kenson concluded that the oldest known relay is in batarian space. Dubbed "Alpha," it resides near the star Bahak and is unusual in its potential range and versatility. Alpha usually sends and receives mass at the range of a normal secondary relay, but if certain controls are adjusted, it becomes powered by an unprecedented amount of dark energy that could send cargo to sixteen other relays and even across a great distance to the Citadel. Hegemony authorities have kept this quiet, fearing retaliation from Council species who would assume hostile intent if they found a sudden new route into their space. It goes without saying that the Reapers have no such fear.

Cerberus Project: Overlord*

Planet: Aite

"Two beautiful moons, one spectacular ring, zero neighbors," says a popular advertisement for this Terminus Systems world. Aite is known for its sparsely settled population despite being a garden planet with a colony nearly a century old. Blessed with a mild climate, wildlife no more dangerous than that on Earth, and soil and bacteria amenable to imported plants, Aite would appear to be an unexploited paradise.

However, it is unpopular for two reasons. The first and most obvious is that its moon, Litae, is in an unstable orbit that will lead to a planetary impact and an extinction-level event within the next two centuries. As such, all investment in the planet is short-term, and the biggest business is selling off the local biota to the highest bidder.

The second drawback is the level of violence on the planet. Like the rest of the Phoenix Massing cluster, Aite was briefly considered part of Citadel space during its first wave of colonization. However, when the colony broke off to become an independent planet in 2133, the Council let the doomed planet go with less than a day of debate. Free from any real governing body, Aite's history has since been filled with wars between small frontier-town city-states over

its resources. The result is a dangerous world where the average citizen is expected to be self-reliant to the point of fending for themselves against cutthroat corporations, strong-arm militia groups, and even geth incursions. The fighting is so frequent that the name of the planet itself has changed more than eleven times. In a sign of blunt indifference, standard Citadel galaxy maps refer to the world by the name given to it by human colonists in the latter half of the century.

Citadel and Galactic government

Citadel



The Citadel is an ancient deep-space station, presumably constructed by the Protheans. Since the Prothean extinction, numerous species have come to call the Citadel home. It serves as the political, cultural, and financial capital of the galactic community. To represent their interests, most species maintain embassies on the Presidium, the Citadel's inner ring.

The Citadel Tower, in the center of the Presidium, holds the Citadel Council chambers. Council affairs often have far-reaching effects on the rest of the galactic community. Five arms, known as the wards, extend from the Presidium. Their inner surfaces have been built into cities, populated by millions of inhabitants from across the galaxy.

The Citadel is virtually indestructible. If attacked, the station can close its arms to form a solid, impregnable shell. For as long as the station has existed, an enigmatic race called the keepers has maintained it.

Citadel Conventions

These diplomatic talks occurred in the wake of the Krogan Rebellions, as a response to the destruction of the conflict and an attempt to distance the Council from the brutal krogan warfare.

The Conventions regulate the use of Weapons of Mass Destruction. A WMD causes environmental alteration to a world. A bomb that produces a large crater is not considered a WMD; a bomb that causes a nuclear winter is.

Use of WMD is forbidden on "garden" worlds like Earth, with ecospheres that can readily support a population. If a habitable world is destroyed, it will not be replaced for millions of years. The Conventions do not forbid the use of WMD on hostile worlds or in sealed space-station environments. Many militaries continue to develop and maintain stockpiles.

The Conventions graded Weapons of Mass Destruction into tiers of concern; Tier I is the greatest threat to galactic peace.

TIER I: Large kinetic impactors, such as asteroid drops or de-orbiting space stations. Effectively free and available in any system (in the form of debris left over from planetary accretion), kinetic impactors are the weapon of choice for terrorists and "third galaxy" nations.

TIER II: Uncontrolled self-replicating weapons, such as nanotechnology, viral or bacteriological organisms, "Von Neumann devices," and destructive computer viruses. These weapons can lie dormant for millennia, waiting for a careless visitor to carry them on to another world.

TIER III: Large energy-burst weapons, such as nuclear or antimatter warheads.

TIER IV: Alien species deliberately introduced to crowd out native forms necessary for the health of an ecosystem. Ecological tampering can take years to bear fruit, making it difficult to prove.

Citadel Council

The Council is an executive committee composed of representatives from the Asari Republics, the Turian Hierarchy, and the Salarian Union. Though they have no official power over the independent governments of other species, the Council's decisions carry great weight throughout the galaxy. No single Council race is strong enough to defy the other two, and all have a vested interest in compromise and cooperation.

Each of the Council species has general characteristics associated with the various aspects of governing the galaxy. The asari are typically seen as diplomats and mediators. The salarians gather intelligence and information. The turians provide the bulk of the military and peacekeeping forces.

Any species granted an embassy on the Citadel is considered an associate member, bound by the accords of the Citadel Conventions. Associate members may bring issues to the attention of the Council, though they have no input on the decision. The human Systems Alliance became an associate member of the Citadel in 2165.

Citadel Space

Citadel Space is an unofficial term referring to any region of space controlled by a species that acknowledges the authority of the Citadel Council. At first glance, it appears this territory encompasses most of the galaxy. In reality, however, less than 1% of the stars have been explored.

Even mass-effect-FTL drive is slow relative to the volume of the galaxy. Empty space and systems without suitable drive discharge sites are barriers to exploration. Only the mass relays allow ships to jump hundreds of light years in an instant, the key to expanding across an otherwise impassable galaxy.

Whenever a new relay is activated, the destination system is rapidly developed. From that hub, FTL drive is used to expand to nearby star clusters. The result is a number of densely-developed clusters thinly spread across the vast expanse of space, connected by the mass relay network.

Citadel Station: Citadel Security Services (C-Sec)

Citadel Security is a volunteer police service answering to the Citadel Council. The 200,000 constables of C-Sec are responsible for maintaining public order in the densely populated Citadel. They also provide pirate suppression, customs enforcement, and search-and-rescue throughout the Citadel cluster.

C-Sec has six divisions:

ENFORCEMENT - Uniformed officers who patrol the Citadel and respond to emergencies.

INVESTIGATION - Detectives who puzzle out the truth behind crimes and bring perpetrators to justice.

CUSTOMS - Screens the thousands of passengers and cargo containers that pass through the Citadel's ports every day.

NETWORK - Deals with "cybercrimes" like identity and copyright theft, hacking and viral attacks, and illegal artificial intelligence.

SPECIAL RESPONSE - Deals with hostage situations, bombs, and heavily armed criminals. In the unlikely event that attackers board the Citadel, they are also the front line of defense, armed with military grade equipment.

PATROL - Naval arm, with ships stationed throughout the Citadel cluster. Unlike the other divisions, they are rarely seen at the Citadel, nor do they stay in one place long.

Joining C-Sec is prestigious; applications must be sponsored by a Citadel Councilor or the ambassador of an associate Council race. Generally, applicants have many years of distinguished service in the military or police forces of their nation, but an inexperienced applicant with demonstrable talent will be fairly considered.

C-Sec and the Spectres are often at odds. Many C-Sec members, notably current Executor Venari Pallin, believe that allowing Spectres to be 'above the law' is a dangerous practice; the actions of Saren Arterius lend credence to this position. The Spectres, in turn, are aggravated when C-Sec's dedication to procedure and due process hampers their investigations.

Citadel Station: Foundations

The 'undersides' of the Wards, between the inhabited superstructures and impenetrable outer hull, are called the Foundations. These dangerous areas are filled with life support systems and power plants. Officially, only the keepers are allowed in the Foundations. In reality, the Foundations are the slums of the Citadel, home to criminals, minorities, transients, and occasional 'state-less' exiles. Some stay in the Foundations of their own will. Others end up there when the opportunities they sought in the Citadel do not come.

The station's recycling systems are located in the Foundations. These manufacture a variety of artificial organic pastes that can be eaten for sustenance. They are free and nutritious, but nearly tasteless and of unpleasant texture. Poorer Citadel residents quickly become adept at dressing up this bland fare with sauces and spices, while imported foodstuffs are a popular luxury of the wealthy.

Citadel Station: Presidium Ring

The Ring is an enclosed loop of park-like space serving as the connection point for the Wards. The interior walls are lined with the embassies of influential species and private residences for the galaxy's elite.

The Presidium is full of 'open-air' restaurants, bars, and luxurious meeting areas. Gravity is about 1/3 Earth-normal. A holographic 'sky' is projected over the 'ceiling' of the ring. Unlike the 24/7 bustle of the Wards, the Presidium maintains a 20-hour day schedule, with a six-hour 'night' where lights are dimmed and the sky goes through a night cycle.

Offices and residences are often open to the interior. It is not unusual for embassies to have no exterior wall at all. This does not cause a crime problem due to the heavy C-Sec presence and ubiquitous monitoring devices on the Presidium. Thieves are quickly identified and apprehended.

The Ring is the location of the Citadel's spaceports. Being closer to the center of spin, there is less motion for a ship to match, and the reduced spin gravity makes handling cargo easier. Hundreds of ships pass through the Citadel every day, and every species with an embassy is granted a private dock.

The Tower, at the center of the Ring, holds the administration of the Citadel Council. The Tower rises over a kilometer from the ring, appearing to thrust forward parallel to the ward arms. As the Tower is at the center of the spin axis, it experiences little centrifugal force. Gravity is maintained using mass effect fields at a 90-degree angle to the Ring and Wards.

A Consular dock can be found at the base of the Tower. While normally used for diplomatic couriers and Spectre business, the shuttles docked here can evacuate the Council government in an emergency.

Citadel Station: Serpent Nebula

The Citadel is surrounded by a blue-tinted reflection nebula. The light of the nebula is actually light from the Citadel, scattered and reflected back at the station.

At first, the Serpent Nebula was assumed to be made of microscopic construction debris. Prevailing theory holds that the Protheans used molecular nanotechnology to manufacture the incredibly durable materials used in the Citadel. But unlike other nebulae, the Serpent does not dissipate over time. Therefore, it must be replenished constantly. The current popular theory is that the non-recyclable waste collected by the Citadel's keepers is somehow rendered down to the atomic or molecular level, and ejected into the cloud.

The thick nebula presents a navigation hazard. Beyond the relatively clear areas around the Citadel, electrical discharges are common. These are not blocked by kinetic barriers, and can severely damage metal-framed starships. In addition, some dense knots of dust can overwhelm the repulsion of kinetic barriers on smaller ships. If such a vessel is moving fast enough at the time, the effects are similar to being hit by a sandblaster.

Attempting to reach the Citadel through open space navigation is unadvisable; the only safe approach is through the various mass relays that orbit it.

Citadel Station: Statistics

Although the Citadel is equipped with mass-effect-generating element-zero cores, most of the gravity on the station is generated by the centrifugal force of rotation.

Rotation: 3.5 minutes per revolution
Rotational Gravity in Wards: 1.02 Earth
Rotational Gravity in Presidium: 0.3 Earth
Total Length (Open): 44.7 km
Diameter (Open): 12.8 km
Ward Length: 43.6 km
Ward Width: 330 m
Presidium Ring Diameter: 7.2 km
Presidium Ring Width: 553 m
Exterior Armor Thickness: 13 m
Population: 13.2 million (not including keepers)
Gross Weight: 7.11 billion metric tons
Height of the Presidium Tower: 1047 m

Citadel Station: Wards

The majority of the Citadel's population lives in the Wards, the five massive arms of the station that house the residential and commercial districts. Many galactic races have established cultural enclaves here. Population density and cost of living are extremely high, akin to Earth cities such as Hong Kong and Singapore.

The Wards are open-topped, with skyscrapers rising from the superstructure. Towers are sealed against vacuum, as the breathable atmosphere envelope is only maintained to a height of about seven meters. The atmosphere is contained by the centrifugal force of rotation and a 'membrane' of dense, colorless sulphur hexafluoride gas, held in place by carefully managed mass effect fields.

The view from the Wards is spectacular. In the background, stars, Serpent Nebula, and the nearby blue giant called 'the Widow' move across the sky as the station rotates to stabilize itself. In the foreground, the lights of buildings and vehicles on the opposing Ward arms perpetually shine. The Citadel has no real day or night. While the station keeps to standard galactic time for political functions, businesses rarely close, and residents acclimate to sleep and work according to personal need rather than a day-night cycle.

Additions and modifications are constantly being constructed, though they must stay within certain specifications that will not compromise the operation of the station. Occasionally, the keepers will descend on an area of the Wards and move or change the architecture without explanation. Residents have learned to live with these inexplicable intrusions.

Spectres



Spectres are agents from the Office of Special Tactics and Reconnaissance and answer only to the Citadel Council. They are elite military operatives, granted the authority to deal with threats to peace and stability in whatever way they deem necessary.

They operate independently or in groups of two or three. Some are empathetic peacekeepers, resolving disputes through diplomacy. Others are cold-blooded assassins, ruthlessly dispatching problem individuals. All get the job done, one way or another, often operating outside the bounds of galactic law.

The Spectres were founded after the salarians joined the Council. For many years, they operated in secrecy, as back-room “problem solvers”. Only after the Krogan Rebellions did their activities become publicized. Assignment of a Spectre is less contentious than a military deployment, but makes it clear that the Council is concerned about a situation.

Treaty of Farixen*

Due to the destructive potential of dreadnoughts, the Council races agreed at the Farixen Naval Conference to fix a ratio of dreadnought construction between themselves. At the top of the pyramid is the peacekeeping turian fleet. Below the turians are the other Council races, currently the asari and salarians. Council associate races are at the bottom. The human Systems Alliance is part of this last group.

The ratio of turian to Council to associate dreadnoughts is 5:3:1. For every dreadnought humans are permitted to build, the asari have three, and the turians five.

Humanity and the Systems Alliance

Rise of the Alliance



A political-economic pact for collective colonial security, the Alliance is the central galactic institution of human society. The Alliance gained associate membership to the Citadel Council in 2165 and full membership in 2183, with Ambassador David Anderson representing humanity.

Human political-economic relationships vary between combative and lucrative. The turians who'd fought humans during the 2157 First Contact War have become valuable trade partners, despite residual social hostility.

Other relationships are even more complicated. The rapid rise of human political influence on the Council -- achieving in decades what others waited or are still waiting centuries to acquire -- has galvanized suspicion and resentment against humanity. That negativity is vastly outweighed by the respect and trust humanity earned by saving the Council during the 2183 attack on the Citadel, at the cost of Alliance cruisers Cairo, Cape Town, Emden, Jakarta, Madrid, Seoul, Shenyang, and Warsaw and their 2400 crew.

Earth

The homeworld and capital of humanity is entering a new golden age. The resource wealth of a dozen settled colonies and a hundred industrial outposts flows back to Earth, fueling great

works of industry, commerce, and art. The great cities are greening as arcology skyscrapers and telecommuting allow more efficient use of land.

Earth is still divided among nation-states, though all are affiliated beneath the overarching banner of the Systems Alliance. While every human enjoys a longer and better life than ever, the gap between rich and poor widens daily. Advanced nations have eliminated most genetic disease and pollution. Less fortunate regions have not progressed beyond 20th century technology and are often smog-choked, overpopulated slums.

Sea levels have risen two meters in the last 200 years, and violent weather is common due to environmental damage inflicted during the late 21st century. The past few decades, however, have seen significant improvement due to recent technological advances.

First Contact War

Humanity's first contact with an alien race occurred in 2157. At that time, the Alliance allowed survey fleets to activate any dormant mass relays discovered, a practice considered dangerous and irresponsible by Council-aligned races. When a turian patrol discovered a human fleet attempting to activate a relay, they attacked. One human vessel survived, retreating to the colony of Shanxi.

The turians followed, quickly defeating the local forces. Shanxi was occupied, the first - and, to date, only - human world to be conquered by an alien species. The turians believed the handful of ships they defeated represented the bulk of human defenses. So they were unprepared when the Second Fleet under Admiral Kastanie Drescher launched a strong counteroffensive, evicting them from Shanxi.

The turians mobilized for full-scale war, drawing the attention of the rest of the galaxy. The Council quickly intervened, forcing a truce. Fortunately for humanity, the First Contact War was ended with a diplomatic solution.

Gagarin Station ("Jump Zero")

Gagarin Station is the largest deep space station built by humanity, a Bernal Sphere design with a 500-meter-diameter habitable area. It was constructed beyond Pluto, nearly 80 Astronomical Units (12 billion kilometers) from Sol. Moving crew and material to this location bankrupted most of the backers.

Gagarin was placed at the inner edge of the heliopause -- the point at which the solar wind can no longer push back the interstellar medium. It was built to test a number of faster-than-light drive principles that theoretically could only occur in interstellar space. The station was nicknamed "Jump Zero," as it was intended to be the jumping-off point for humanity's expansion into the galaxy. Shortly after the station was completed, the Prothean ruins were discovered on Mars, rendering the entire effort moot.

After struggling to make a profit for a decade, Gagarin was sold to the Systems Alliance in 2159 for a fraction of its construction costs. The Alliance refurbished it as a research and training center for the recently discovered biotic phenomenon.

In 2169, the Biotic Acclimation and Training program was shut down and Gagarin became a general research facility. Its remote location and intentional isolation from the extranet makes it popular for dangerous research, particularly in the field of artificial intelligence. Humanity's first stable AI, the Alliance-sponsored "Eliza," achieved sapience at Gagarin in 2172.

Today, Gagarin Station has a permanent population of approximately 9000. A plan has been proposed to move it to the gravitationally stable barycenter point between Pluto and the Charon Relay, allowing it to serve as a gateway facility between the Sol and Arcturus systems. The high cost of safely moving its mass has delayed this indefinitely.

Genetic Engineering

In the 22nd century, manipulation of the human genome became commonplace. Techniques of genetic engineering advanced to the point where the rich could custom-build fetuses that grew into stronger, smarter, and more attractive adults. In more permissive regions, custom-designed life forms and 'uplifted' animals occupied an ill-defined niche between 'property' and 'sapient being'.

Travel to planets with unique forms of life brought an awareness that Earth's unique biodiversity could be lost if spliced and hybridized to gain useful alien qualities. The Sudham-Wolcott Genetic Heritage Act was passed by the Systems Alliance Parliament in 2161. It imposed sharp restrictions on controversial uses of genetic engineering, but provided government subsidies for beneficial applications.

SCREENING AND THERAPY: Most governments provide free assessments and corrective therapy for genetic diseases in prospective parents. This has nearly eliminated everything from cystic fibrosis to nearsightedness. The earlier screening and therapy is performed, the more comprehensive the results. Though ideally performed on artificially fertilized zygotes in a lab, procedures are available for embryos in the womb and newborns, out of respect for personal beliefs.

ENHANCEMENT: Improvement of natural human abilities is legal, but adding new abilities is not. Treatments to improve strength, reflexes, mental acuity, or appearance are permitted; adding a tail or the ability to digest cellulose is not. Some genetic enhancement is provided for free to Alliance military recruits, but the average citizen must pay for the privilege. The process can take years to reach fruition in an adult.

ENGINEERING: Artificial hybridization of genes from compatible non-human species with human genetic code is illegal. Creation of designed life is broadly legal (and mainly used for

terraforming and medical applications), but sentient creatures are heavily regulated, and creation of sapient life is outlawed by both the Systems Alliance and the Citadel Council.

Systems Alliance: Geological Survey

As the human race expands its territory and raises the general standard of living, demand for industrial resources continues to grow. Many planets, moons and asteroids contain a wealth of resources, but many systems have barely been charted, let alone thoroughly surveyed. Unmanned probes are one solution, but they are often lost to space hazards, unforeseen circumstances, or theft by salvagers.

In recent years, AGeS, the Alliance Geological Service, has offered bounties to private individuals or teams willing to perform mineralogical surveys on the frontier. This survey data is made publicly available to further corporate development. Due to the cost of travel and the dangers of operating on hostile worlds, it is rarely a profitable endeavor.

LIGHT METALS - Metals with low atomic weight are often used in the construction of spacecraft and vehicles.

HEAVY METALS - Metals with higher atomic weights are used to construct equipment components. The platinum group elements are particularly useful.

RARE EARTHS - Most useful materials in this category are radioactives or magnets.

GASES - Various gases are required to support all known forms of sapient life. Some are commonly used as fuel.

Systems Alliance: Military Doctrine

The Alliance military is of great concern to the galaxy. At first contact with the turians, they were completely inexperienced. Turian disdain changed to respect after the relief of Shanxi, where the humans surprised them with novel technologies and tactics.

The human devotion to understanding and adapting to modern space warfare stunned the staid Council races. For hundreds of years, they had lived behind secure walls of long-proven technologies and tactics. The Council regards the Alliance as a "sleeping giant." Less than 3% of humans volunteer to serve in their military, a lower proportion than any other species.

While competent, Alliance soldiers are neither as professional as the turians nor as skilled as the asari. Their strengths lie in fire support, flexibility, and speed. They make up for lack of numbers with sophisticated technical support (VIs, drones, artillery, electronic warfare) and emphasis on mobility and individual initiative.

Their doctrine is not based on absorbing and dishing out heavy shocks like the turians and krogan. Rather, they bypass enemy strong points and launch deep into their rear, cutting supply lines and destroying headquarters and support units, leaving enemies to "wither on the vine."

On defense, the human military is a rapid reaction force that lives by Sun Tzu's maxim, "He who tries to defend everything defends nothing." Garrisons are intended for scouting rather than combat, avoiding engagement to observe and report on invaders using drones.

The token garrisons of human colonies make it easy for alien powers to secure them, for which the Alliance media criticizes the military. However, the powerful fleets stationed at phase gate nexuses such as Arcturus are just a few hours or days from any colony within their sphere of responsibility. In the event of an attack, they respond with overwhelming force.

Systems Alliance: Military Jargon

ashore - When a ship's crew leaves the vessel, they are "ashore." Though normally used regarding planets, it can refer to boarding a space station.

aweigh - When a ship releases the equipment tethering it to a space station or surface dock, it is "aweigh."

aye, aye - The proper way to acknowledge an order. If told to attack, the correct response is "Aye, aye, sir." If asked "Are you proud to be a marine?" the correct response is "Yes, sir."

ASAP - Pronounced "a-sap," an acronym of "as soon as possible."

belay - Stop, cease.

bridge - The navigation center of a spacecraft, where the steering is done.

captain's mast - Non-judicial disciplinary proceedings by unit commanders.

CIC - Combat Information Center, the command center of a spacecraft. The CIC is filled with sensor displays to make sense out of the chaos of combat.

DC - Damage Control. The containment and repair of damage to a spacecraft.

ECM - Electronic Counter-Measures used to avoid enemy sensors, from passive emissions masking to active jamming.

EVA - Extra-Vehicular Activity. Time spent in a pressure suit, outside of a vehicle, spacecraft, or station.

flank - The flank is the "side" of a military formation. Since the soldiers are facing elsewhere, an enemy that can attack on the flank can often "turn it" or "roll it up."

FNG - "Freaking" New Guy(s). A derisive term for inexperienced personnel.

groundside - The surface of a planet.

helmsman - The crewmember who pilots a spacecraft.

ladar - Light-amplified detection and ranging. An active sensor that bounces lasers off an object to determine its bearing and distance. Ladar has sufficient resolution that the data can be reconstructed into an image.

shore party - Spacecraft crew sent ashore on official business.

silent running - An old submariner's term used aboard the Normandy to denote when stealth systems are active.

sitrep - Abbreviation of "situation report," an evaluation of the current military situation.

spacer - Someone who has spent most of their life in space.

XO - Executive Officer, the second-in-command of an Alliance warship. The XO is responsible for administrative and personnel matters.

Systems Alliance: Military Ranks

The Alliance uses a modified version of the ranking system that has been used for hundreds of years. Soldiers are classified into rank-and-file enlisted personnel, experienced non-commissioned officers (NCOs), and specially trained officers.

The divide between naval personnel and ground forces ('marines') is small. Ground units are a specialized branch of the fleet, just as fighter squadrons are. This unity of command is imposed by the futility of fighting without control of orbit; without the navy, any army is pointless. The marines, as a matter of pride, maintain some of their traditional rank titles; for example, marines have Privates and Corporals instead of Servicemen.

In ascending order of responsibility, the ranks of the Alliance are:

ENLISTED

Serviceman 3rd Class / Private 2nd Class

Serviceman 2nd Class / Private 1st Class

Serviceman 1st Class / Corporal

NCOs
Service Chief
Gunnery Chief
Operations Chief

OFFICERS
2nd Lieutenant
1st Lieutenant
Staff Lieutenant
Lieutenant Commander
Staff Commander
Captain / Major
Rear Admiral / General
Admiral
Fleet Admiral

Systems Alliance: N7

The Alliance Military Vocational Code system classifies the career path of all serving personnel. The MVC consists of one letter and one number. A soldier's MVC indicates proficiency, not rank. The letter notes career path; the number indicates level of experience, as indicated by service record, technical scores, and commendations. All 26 letters are used, and numbers run from 1 to 7. N is the letter code for Special Forces personnel.

Terra Firma Party

Terra Firma is an Alliance political party formed after the First Contact War. Its policy agenda is based on the principle that Earth must stand firm against alien influences. This covers a variety of legislation. Recent activities by Terra Firma include opposition to a law requiring high school alien language study, a proposal to increase tariffs on alien imports, and leading a popular movement to mark the First Contact War with a public holiday.

Though founded by well-meaning individuals who feared the submersion of native human cultures under a wave of "alien vogue," Terra Firma's agenda attracts many jingoists and xenophobes.

Timeline

2069 - Armstrong Outpost at Shackleton Crater becomes the first human settlement on Luna. It is formally founded on July 24, the 100th anniversary of the first lunar landing.

2103 - Lowell City in Eos Chasma becomes the first human settlement on Mars.

2137 - Eldfell-Ashland Energy Corporation demonstrates helium-3 fuel extraction from the atmosphere of Saturn.

2142 - Construction of Gagarin Station (Jump Zero) begins beyond the orbit of Pluto.

2148 - Prospectors discover the Prothean ruins at Promethei Planum on Mars.

2149 - Translation of Prothean data leads humans to the Charon mass relay. Systems Alliance founded to coordinate exploration and colonization of extra-solar worlds.

2151 - A shipping accident at Singapore International Spaceport exposes downwind communities to containers of dust-form element zero. Alliance begins construction of Arcturus Station.

2152 - Roughly 30% of the children born in Singapore after element zero exposure suffer from cancerous growths. Systems Alliance begins settlement of Earth's first extra-solar colony world, the planet Demeter.

2154 - Commander Shepard born.

2155 - Systems Alliance occupies completed portions of Arcturus Station as a headquarters.

2156 - Some children of Singapore exhibit minor telekinetic abilities.

2157 - Turians encounter human explorers; First Contact War. Occupation and liberation of the human colony of Shanxi.

2158 - Humans learn potential of biotics. An international effort to track element zero exposures begins. Roughly 10% of exposed children show some level of biotic ability.

2160 - Systems Alliance Parliament formed.

2165 - Humans establish embassy on Citadel.

2170 - Batarian slavers attack the Alliance colony of Mindoir.

2176 - Skyllian Blitz - Pirates and slavers attacked Elysium, the human capital in the Skyllian Verge.

2177 - Thresher maws devour the Alliance colony of Akuze.

2178 - In retaliation for the Skyllian Blitz, an Alliance fleet wipes out an army of slavers on the moon of Torfan.

2183 - Geth led by rogue Spectre Saren Arterius attack the Citadel, ensuing in a battle that cost thousands of lives. A few weeks later, the SSV Normandy is ambushed and destroyed. Commander Shepard is presumed dead.

Organizations

Cerberus



Immediately following the First Contact War, an anonymous extranet manifesto warned that an alien attempt at human genocide was inevitable. The manifesto called for an army -- a Cerberus to guard against invasion through the Charon relay.

Derided as "survivalist rhetoric written by an illusive man," the manifesto and its anonymous author soon fell off the media radar. But in 2165, terrorists stole antimatter from the SSV Geneva; the sole figure arrested named his sponsor "Cerberus." Throughout the 2160s and 2170s, alleged Cerberus agents assassinated politicians, sabotaged starships bearing eezo, and conducted nightmarish experiments on aliens and humans. Denounced as human-supremacist, Cerberus calls itself human-survivalist.

Counterterror experts speculate Cerberus may have changed leadership with its recent shift to stockpiling ships, agents, and weapons. Whether "he," "she," or "they," the Illusive Man hides his finances behind shell companies. Few doubt he will kill anyone attempting to expose him.

Cerberus: The Illusive Man



The reclusive tycoon calling himself the Illusive Man is a human nationalist focused on advancing human interests, whatever the cost to non-humans. The Citadel Council regards him as a fanatic posing a serious threat to galactic security.

A mysterious maverick to say the least, the Illusive Man heads the Cerberus network. Dubbed "the illusive empire" by investigators, Cerberus is an allegedly untraceable syndicate of private intelligence agencies, biotics laboratories, engineering and scientific research teams, and lucrative front companies.

Branded a terrorist and seditionist organization by authorities, Cerberus is the only human power base other than the Terra Firma Party strong enough to embarrass -- if not threaten -- the Council and its human representatives.

Mercenaries: Blue Suns



Founded by notorious batarian slaver Solem Dal'serah, the Blue Suns began as a Skyllian Verge protection racket providing genuine protection from slavers and pirates. Eventually captured by the Systems Alliance Navy, Dal'serah beat almost two dozen charges to be convicted on a single count of conspiracy. The slaver benefited from the tutelage of cellmate and brilliant con artist Bernard "Legits" Ledger. Upon release five years later, Dal'serah incorporated Blue Suns as a legal security agency.

Today, the Blue Suns boast a galaxy-wide force of batarians, turians, humans, and krogan. Each deployment is backed by a logistics corps selling everything from heavy weapons to shaving cream. Despite claims that Blue Suns sells its captives as slaves, no Blue Suns employee has ever been convicted on such charges.

Many Blue Suns members sport the company logo in tattoo form, removed during assignments and reapplied at mission-end.

Mercenaries: Eclipse



Brainchild of asari commando Jona Sederis, Eclipse was incorporated as a "proactive" security company. Influenced by asari and salarian military doctrine, Eclipse specializes in sabotage, assassination, and personal and organizational security. Although Citadel governments regard the corporation with suspicion, it's embraced in the Skyllian Verge and Terminus Systems.

Early on, Sederis sought government contracts to establish market share against the better-established Blue Suns. Her agency scored a galactic PR coup by retaking several space stations captured by the Anhur People's Liberation Army and neutralizing its leaders, a victory Eclipse's marketing department never ceases trumpeting.

Based on Omega Station, Eclipse controls nearly 20% of the asteroid's real estate. Its services range from mech repair to open warfare, although assassination is reserved for meeting wider, longer-term company goals (for instance, pre-emptive strikes against pirates rather than murdering spouses for insurance money). Despite numerous reports, Eclipse denies sabotaging or kidnapping business rivals.

Mercenaries: The Blood Pack



Originally a small Terminus Systems vorcha gang, the Blood Pack was transformed into a legion by visionary krogan battlemaster Ganar Wrang. Exiled for striking a female in anger, Wrang obsessed over reclaiming his lost status.

Leading the vorcha pack as a pirate crew, Wrang cultivated recruits and infamy for a decade before incorporating his fighters as a security company across the Skyllian Verge. His notoriety ensured his initial public offering for investors made him rich beyond most krogan's dreams. Wrang returned triumphantly to his clan, rallying elders, krogan hordes, and their firepower and biotic support toward professional violence in the Terminus Systems.

Banned from Citadel space, the Blood Pack bribes its way through spaceports into armed conflicts across the galaxy. Priding themselves for accepting otherwise untouchable contracts, the Blood Pack rejects bodyguarding and security in favor of cases requiring minimal oversight and maximal violence.

Planets and locations

Aeia



Humans detected Aeia as an Earth-type world via telemetry in 2165. After probe surveys indicated life -- lush vegetation, ample fresh water and breathable air -- the Alliance upgraded the planet to a garden-world colonization priority. Commanded by Captain Ronald Taylor, the crew of Alliance survey vessel Hugo Gernsback made planetfall on the jungle world in 2173. Soon after, ship transmissions inexplicably stopped. While the precise fate of the Hugo Gernsback command and crew is unknown, they are presumed killed in action and their vessel destroyed.

Freedom's Progress



Freedom's Progress colony was once a typical Alliance settlement, but following complete communications blackout and its apparent destruction is now a lightning rod for anxiety and dread in the galactic human community.

The communications blackout followed an upgrade of the colony's small military force (supplemented by mechs and security drones) with high-powered, tower-mounted GARDIAN lasers. Colonists complained about construction cost overruns, delays, noise, and damage to the local environment. They also feared the defense array could be seen as provocative to their world's neighbors. Such fears may not have been baseless. Authorities have still offered no explanation for the communications blackout, fueling rumors of plagues, natural disasters, or a cult-inspired mass-suicide.

Located in strategically insignificant space, Freedom's Progress colony had once offered residents spectacular rainbows, lush marshlands and stunning mountain ranges. Its potential as an agricultural settlement and tourism wonderland rivaled that of any Alliance colony.

Haestrom



Before the geth revolt 300 years ago, the quarians colonized Haestrom to study the mysterious instability of its sun, which threatened premature eruption into a red giant. As a scientific outpost of minimal military value, Haestrom was ill-equipped to repel geth forces during the insurrection and fell quickly under their control.

Captured geth planetary survey data indicates that despite sustaining damage, Haestrom's architecture remains as it was before the war, preserving a quarian architectural style that no longer exists anywhere else in the galaxy.

Because Haestrom's sun has overwhelmed the planet's protective magnetosphere, humans foolhardy enough to venture into geth-controlled Haestrom must exercise extreme caution. Minutes of radiation exposure will overload shields and hours of exposure will kill. Furthermore, solar output renders surface-to-orbit communication nearly impossible.

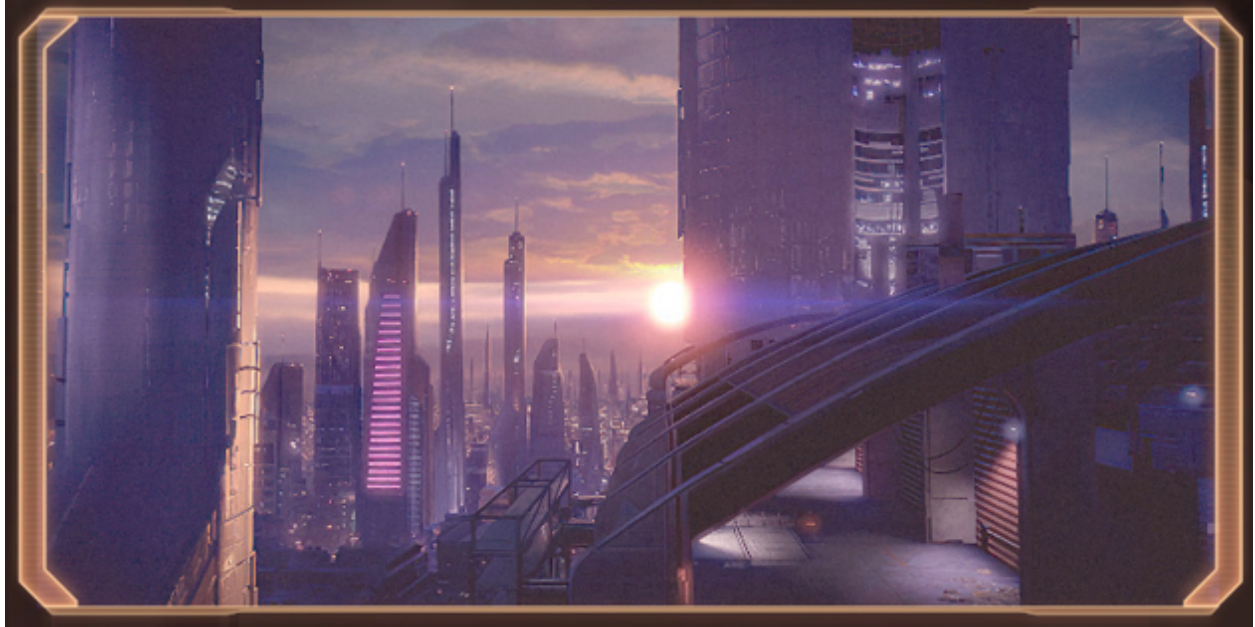
Horizon



A typical Terminus colony possessing minimal tourist value, Horizon promises substantial economic opportunity, especially in providing new products for humans and supplying the Turian Hierarchy. Surveyed 18 years ago, Horizon received pilot habitation four years later; the colony proper is now eight years old.

Blessed with verdant forests and abundant fresh water, Horizon maintains a colonial culture that thrives as a refuge from the increasing restrictions of Citadel-governed society. Horizon has attracted numerous dissidents, marginal people, and fringe-dwellers from across Alliance space.

Illium



A regional hub of asari commerce awash in riches, Illium is infamous for its abusive labor practices and legalization of nearly everything except murder. As such, Illium is the preferred production site for weapons and pharmaceuticals that would be illegal nearly everywhere else, made even more lucrative by legal indentured servitude. Among the biotics-related pharmaceutical producers is the Dantius Corporation, a rising star in galactic commerce.

Despite the dangers of its products, Illium is renowned for glamor, luxury, and safety (provided by near-total surveillance), making it a favored tourist destination. Countless celebrities maintain palatial estates on Illium and in its capital, Nos Astra. The sole obstacle to business on Illium is its extensive bureaucracy, tolerated only for its provision of security.

Regardless of the character of its economy, Illium's self-congratulatory media exalts its own society with the provincial arrogance of "new money," glorifying in "sexiest CEOs" and "ten richest residents" lists.

Korlus



Known as the starcraft cemetery, Korlus was the regional toxic junk yard for centuries. Ships reaching astronomical "near-death" at connecting mass relays were sent to Korlus, stripped of every useful component, then dumped planetward to clear shipping lanes.

Currently Korlus hosts numerous merc factions such as the Blue Suns, rumored to be using downed ship fossils to test advanced munitions. Massive gun batteries threaten anyone attempting planetfall, with minimal defenses against ground attack.

Because ancient vulcanism greenhoused the planet, Korlus was too hot and CO2-rich to develop a biosphere, despite the abundant lakes that could have sponsored the development of life.

Now cool enough for protected habitation, but too scorching for anyone but extremophiles and mercenaries seeking secrecy, Korlus supports numerous krogan outposts. The krogan have therefore seeded Korlus with hardy varren, often kept as war hounds. Varren live primarily on a diet of geophagous vermin and each other.

Omega



Originally an asteroid rich in element zero, Omega was briefly mined by the Protheans, who eventually abandoned it due to its thick, impenetrable crust. Thousands of years later, nature did what even the Protheans could not: a collision with another asteroid broke Omega in half, exposing its trove of element zero for easy mining.

A rush ensued as corporations and private individuals tried to strike it rich on Omega, and thieves and outlaws followed in their wake. As space became tight, construction of processing facilities extended vertically from the asteroid, creating Omega's jellyfish-like silhouette. To prevent future collisions, the station is ringed with enormous mass-effect field generators that redirect incoming debris.

Today, Omega is a major hub of narcotics, weapons, and eezo trafficking without even a pretense of civilian government or military control. Only mercenary groups have been able to instill a limited order; the most ruthless is an asari syndicate run by the notorious Aria T'Loak.

Pragia



Choked by the hyper-growth of non-native plant species, Pragia serves as a galactic reminder about the imperative for careful regulation during colonization.

Two centuries ago, batarian agribusiness chose uninhabited Pragia as their empire's breadbasket. Colonization authorities introduced non-native, industrially-mutated plants that flourished in the world's fertile volcanic soil. Synergizing with Pragia's natural geothermal conditions and chemotropic microbes, the imported species soon became a nightmare. Mutant strains of poisonous and even carnivorous plants arose, overgrowing colonies in days instead of years, and causing the batarians to abandon their holdings. Because the planet's small animal population is insufficient to check its plant growth, Alliance ecologists predict soil exhaustion in 400 years.

Due to its relative isolation and lack of population, Pragia has become a regional haven for drug-runners, weapons-smugglers, pirates, mercenaries, terrorists, and intelligence agents seeking secrecy.

Rhakana



The drell homeworld of Rakhana once teemed with life, its arid plains home to spectacular insect and reptile analogues. But the drell took to industrialization early and did not realize the extent of the environmental damage they caused until it was too late. With their topsoil depleted and oceans too acidic to sustain life, the drell were situated for a massive population crash by 2025 CE.

It was then the hanar stepped in, mounting a large-scale rescue operation to bring drell to the hanar homeworld, Kahje. As wars erupted over what resources remained on Rakhana and billions began to die, approximately 375,000 drell escaped in the exodus. To repay their debt, the drell entered into an agreement with the hanar. Called the Compact, it states that the drell would assist the hanar with tasks the hanar cannot physically perform. Today, high-ranking hanar are often inseparable from their drell attendants.

The Perseus Veil



As vast in natural beauty as it is in threat, the purple and gold nebula called the Perseus Veil forms the natural border between geth space and the Terminus Systems.

The Veil's total opacity prevents Council intelligence from surveying geth activity. Theoretically, the geth could be preparing a devastating attack against which the Council could be defenseless, or the geth could have died out, so that the defense budget against them could be gaining the Alliance nothing but economic ruination.

Despite fears of geth, prospectors do occasionally mount salvage ventures inside the Veil; one ended in tragedy. Using technomental domination, the geth drew the team into the Veil before aiming them back as husks at the organic society that produced them.

A leaked classified Spectre report claims that the dreadnought Sovereign, commanded by ex-Spectre Saren Arterius and crewed by geth, hid near the Veil before initiating the 2183 Citadel attack.

Tuchanka



The krogan homeworld boasts extreme temperatures, virulent diseases, and vicious, predatory fauna. Around 1900 BCE, the krogan discovered atomic power and promptly instigated many intraplanetary wars, sending Tuchanka into a nuclear winter. With most of their industrial base destroyed, the krogan entered a new dark age and warring tribal bands dominated. Populations remained low for the next 2000 years.

First contact with the salarians made resurgence possible. Krogan brought to less hostile planets bred exponentially and returned to reconquer their home. They built vast underground shelters to shield themselves from surface radiation, which proved prescient during the Krogan Rebellions when many of them isolated themselves in a vain attempt to avoid the genophage. Convinced they could outbreed the genophage, they transmitted it into more than 90 percent of the sealed bunkers. Today, Tuchanka's population is sharply limited and while individual krogan are long-lived, the genophage ensures few replacements.

Ilos

Like the ancient human city of Troy, Ilos is a world known only through second-hand sources. References to Ilos have been found at several other Prothean ruins, though direct study of the world is unlikely to occur.

Ilos lies in a remote area of the Terminus Systems only accessible by the legendary Mu Relay. Four thousand years ago, the Mu Relay was knocked out of position by a supernova and lost. Since then, Ilos and its cluster have been inaccessible.

Occasionally, a university will organize an expedition to chart a route to Ilos using conventional FTL drive. These never get beyond the planning stages due to the distance and danger. The journey could take years or decades, passing through the hostile Terminus Systems and dozens of unexplored systems.

Purgatory

Originally an "ark ship" designed to carry agricultural animals, the Purgatory was taken by the Blue Suns mercenary company during a large-scale battle in the Skyllian Verge. In a years-long reconstruction of its interior, the Blue Suns repurposed it to hold sapient prisoners, supposedly because they captured so many in their conflicts throughout the galaxy. When media outlets started investigating claims that the ship was used for slaving operations, the Blue Suns turned a public relations nightmare into a regular income source.

Claiming to be in full accordance with Citadel law, the crew of Purgatory now regularly lands on planets or space stations claiming that they can no longer hold their prisoners because of cost overruns. To avoid keeping prisoners under inhumane conditions, they will have to release them at the nearest port, dumping the scum of the galaxy directly into the local population. Faced with such a scenario, the government usually grants Purgatory's crew massive discounts in fuel, food, and repairs as long as they go away. Some even offload their own prisoners to Purgatory for a fee, grateful to have a problem relocated somewhere other than their backyard. Such unfortunates go in the dark depths of the ship, never to be seen again by their families or contacts.

Purgatory is minimally armed with GARDIAN defenses. Though a cruiser-weight ship, it relies on the Blue Suns' fighters to prevent any attacks bent on a jailbreak or similar events.

The Migrant Fleet

The flotilla, or the Migrant Fleet, is a fleet of roughly 50,000 starships that houses over 17 million quarians. The largest collection of starfaring vessels in the galaxy, the Fleet is so large it may take days for all the ships to pass through a mass relay.

The ships are constantly repaired, replaced, and upgraded to comfortably house as many quarians as possible. Typically, ships specialize in roles for the Fleet, from the enormous agricultural liveships to the shielded lab ships to the repurposed freighters known as homeships that house quarian children, young parents, and educators. Employed quarians typically live in the ship they work on, since commuting from ship to ship ties up resources with unnecessary docking procedures.

Even within the flotilla, quarians on most ships will remain encased in their protective suits. Rarely, quarians will meet on "clean ships" for specific purposes such as medical services or reproduction. When this occurs, they remove their suits, knowing full well that it is likely they will

spend a few days having allergic reactions or getting over infections as their weakened immune systems compensate for each other's presence.

Virmire

Virmire is a lush world located on the frontier of the Attican Traverse. Its vast seas and orbital position on the inner life zone have created a wide equatorial band of humid, tropical terrain. Only the political instability of the region has impeded efforts at colonization.

Many times, the Citadel has opened negotiations to settle Virmire with the various criminal gangs and petty dictatorships in the nearby Terminus Systems. All fell apart due to internal power shifts within the opposing parties. The Citadel has written off the colonization of Virmire as impossible without significant political change.

The Terminus powers themselves are unlikely to ever settle Virmire. Most lack the resources to support settlement of a virgin world, finding it more expedient to steal from their neighbors than build for themselves.

Shadow Games: The Broker's Secrets*

The Yahg

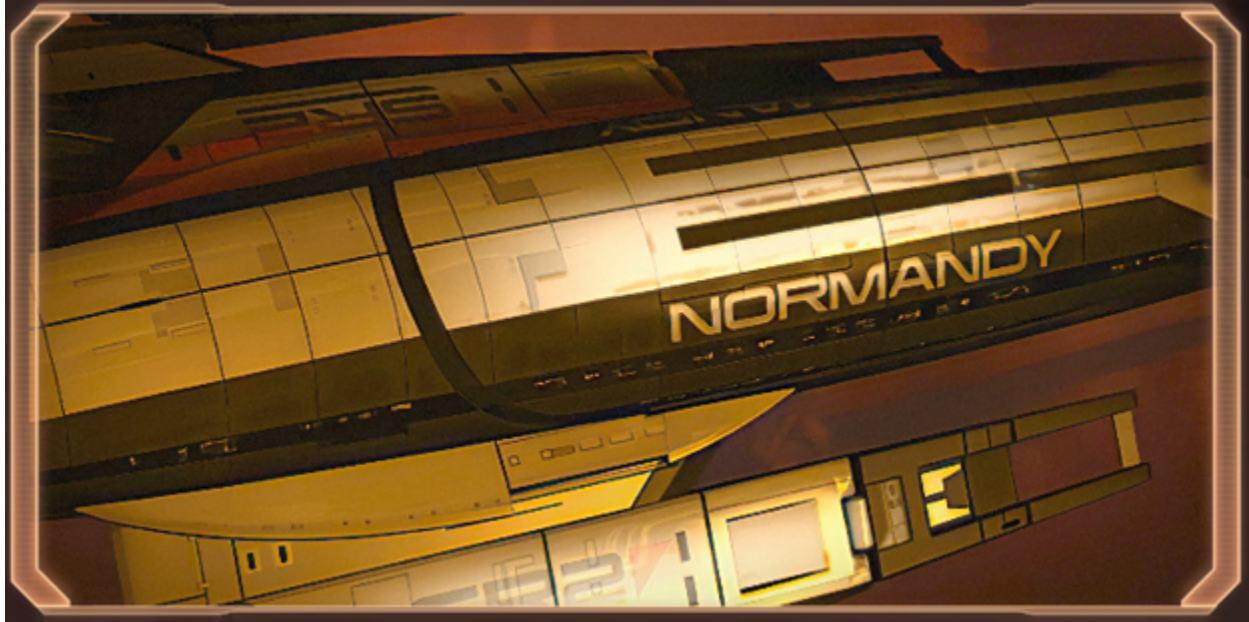
The yahg are a race of massive apex predators from the world of Parnack whose rise to sentience in no way blunted their violent nature. A group of yahg is unable to cooperate until a single leader has been determined through either social maneuvering or brute force, but no grudges are held once a yahg establishes dominance. Former rivals serve their new superior's purpose with unflinching loyalty and relentless determination, a legacy of their origin as pack species.

Their eight eyes are another sign of their hunter ancestry -- all four pairs are geared toward tracking down and predicting the movements of prey. Sophisticated and keenly developed sensitivity to movement and light have made yahgs masters at reading body language, regardless of species. Much to their short-lived chagrin, the Council's first contact teams discovered it was nearly impossible to lie to the yahg.

The yahg had technology equivalent to 20th century Earth standards when they were discovered by the Council in 2125. The Council's ambassadors approached the yahg as friends and allies instead of subordinates, a baffling sign of contempt from newcomers on Parnack. The yahg attacked when it became apparent that the alien diplomats stubbornly considered themselves sovereign people instead of new underlings. Parnack remains off-limits by order of the Council, which fears that the yahg's size, aggression, and obsession with control make them poorly suited for integration into the galactic community.

Ships and Vehicles

Normandy Armor Upgrade: Silaris Armor



Asari-made Silaris armor can resist even the tremendous heat and kinetic energy of starship weapons. The armor is nearly unsurpassed in strength because its central material, carbon nanotube sheets woven with diamond Chemical Vapor Deposition, are crushed by mass effect fields into super-dense layers able to withstand extreme temperatures. That process also compensates for diamond's brittleness.

Diamond armor itself has two limiting disadvantages. First, while nanotubes and CVD-diamond construction have become cheaper in recent years, it remains prohibitively expensive to coat starships or aircraft larger than fighters in Silaris material. Second, the armor must be attached to the ship's superstructure, so shock waves from massive firepower can still destroy the metals beneath the armor itself.

A popular misconception holds that the diamond composition of Silaris armor gives it a sparkle. In fact, atmospheric nitrogen impurities during the super-hot forging process give the armor a metallic gray or yellow sheen.

Normandy Shield Upgrade: CBT



Cyclonic Barrier Technology (CBT) attempts to solve the higher-end limitations of traditional kinetic barriers. Traditional barriers cannot block high-level kinetic energy attacks such as disruptor torpedoes because torpedo mass effect fields add mass. The CBT violently slaps aside rather than halting incoming linear force. By rotationally firing their mass effect field projectors, ships create rapidly oscillating kinetic barriers instead of static ones. Shooting through the CBT is like trying to shoot at a target inside a spinning ball.

Significant drawbacks to current CBT configuration prevent its use on anything other than frigates and fighters. Its many high-frequency sensors and emitters require frequent maintenance and replacement. A partially damaged CBT can endanger its operator, who is surrounded by rotating mass effect fields skewing in unpredictable directions. Fortunately, if an emitter is damaged, the CBT corrects to become a traditional shield array, a safety feature that makes it most effective during opening volleys.

Normandy SR-1



The Systems Alliance Space Vehicle Normandy is a prototype starship created as a joint human and turian venture. A frigate optimized for reconnaissance missions, the vessel uses state-of-the-art stealth technology.

Most ships generate tremendous heat that is easily detectable against the absolute-zero background of space. The Normandy, however, temporarily sinks this heat within its hull. Because of exterior hull refrigeration, the ship can travel undetected for hours, or drift passively for days of covert observation. That heat-sinking carries the risk of cooking the crew alive if the stored heat is not eventually radiated.

Also contributing to stealth is the Normandy's revolutionary Tantalus drive, a mass effect core double the standard size. The Tantalus generates mass concentrations that the Normandy "falls into," allowing it to move without the use of heat-emitting thrusters.

Normandy SR-2

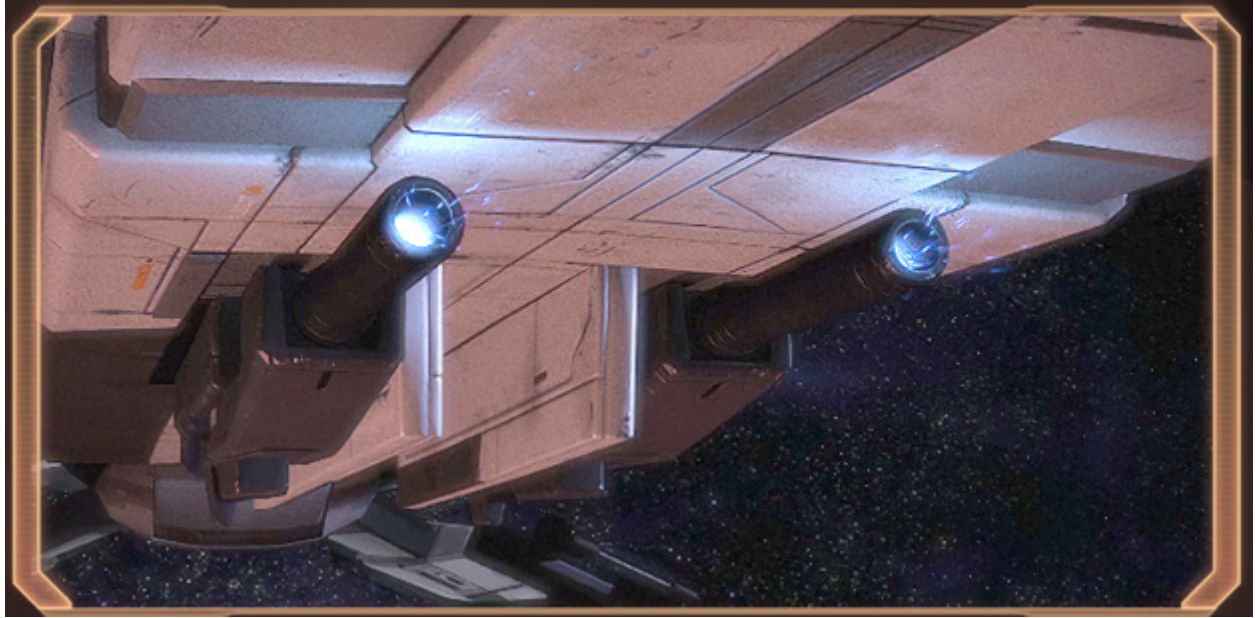


With elaborate secrecy, Cerberus labored for years to build a new, superior Normandy. The vehicle's many alterations produced a craft nearly double the original size, requiring an even larger Tantalus drive core to compensate.

The new Normandy features greater space in living quarters, research laboratory, observation deck, and cargo bay. Its shuttle can make landings the Normandy cannot attempt. In addition to tightbeam communicators, Normandy's Quantum Entanglement Communicator (QEC) provides instantaneous contact with the Illusive Man. The Enhanced Defense Intelligence AI coordinates many of the ship's combat functions, assisting and even supplanting human piloting.

Potential upgrades are numerous: the airframe could support additional armor and an axial mass accelerator, the thrusters could support recent advances in fuel technology beyond H2/O2 chemical rockets, and the hull can mount double the standard number of kinetic barrier projectors, leaving space for stronger shields, easily sustainable via the new eezo drive core.

Normandy Weapon Upgrade: Thanix Cannon



Following the Battle of the Citadel, human and turian volunteers conducted a massive three-month recovery effort to clear the station's orbit of debris. Secretly, the turian Office of Technological Reconnaissance "volunteers" were technology recovery specialists salvaging the main weapon of the geth flagship Sovereign, and large amounts of its valuable element zero core.

Contrary to popular belief, Sovereign's main gun was not a directed-energy weapon. Rather, its massive element zero core powered an electromagnetic field suspending a liquid iron-uranium-tungsten alloy that shaped into armor-piercing projectiles when fired. The jet of molten metal, accelerated to a fraction of the speed of light, destroys targets by impact force and irresistible heat.

Only 11 months after the battle, the turians produced the Thanix, their own miniaturized version of Sovereign's gun. The Thanix can fire reliably every five seconds, rivaling a cruiser's firepower but mountable on a fighter or frigate.

UT-47 Kodiak “Drop-Shuttle”



The Systems Alliance UT-47 drop-shuttle landing craft holds 12 soldiers in a cramped, uncomfortable cargo bay and two more in the cockpit. Officially named the Kodiak, the drop-shuttle is better known to Alliance marines as the "combat cockroach" due to its appearance and durability.

The vehicle's robust environmental sealant technology exposes few vulnerable parts to the elements. First tested in the sulfuric acid clouds and extreme temperatures of Venus, the Kodiak can land in hard vacuum, high pressure, and temperatures from near-absolute zero to over 900 degrees Celsius.

A true contragravitic vehicle, the Kodiak's substantial element zero core allows flight by entirely countering the vehicle's mass. Its small thrusters are for directional control only, so if the mass effect field fails, the vehicle becomes a proverbial "three-million-credit coffin." The unarmed shuttle forgoes weaponry-space for active masking, electronic countermeasures, and a robust kinetic barrier system. It is ideal for dropping troops undetected.

A-61 Mantis Gunship

The workhorse of mercenary bands throughout the galaxy, the Mantis is a two-man, vectored-thrust aircraft that excels in close air support roles. Highly modular in construction, the Mantis can be reconfigured as a low-altitude gunship, a fighter, a high-altitude bomber, or even a single-stage-to-orbit spaceplane that can engage enemy craft around a planet or space station. The only role that the Mantis cannot perform is that of a true deep-space fighter, as it has no FTL drive.

First rolled off the assembly lines in 2170, the Mantis remains in service in dozens of armies across the galaxy. It is most commonly used as air support in pitched ground battles, in a configuration that sports two pods for Inferno PKRs (Precision Kill Rockets) and a chin-mounted M350 mass accelerator cannon. Its kinetic barriers, thermal decoy system, and electronic countermeasures suite make the Mantis far less vulnerable to surface-to-air attacks than previous generations of aircraft. Like most modern planes, the Mantis uses an element zero core to ease the load of the engines with a mass effect field, allowing it to take off vertically or hover in place using minimum fuel. This also gives it far greater range and speed than the helicopters and jump-jet aircraft that once filled its niche -- a Mantis can take off from Baton Rouge, reach Moscow in a few hours, fly a ground attack mission, and return home before having to refuel.

FTL Drive

Faster-than-light drives use element zero cores to reduce the mass of the ship, allowing higher rates of acceleration. This effectively raises the speed of light within the mass effect field, allowing high speed travel with negligible relativistic time dilation effects.

Starships still require conventional thrusters (chemical rockets, commercial fusion torch, economy ion engine, or military antiproton drive) in addition to the FTL drive core. With only a core, a ship has no motive power.

The amount of eezo and power required for a drive increases exponentially to the mass being moved and the degree it is being lightened. Very massive ships or very high speeds are prohibitively expensive.

If the field collapses while the ship is moving at faster-than-light speed, the effects are catastrophic. The ship is snapped back to sublight velocity, the enormous excess energy shed in the form of lethal Cerenkov radiation.

FTL Drive: Appearance

New space travelers ask, "What does it look like outside a ship moving at faster-than-light speed?" Part of the answer can be seen in a simple pane of glass. Light travels slower through glass than it does through open air; light also moves slower in conventional space than it does in a high-speed mass effect field. This causes refraction - any light entering at an angle is bent and separated into a spectrum. Objects outside the ship will appear refracted. The greater the difference between the objective (exterior) and subjective (interior) speeds of light, the greater the refraction.

As the subjective speed of light is raised within the field, objects outside will appear to red-shift, eventually becoming visible only to radio telescope antennae. High-energy electromagnetic sources normally hidden to the eye become visible in the high blue spectrum. As the speed of

light continues to be raised, x-ray, gamma ray, and eventually cosmic ray sources become visible. Stars will be replaced by pulsars, the accretion discs of black holes, quasars, and gamma ray bursts.

To an outside observer, a ship within a mass effect drive envelope appears blue-shifted. If within a field that allows travel at twice the speed of light, any radiation it emits has twice the energy as normal. If the ship is in a field of about 200 times light speed, it radiates visible light as x-rays and gamma rays, and the infrared heat from the hull is blue-shifted up into the visible spectrum or higher.

Ships moving at FTL are visible at great distances, though their signature will only propagate at the speed of light.

FTL Drive: Drive Charge

As positive or negative electric current is passed through an FTL drive core, it acquires a static electrical charge. Drives can be operated an average of 50 hours before they reach charge saturation. This changes proportional to the magnitude of mass reduction; a heavier or faster ship reaches saturation more quickly.

If the charge is allowed to build, the core will discharge into the hull of a ship. All ungrounded crew members are fried to a crisp, all electronic systems are burned out, and metal bulkheads may be melted and fused together.

The safest way to discharge a core is to land on a planet and establish a connection to the ground, like a lightning rod. Larger vessels like dreadnoughts cannot land and must discharge into a planetary magnetic field. The ship passes the charge from the drive core to the exterior armored hull, then dives into the magnetic field.

As the hull discharges, sheets of lightning jump away into the field, creating beautiful auroral displays on the planet. The ship must retract its sensors and weapons while dumping charge to prevent damage, leaving it blind and helpless. Discharging at a moon with a weak magnetic field can take days. Discharging into the powerful field of a gas giant may require less than an hour. Deep space facilities such as the Citadel often have special discharge facilities for visiting ships.

Helios Thruster Module

Intended for next-generation fighter craft, the Heed Industries Helios Thruster Module propulsion system far outpaces the typical liquid hydrogen/liquid oxygen reactions that power a frigate's maneuvering thrusters. By using metastable metallic hydrogen, the Helios boasts a fuel that burns at far greater efficiency than liquid H₂/O₂. Navigators can execute the numerous small course corrections inherent to any long- distance travel without fear of exhausting the ship's fuel supplies. This net gain extends to forward impulse as well: a ship powered by

antiprotons can coast temporarily using the Helios to reach an inferior but highly sustainable speed. Such efficiency lowers antiproton consumption, a constant concern for any warship.

When a Helios-propelled ship must refuel, however, it typically relies on a large carrier or nearby planetary factory to synthesize the metallic hydrogen. This process uses extremely dense mass effect fields to create the metal under pressures of over a million Earth atmospheres, an activity most safely done while planetside. While that process may seem like a drawback compared to "skimmer ships" that can gather hydrogen and oxygen from anywhere in the universe, the combat superiority of the Helios' maneuvering capabilities is often a worthwhile tradeoff. The same efficiency that allows for microburn course correction can power rapid bursts of motion. Once a pilot becomes used to the ship's new energetic responses, she can easily put the ship wherever and at whatever angle she desires.

Space Combat: Combat Endurance

Heat limits the length and intensity of ship-to-ship combat. Starships generate enormous heat when they fire high-energy weapons, perform maneuvering burns, and run on-board combat electronics.

In combat, warships produce heat more quickly than they can disperse it. As heat builds within a vessel, the crewed spaces become increasingly uncomfortable. Before the heat reaches lethal levels, a ship must win or retreat by entering FTL. After an FTL run, the ship halts, shuts down non-essential systems, and activates the heat radiation gear.

Combat endurance varies by ship design, and by the battle's location. Battles in the deep cold of interstellar space can go on for some time. Engagements close to a star are brief. Since habitable worlds are usually close to a star, battles over them are frantic.

Space Combat: General Tactics

Shells lofted by surface navies crash back to earth when their acceleration is overwhelmed by gravity and air resistance. In space, a projectile has unlimited range; it will keep moving until it hits something.

Practical gunnery range is determined by the velocity of the attacker's ordnance and the maneuverability of the target. Beyond a certain range, a small ship's ability to dodge trumps a larger attacker's projectile speed. The longest-ranged combat occurs between dreadnoughts, whose projectiles have the highest velocity but are the least maneuverable. The shortest-range combat is between frigates, which have the slowest projectile velocities and highest maneuverability.

Opposing dreadnoughts open with a main gun artillery duel at EXTREME ranges of tens of thousands of kilometers. The fleets close, maintaining evasive lateral motion while keeping their bow guns facing the enemy. Fighters are launched and attempt to close to disruptor torpedo

range. Cautious admirals weaken the enemy with ranged fire and fighter strikes before committing to close action. Aggressive commanders advance so cruisers and frigates can engage.

At LONG range, the main guns of cruisers become useful. Friendly interceptors engage enemy fighters until the attackers enter the range of ship-based GARDIAN fire. Dreadnoughts fire from the rear, screened by smaller ships.

Commanders must decide whether to commit to a general melee or retreat into FTL.

At MEDIUM range, ships can use broadside guns. Fleets intermingle, and it becomes difficult to retreat in order. Ships with damaged kinetic barriers are vulnerable to wolfpack frigate flotillas that speed through the battle space.

Only fighters and frigates enter CLOSE 'knife fight' ranges of 10 or fewer kilometers. Fighters loose their disruptor torpedoes, bringing down a ship's kinetic barriers and allowing it to be swarmed by frigates. GARDIAN lasers become viable weapons, swatting down fighters and boiling away warship armor.

Neither dreadnoughts nor cruisers can use their main guns at close range; laying the bow on a moving target becomes impossible. Superheated thruster exhaust becomes a hazard.

Space Combat: Planetary Assaults

Planetary assaults are complicated if the target is a habitable garden world; the attackers cannot approach the defenders straight on.

The Citadel Conventions prohibit the use of large kinetic impactors against habitable worlds. In a straight-on attack, any misses plough into the planet behind the defending fleet. If the defenders position themselves between the attackers and the planet, they can fire at will while the attacker risks hitting the planet.

Successful assaults on garden worlds hinge upon up-to-date intelligence. Attackers need to determine where the enemy's defenses are, so they may approach from an angle that allows them to fire with no danger of collateral damage. Note this is not necessary for hostile worlds.

Once control of orbit has been lost, defensive garrisons disperse into the wilderness. An enemy with orbital superiority can bombard surface forces with impunity. The best option for defenders is to hide and collect reconnaissance in anticipation of relief forces.

Given the size of a planet, it is impractical to garrison entire conquered worlds. Fortunately, colonization efforts tend to focus on building up a dozen or fewer areas. Ground forces occupy the spaceports, industrial facilities, and major population centers. The wilderness is patrolled by unmanned aerial vehicles and satellite reconnaissance. If a defender unit is spotted, airmobile rapid deployment units and satellite artillery are used to pin down and destroy them.

Space Combat: Pursuit Tactics

Dependent on light, sensors cannot detect objects moving at faster-than-light speeds. No ship can be detected at interstellar ranges. Detection at interplanetary ranges suffers from light speed lag: observers see ships not where they appear to be but where they were when the light bearing their image left them, minutes, hours, or days before. To counteract light speed lag, battle fleets surround themselves with spheres of screening and scouting frigates.

Pursuers cannot detect ships and directly intercept them. Instead, pursuers track where objects were, where they were heading, and at what speed they were moving. Such data reliably predicts an object's future location and for pursuit along its light-lagged "wake." Ships trying to evade pursuit follow erratic zig-zag courses, requiring pursuers to make stops to update their projections.

Space Combat: Trans-Relay Assaults

The crucial choice for any attack through mass relays is how to divide the fleet for transit. The accuracy of a relay's mass- projection depends on the mass being moved and how far it's going. Any long distance and/or high mass jump will see drift. That is, a ship may be hundreds or millions of kilometers from its intended drop point, in any direction from the relay.

Distance can't be chosen by admirals, but a relay is told how much mass to transit. For example, if told to move a million metric tons of mass, the relay will scan the approach corridor, find four 250,000-ton freighters, and transit them together, maintaining their relative positions.

A commander has the option of moving his fleet as one large, coherent formation that may be wildly off-position, or breaking it up into many smaller formations that will be individually closer to the intended attack point, but could be widely dispersed.

Conservative assault doctrine holds that fleets should be moved en masse, maintaining concentration of force and reducing the chances of collision. The only time it is reasonable to split up a formation is during blockade running.

Starships: Carriers

All races provide their fleets with organic fighter support. Cruisers fit a handful in the space between the interior pressure hulls and exterior armor. Dreadnoughts have a hangar deck within the hull. Humans, who had only recently 'graduated' from surface to space combat, were the first to build ships wielding fighters as the main armament.

In fleet combat, carriers stay clear of battle, launching fighters bearing disruptor torpedoes. Fighters are the primary striking power of the ship; if a carrier enters mass accelerator range of the enemy, things have gone very wrong.

It is possible to recover and rearm fighters during combat, though most carriers seal the flight deck and try to stay out of the way. The flight deck is essentially a corridor through the armor and into the heart of the vessel. A single well-placed torpedo is enough to gut a carrier.

Alliance carriers are named after great leaders, artists, and intellectuals from human history.

Starships: Crew Considerations

Cabins give each individual ten cubic meters of space. On larger vessels private rooms are common. As ships get smaller, the number of crew packed into a single wardroom increases. Asari prefer shared spaces even on large vessels, while krogan territorial instincts make it impossible for them to cohabitate even on the smallest ships.

On smaller vessels, 'hot bunking' is the norm. Crew members assigned to different watches share the same bunk. When one gets off-duty, he wakes up the person in the bunk. While that crewman is on duty, the first gets his rack time.

Spacecraft compartments can be isolated by air-tight doors in case of decompression. The cinematic vision of explosive decompression is fiction; holed compartments either take enough damage that occupants are killed instantly, or leak slowly enough that they are able to reach protective gear.

Compartments are equipped with Emergency Life Support Apparatus: fireproof plastic bubbles with air bottles. Small when stowed, ELSA comfortably accommodate one individual inflated. Damage control procedure cuts off ventilation to burning compartments. Without oxygen to consume, fires die in seconds. The compartment is re-pressurized afterwards for crew recovery.

Mass effect fields create an artificial gravity (a-grav) plane below the decks, preventing muscle atrophy and bone loss in zero-gee. Large vessels arrange their decks perpendicular to their thrust axis. The 'highest' decks are at the bow, and the 'lowest' at the engines. This allows a-grav to work with the inertial effects of thrust. Ships that can land arrange their decks laterally, so the crew can move about while the vessel is on the ground.

Warships normally turn off their a-grav systems during combat, reducing the heat generated by systems and increasing combat endurance. To provide a point of reference for navigating in zero-gee, floors are painted a different color from the walls and ceiling.

Starships: Cruisers

Cruiser-weight starships are the standard combat unit encountered away from large naval bases, the 'poor bloody infantry' of most fleets. Nimble scouting frigates have neither the punch nor the stamina to stand up to serious combat, and the mighty dreadnoughts are a strategic resource, carefully hoarded and committed to the most critical battles.

Cruisers perform routine independent 'show the flag' patrols in settled systems and lead flotillas of frigates in small engagements, such as pirate suppression campaigns. In major fleet engagements, cruiser squadrons support the dreadnought battle line by screening their flanks against enemies attempting to maneuver for a main gun 'bow shot' from their vulnerable broadsides.

Alliance cruisers are named after cities of Earth.

Starships: Fighters

Fighters are single-pilot combat small craft. They are lightweight enough that they can be economically fitted with powerful element zero cores, making them capable of greater acceleration and sharper maneuvers than starships.

Kinetic barrier shields changed starship battles from short, vicious bloodbaths to extended, indecisive slugging matches. Only the main gun of a dreadnaught could punch a mass accelerator slug through the barriers of an opposing dreadnought. This changed with the development of the fighter-launched mass disruptor torpedo, a short-ranged weapon that can penetrate kinetic barriers to destroy their projector assemblies.

Starship GARDIAN defenses must be overwhelmed through swarm tactics. Fighter groups can take heavy casualties pressing their torpedo attacks home. Once fighter-launched torpedoes have crippled an enemy's barriers, the mass accelerators on frigates and cruisers can make short work of them.

Interceptors are a type of fighter optimized to attack other fighters, with no ability to damage starships. Interceptors are used to screen friendly units from incoming fighter attack.

Starships: Heat management

Dispersal of heat generated by onboard systems is a critical issue for a ship. If it cannot deal with heat, the crew may be cooked within the hull.

Radiation is the only way to shed heat in a vacuum. Civilian vessels utilize large, fragile radiator panels that are impossible to armor. Warships use Diffuse Radiator Arrays (DRA), ceramic strips along the exterior of the armored hull. These make the ship appear striped to thermographic sensors. Since the arrangement of the strips depends on the internal configuration of the ship,

the patterns for each vessel are unique and striking. On older ships, the DRA strips could become red- or white-hot. Dubbed 'tiger stripes' or 'war paint' by humans, the glowing DRA had a psychological impact on pirates and irregular forces.

Strip radiators are not as efficient as panels, but if damaged by enemy fire, the ship only loses a small portion of its total radiation capacity. In most cases, a vessel's DRA alone allows it to cruise with no difficulties. Operations deep within a solar system can cause problems.

A ship engaged in combat can produce titanic amounts of heat from maneuvering burns and weapons fire. When fighting in a high-heat environment, warships employ high-efficiency 'droplet' heat sinks.

In a droplet system, tanks of liquid sodium or lithium absorb heat within the ship. The liquid is vented from spray nozzles near the bow as a thin sheet of millions of micrometer-scale droplets. The droplets are caught at the stern and recycled into the system. A droplet system can sink 10-100 times as much heat as DRA strips.

Droplet sheets resemble a surface ship's wake through the water. The wake peels out in sharp turns, spreading a fan of droplets as the ship changes vectors and leaves the coolant behind.

Starships: Quarian Liveships

There are few wide-open spaces in quarian spacecrafts; liveships are the exception. Each ship is a massive hydroponics facility, growing thousands of tons of genetically modified staple crops under artificial light and in highly enriched soil.

The surface of a liveship is studded with docking bays so as many shuttles as possible can distribute the foods throughout the flotilla on a daily basis. When received, the crops are sterilized with radiation, ground up into nutritious pastes, and pumped into quarian suits through feeding tubes. In return, waste products that could be used as fertilizer or compost are returned to the liveships through an efficient (if odorous) recycling program.

Liveships do not hold animals. The quarians consume a vegan diet, driven not by ethics but by practicality. Captive animals require living space, and consume large amounts of water and plant matter. The quarians cannot afford such an inefficient resource-to-calorie ratio, to say nothing of a live animal's disease or allergen potential. As a result, when the flotilla arrives in a star system where life is based on the same dextro-amino acids that the quarians consume, pastes based on animal proteins fetch highly inflated prices, and the vendors are typically mobbed by quarians wanting a new taste sensation. The sickness that often follows these binges is treated much the same way as hangovers are in human culture: painful, but part of the overall experience of excess.

Starships: Sensors

'Light lag' prevents sensing in real time at great distances. A ship firing its thrusters at the Charon Relay can be easily detected from Earth, 5.75 light- hours (six billion kilometers) away, but Earth will only see the event five hours and 45 minutes after it occurs. Due to the light-speed limit, defenders can't see enemies coming until they have already arrived. Because there is FTL travel and communications but no FTL sensors, frigates are crucial for scouting and picket duties.

Passive sensors are used for long-range detection, while active sensors obtain short-range, high quality targeting data.

Passive sensors include visual, thermographic, and radio detectors that watch and listen for objects in space. A powered ship emits a great deal of energy; the heat of the life support systems; the radiation given off by power plants and electrical equipment; the exhaust of the thrusters. Starships stand out plainly against the near-absolute zero background of space. Passive sensors can be used during FTL travel, but incoming data is significantly distorted by the effects of the mass effect envelope and doppler shift.

Active sensors are radars and high resolution ladars (LAser Detection And Ranging) that emit a 'ping' of energy and 'listen' for return signals. Ladars have a narrower field of view than radar, but ladar resolution allows images of detected objects to be assembled. Active sensors are useless when a ship is moving at FTL speeds.

Starships: Thrusters

A mass effect drive core decreases the mass of a bubble of space-time around a ship. This gives the ship the potential to move quickly, but does not apply any motive power. Ships use their sublight thrusters for motive power at FTL. There are several varieties of thruster, varying in performance versus economy. All ships are equipped with arrays of hydrogen- oxygen reaction control thrusters for maneuvering.

Ion drives electrically accelerate charged particles as a reaction mass. They are extremely efficient, but produce negligible thrust. They are mainly used for automated cargo barges.

The primary commercial engine is a fusion torch, which vents the plasma of the ship's power plant. Fusion torches offer powerful acceleration at the cost of difficult heat management. Torch fuel is fairly cheap: helium-3 skimmed from gas giants and deuterium extracted from seawater or cometary bodies. Propellant is hydrogen, likewise skimmed from gas giants.

In combat, military vessels require accelerations beyond the capability of fusion torches. Warship thrusters inject antiprotons into a reaction chamber filled with hydrogen. The matter-antimatter annihilation provides unmatched motive power. The drawback is fuel production; antiprotons must be manufactured one particle at a time. Most antimatter production

is done at massive solar arrays orbiting energetic stars, making them high-value targets in wartime.

The exhaust of fusion and antiproton drives is measured in millions of degrees Celsius. Any vessel caught behind them will melt like wax in a blowtorch.

Weapons: Ablative Armor

A warship's kinetic barriers reduce the damage from solid objects, but can do nothing to block GARDIAN lasers, particle beams, and other forms of Directed Energy Weapon (DEW). The inner layer of warship protection consists of ablative armor plate designed to 'boil away' when heated. The vaporized armor material scatters a DEW beam, rendering it ineffectual.

A scaffold is built around the interior pressure hull, with sheets of ablative armor hung from the structure. Ships typically have multiple layers of armor separated by empty baffles, spaces often used for cargo storage. Cruisers, which lack the internal space to fit dedicated fighter hangars, store the shipboard fighter complement in the baffles. It is not unknown for enlisted crew to build illicit alcohol distilleries in some obscure corner of the baffles, safe from prying eyes.

Weapons: GARDIAN

A ship's General ARea Defense Integration Anti- spacecraft Network (GARDIAN) consists of anti-missile / anti-fighter laser turrets on the exterior hull. Because these are under computer control, the gunnery control officer needs to do little beyond turn the system on and designate targets as hostile.

Since lasers move at light speed, they cannot be dodged by anything moving at non-relativistic speeds. Unless the beam is aimed poorly, it will always hit its target. In the early stages of a battle, the GARDIAN fire is 100% accurate. It is not 100% lethal, but it doesn't have to be. Damaged fighters must break off for repairs.

Lasers are limited by diffraction. The beam 'spreads out', decreasing the energy density (watts per m²) the weapon can place on a target. Any high-powered laser is a short-ranged weapon.

GARDIAN networks have another limitation: heat. Weapons-grade lasers require "cool-down" time, during which heat is transferred to sinks or radiators. As lasers fire, heat builds within them, reducing damage, range, and accuracy.

Fighters attack in swarms. The first few WILL be hit by GARDIAN, but as battle continues, the effects of laser overheat allow the attackers to press ever closer to the ship. Constant use will burn out a laser.

GARDIAN lasers typically operate in infrared frequencies. Shorter frequencies would offer superior stopping power and range, but degradation of focal arrays and mirrors would make

them expensive to maintain, and most prefer mechanical reliability over bleeding-edge performance where lives are concerned. Salarians, however, use near-ultraviolet frequency lasers with six times the range, believing that having additional time to shoot down incoming missiles is more important.

Lasers are not blocked by the kinetic barriers of capital ships. However, the range of lasers limits their use to rare 'knife fight'-range ship-to-ship combat.

Technology

Argus Planet Scan Technology*

The Argus provides a qualitative leap in planetary surface imaging. A proprietary technology of the Ayndroid Group, an R&D laboratory reportedly owned by Cerberus, this upgrade for Normandy's sensory array delivers superior long-range topographical scanning resolution and rendering speed.

By deploying an orbital multistatic grid of 100 radar-emitting micro-satellites, the Argus quickly delivers a global Digital Elevation Model (DEM) at 15 meters per pixel (mpp) resolution, vastly outclassing the Normandy's previous scanner peak performance of 27 mpp. Such imaging quality provides superior defensive intelligence, and at a speed warranted by the dangers of combat.

At slower scanning and rendering speed, the Argus can resolve down to an astonishing 0.001 mpp -- one millimeter per pixel -- ideal for geological and biological prospecting, archeological research, and long-term security surveillance. By employing such a massive multistatic grid of nearly- untraceable micro-emitters, the resilient Argus is virtually invulnerable to electronic countermeasures. The spherical geometry of the Argus grid also allows superior cross-sectioning of targets.

Biotics



Biotics is the ability of rare individuals to manipulate dark energy and create mass effect fields through the use of electrical impulses from the brain. Intense training and surgically-implanted amplifiers are necessary for a biotic to produce mass effect fields powerful enough for practical use. The relative strength of biotic abilities varies greatly among species and with each individual.

There are three branches of biotics. TELEKINESIS uses mass-lowering fields to levitate or impel objects. Mass-raising KINETIC FIELDS are used to block or pin objects. DISTORTION uses rapidly shifting mass fields to shred objects.

Most organic species are capable of developing biotic abilities, though there are risks involved. Biotics are the result of in-utero exposure to element zero. This usually causes fatal cancers in the victim, but in rare cases it coalesces into nodules within the fetus's developing nervous system.

Biotics: Biotic Amps

Biotics manipulate mass effect fields using dozens of element zero nodules within their nervous systems that react to electric stimuli from the brain. Amplifiers allow biotics to synchronize the nodules so they can form fields large and strong enough for practical use. Amplifiers can improve a specific discipline or talent.

An implant is a surgically-embedded interface port into which amps are 'plugged in'. On humans, the implant is usually placed at the base of the skull for convenient access, though the user must be careful to keep it free of contaminants.

Implant ports can fit a variety of amps, and there is a growing market for modifications and add-ons. The finest quality implants and amps are manufactured by asari artisans, but the Alliance's L3 implants - first deployed in 2170 - are a significant step forward.

Biotics: Life as a Biotic

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Biotics: Training

Biotic implants and amplifiers only provide the potential to create coherent mass effect fields. Whether biotics can actually do so is largely determined by their training.

Biotics must develop conscious control over their nervous systems, sending specific electrical impulses to the element zero nodules embedded in their nerves. They are taught to use their implants and amps with biofeedback devices and physical mnemonics. Specific gestures or muscle movements fire the proper sequence of nerves to activate a certain skill.

Conatix Industries pioneered biotic training with the Biotic Acclimation and Temperance Training program. Although BAaT did not achieve the desired results, many techniques taught are still used today.

Many human think tanks are trying to develop some form of biotic super soldier. Most are benign efforts to create more flexible troops. Others, less publicly known, are unapologetic attempts to create Nietzschean supermen.

Communications*

Real-time communication is possible thanks to networks of expensive mass relay comm buoys that can daisy-chain a transmission via lasers.

Comm buoys are maintained in patterns built outward from each mass relay. The buoys are little more than a cluster of primitive, miniature mass relays. Each individual buoy is connected to a partner on another buoy in the network, forming a corridor of low-mass space. Tightbeam communications lasers are piped through these 'tubes' of FTL space, allowing virtually instantaneous communication to anywhere on the network. The networks connect across regions by communications lasers through the mass relays.

With this system, the only communications delay is the light lag between the source or destination and the closest buoy. So long as all parties remain within half a light-second (150,000 km) of buoys, seamless real time communications are possible. Since buoys are maintained in all traveled areas, most enjoy unlimited instant communication. Ships only suffer communications lag when operating off established deep space routes, around uninhabited outer system gas giants, and other unsettled areas.

During wartime, comm buoy networks are the first target of attack. Once the network is severed, it can take anywhere from weeks to years to get a message out of a contested system. In systems where a buoy network has not yet been built or has been destroyed, rapid communication means ferrying information through high-speed courier ships and unmanned data drones.

Communications: Administration

While comm buoys allow rapid transmission, there is a finite amount of bandwidth available. Given that trillions of people may be trying to pass a message through a given buoy at any one time, access to the network is parceled out on priority tiers.

The Citadel Council and the Spectres have absolute priority; if they are using all the bandwidth, everyone else must wait. Individual governments and their militaries enjoy the next-highest tier. During wartime, civilian communication can suffer hours or even days of lag. Intelligence agencies study ping time through various systems to predict military buildups.

Below the governments and militaries, bandwidth priority is sold to the highest bidder. Media conglomerates, particularly headline news networks, purchase higher priority to provide their viewers with timely information. Corporations that require timely information and response capability (for example, financial institutions and investment firms) also invest heavily in priority access. The funds acquired through sales of bandwidth are used to maintain and expand the communications infrastructure.

While everyone with a computer has guaranteed free and unlimited access to the galactic extranet, they are last in line for bandwidth and may have to wait for their requests to be processed. Bandwidth resale corporations use investment capital to purchase blocks of high priority access, made available by paid subscription.

Communications: Methodology

As the population of the galaxy increases and new worlds are settled, timely access for home users and frontier settlements with underdeveloped communication infrastructures is a growing problem. To ameliorate bandwidth issues, a sophisticated array of data caches and virtual intelligence search agent programs are available.

When a user submits a query, it is first routed to the data cache on their colony or star system. At the cache, the user's search agent VI collates mountains of locally-stored data to find the desired material. If the information is not available locally, the query is passed along to neighboring systems, and then outward in an expanding network. VI search agents in those systems replicate the search. If the desired information is found, it is compressed into a 'burst' file and queued for transmission to the source system. The burst is assigned a priority based on the number of queries for it; the greater the number of queries, the higher the priority.

When a new solar system is first connected to the net, a selection of the most popular data is installed locally. Though storage hardware is cheap, the capacity required to hold all the data produced every day by trillions of people on hundreds of worlds is not trivial. It's not economical to store local copies of all the data available on obscure topics "just in case."

As colonies mature, older and less-popular chunks of data filter into them as a result of queries and are placed in the local archive. Searches for obscure topics are increasingly likely to produce instant results as the archive grows.

Computers: Artificial Intelligence (AI)*

An artificial intelligence is a self-aware computing system capable of learning and independent decision making. Creation of a conscious AI requires adaptive code, a slow, expensive education, and a specialized quantum computer called a 'blue box'.

An AI cannot be transmitted across a communication channel or computer network. Without its blue box, an AI is no more than data files. Loading these files into a new blue box will create a new personality, as variations in the quantum hardware and runtime results create unpredictable variations.

The geth serve as a cautionary tale against the dangers of rogue AI, and in Citadel Space they are technically illegal. Advocacy groups argue, however, that an AI is a living, conscious entity deserving the same rights as organics. They argue that continued use of the term 'artificial' is institutionalized racism on the part of organic life; the term 'synthetic' is considered the politically correct alternative.

Computers: Haptic Adaptive Interface*

Advances in computing have done away with traditional input devices like keyboards. Instead, modern input peripherals are usually holographically displayed in front of the user at a height and angle for ergonomic ease. Machines that use this interface detect a user through a microframe chip in the user's glove that "keys in" to the computer. Once a user is accepted, motion accelerometers in the user's gloves match his hands' location with that of a proportionate but smaller "mirror" set of controls inside the computer itself. As the user presses against the holographic field, force-feedback in the glove kicks in, giving a slight resistance. A person can then feel his way through using a touch-screen that isn't actually there. A simple toggle switch on the back of the hands allows the gloves to be turned off when not in use.

Haptic interfaces have become so common that some individuals undergo cybernetic enhancement surgery to have the accelerometers implanted in their fingertips. "Going bareskin" is the sign of a committed computer user, who no longer has to fuss with putting on gloves or cleaning them with alcohol wipes to get rid of the clammy-hand smell.

Computers: Virtual Intelligence (VI)*

A virtual intelligence is an advanced form of user interface software. VIs use a variety of methods to simulate natural conversation, including an audio interface and an avatar personality to interact with. Although a VI can provide a convincing emulation of sentience, they are not self-aware, nor can they learn or take independent action.

VIs are used as operating systems on commercial and home computers. Minimal VI 'agents' are also available. Agents are compact and specialized. Some serve as personal secretaries, filtering calls and scheduling meetings based on user-defined priorities. Others are advanced search engines, propagating themselves across the extranet to collate user-requested data.

Commercial VIs in a variety of stock personalities are available at any software retailer. Boutique firms and hobbyists also build unique VIs to personal specification. Although software emulation of living personalities is illegal, reconstructions of famous historical figures are common.

Credits ("Creds")*

The standard credit was established by the Citadel's Unified Banking Act as the currency of interstellar trade. The credit has a managed floating exchange rate, calculated in real time by the central bank to maintain the average value of all participating currencies. Some regional currencies are worth more than a credit, and some less.

Hard currency can be stolen or counterfeited, so electronic fund transfers are the norm. More importantly, physical transactions cannot be easily tracked, making them ideal for tax evasion or the purchase of illegal goods.

When the Alliance joined the Citadel, its various national treasuries were linked into the credit network. A human with a bank account of Mexican pesos, Japanese yen, or Indian rupees can purchase any item priced in credits at fair market value. All economies that participate in the credit network are required to price items in both local currency and credits.

Drones*

Drones are small robots used to support and supplement organic soldiers on the battlefield. They have no artificial intelligence of any kind, but follow fixed, minimally adaptive programs. Most varieties employ mass effect levitation to improve mobility.

All modern armies rely on veritable fleets of drones for routine soldiering (static garrisons, patrols, etc.). The use of drones in non-critical duties keeps manpower needs down and reduces casualties in low intensity conflicts. Less advanced races and cultures with less sensitivity to casualties have correspondingly fewer drones in their inventory. Drones are of little use in conventional open field battles, as they are poorly armed and armored.

In addition to combat drones, support drones are used to assist organic units in the field. Reconnaissance drones are small, stealthy craft that screen combat units in the field and warn commanders when enemies are spotted. Electronic Warfare drones supplement battlefield technicians, serving as mobile jammers and ELINT (ELectronic INTelligence gathering platforms. Military and civilian police utilize "dazzler drones" equipped with powerful strobe lights to disorient and subdue intruders using nonlethal force.

Drone formations are officially referred to as wings (i.e., "Deploy the 4th Assault Drone Wing on the left flank!"). Common soldiers often refer to friendly formations as flocks and enemy formations as swarms.

Element Zero (“Eezo”)

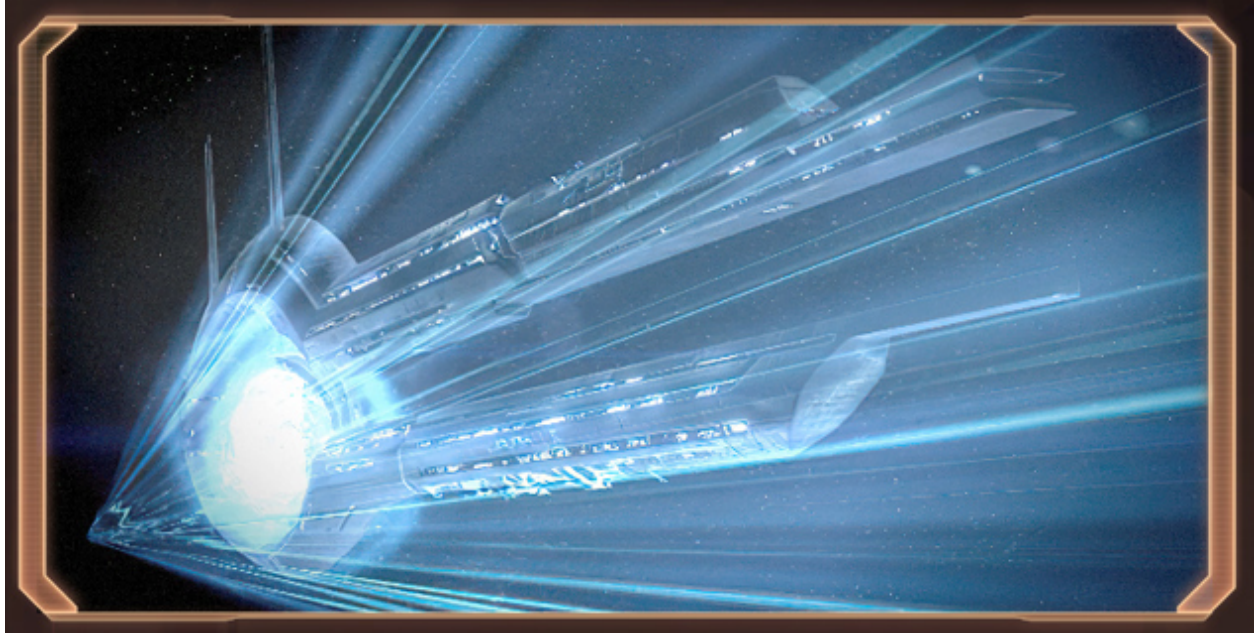


When subjected to an electrical current, the rare material dubbed element zero, or 'eezo', emits a dark energy field that raises or lowers the mass of all objects within it. This 'mass effect' is used in countless ways, from generating artificial gravity to manufacturing high-strength construction materials. It is most prominently used to enable faster-than-light space travel.

Eezo is generated when solid matter, such as a planet, is affected by the energy of a star going supernova. The material is common in the asteroid debris that orbits neutron stars and pulsars. These are dangerous places to mine, requiring extensive use of robotics, telepresence, and shielding to survive the incredible radiation from the dead star. Only a few major corporations can afford the set-up costs required to work these primary sources.

Humanity discovered refined element zero at the Prothean research station on Mars, allowing them to create mass effect fields and develop FTL travel.

Mass Effect Fields



Element zero can increase or decrease the mass of a volume of space-time when subjected to an electrical current. With a positive current, mass is increased. With a negative current, mass is decreased. The stronger the current, the greater the magnitude of the dark energy mass effect.

In space, low-mass fields allow FTL travel and inexpensive surface-to-orbit transit. High-mass fields create artificial gravity and push space debris away from vessels. In manufacturing, low-mass fields permit the creation of evenly-blended alloys, while high mass compaction creates dense, sturdy construction materials.

The military makes extensive use of mobility enhancing technologies, with mass effect utilizing fighting vehicles standard front-line issue in most military forces. Mass effect fields are also essential in the creation of kinetic barriers or shields to protect against enemy fire.

Mass Relays

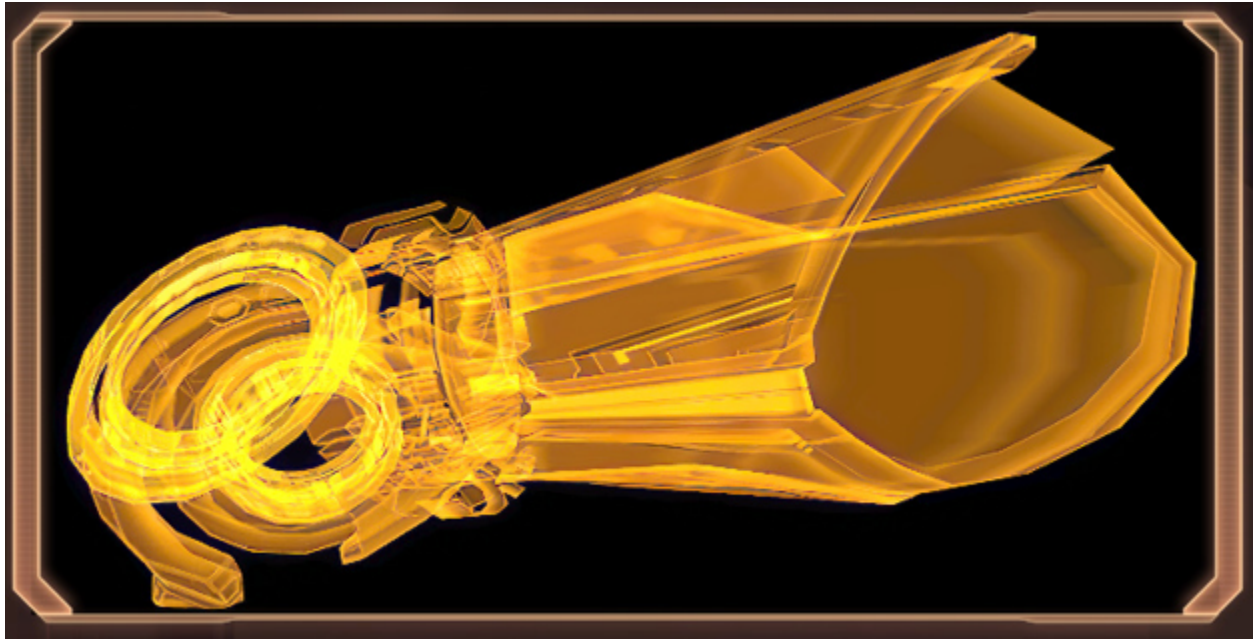


Mass relays are feats of Prothean engineering advanced far beyond the technology of any living species. They are enormous structures scattered throughout the stars, and can create corridors of virtually mass-free space, allowing instantaneous transit between locations separated by years or even centuries of travel using conventional FTL drives.

Primary mass relays can propel ships thousands of light years, often from one spiral arm of the galaxy to another. However, they have fixed one-to-one connections: a primary relay connects to one other primary relay, and nowhere else. Secondary relays can only propel ships across a few hundred light years, however they are omnidirectional: a secondary relay can send a ship to any other relay within its limited range.

There are many dormant primary relays whose corresponding twins have not yet been located. These are left inactive until their partner is charted, as established civilizations are unwilling to blindly open a passage that might connect them to a hostile species.

Omni-Tool



Omni-tools are handheld devices that combine a computer microframe, sensor analysis pack, and minifabricator. Versatile and reliable, an omni-tool can be used to analyze and adjust the functionality of most standard equipment, including weapons and armor, from a distance.

The fabrication module can rapidly assemble small three-dimensional objects from common, reusable industrial plastics, ceramics, and light alloys. This allows for field repairs and modifications to most standard items, as well as the reuse of salvaged equipment.

Omni-tools are standard issue for soldiers and first-in colonists.

Security Mechs*

The death of thousands of security and military personnel in the Battle of the Citadel was a loss felt throughout the galaxy. As large numbers of qualified personnel transferred to the Citadel to replace those that died, short-handed security companies filled out their numbers with large-scale use of unmanned security robots. Commonly referred to as "mechs," the security robots are typically grouped into light and heavy varieties. Light mechs come in a variety of sizes but are easily distinguished by opposable digits that help them in their versatile security roles. Heavy mechs lack digits and are simply weapons platforms intended to keep the peace in high-threat areas. The quadrupedal dog mech has a "face" composed of contraband-detection sensors, and it too is armed in case a perpetrator resists arrest.

A typical security mech has an extremely limited virtual intelligence. Its duty is straightforward and narrow, usually to guard an area, run a friend-or-foe program to halt unauthorized access, and fire a set of prerecorded voice commands to warn troublemakers away from the area. Light security mechs are equipped with irritant sprays and electroshockers to force compliance, and heavy mechs may be outfitted with flash-bang stunners for similar purposes. When facing an opponent armed with a firearm, any mech will immediately resort to lethal antipersonnel weapons to neutralize the threat. If the situation turns violent rapidly enough, it may not even use its warnings.

Security mechs are frowned upon for actual military duty. Though tough enough to survive most firefights, their VI simply does not have the programming to plan an ambush, rescue a hostage, treat a wound, or any of countless other objectives that a soldier must be able to perform on the fly.

The Master Thief: Kasumi's Secrets*

Grayboxes

A mnemonic neural recall stimulator, also known as a graybox, is a device implanted in the brain to assist and prioritize memory. Originally developed to slow the progression of Alzheimer's disease, grayboxes function by helping the amygdalae "chunk" incoming stimuli into recognizable pieces for memory consolidation. Each memory is assigned a shape or sensation from other memories, tying the concepts together into a block that is more easily recalled.

When Synthetic Insights first released them onto the market in 2140, grayboxes were hailed as a way humans could level the playing field between themselves and the salarions, whose natural eidetic memories gave them an advantage. However, because the implant procedure of a graybox requires the brain to irreversibly shift its workload over to the machine, software bugs or attempted removal of the graybox for maintainance purposes could lead to incapacitating brain damage. For this reason, grayboxes soon became used only by those with a dire need for photographic memories, such as researchers and spies.

In 2175, sale and implantation of grayboxes were outlawed by the Systems Alliance following an incident with Abraham Rumoi, an employee of the Alliance Intelligence Agency. Rumoi was believed to be a professional con man and thief named Keiji Okuda, who accessed and sold classified data. However, prosecuting attorneys were unable to use his assisted memories as evidence due to the Alliance court system's prohibitions against self-incrimination (based on the Fifth Amendment of the old U.S. Constitution). Rumoi soon disappeared off the map following his trial, further heightening suspicions that he was Okuda and living off of ill-gotten gains.

When found outside a human head, grayboxes are usually accessed with a specialized reader. A separate decryption key is almost always required, as users with data sensitive enough to require a graybox invariably install their own encryption.

Kassa Fabrications Locust

"The gun that killed two Presidents" is the infamous legacy of the Kassa Fabrications Model 12 Locust. Originally created for the Systems Alliance, who wanted a lightweight weapon for high-gravity worlds, the Locust was designed to overcome the limitations of traditional submachine guns at long range.

With bullet velocity of modern weapons already pushed to the limit, the Locust's designers sought a way to improve accuracy through reducing weapon kick. They created an internal "floating bed" that absorbs the gun's recoil with minimal jarring of the gun frame itself. The barrel, magazine, chamber, and operating mechanism all move within this bed, which absorbs shock with springs and buffers. This creates a platform stable enough that the Locust can use autotargeting software usually reserved for match-grade weapons.

The Locust's lethality on shielded targets has been amply demonstrated. In 2176, a Virginian patent clerk named Michael Moser Lang brought a Locust concealed in a shoulder-mounted video camera to a photo opportunity between Enrique Aguilar, president of the United North American States, and Chinese People's Federation premier Ying Xiong. At a distance of about 25 meters, Lang pierced the kinetic barriers covering the stage with the first burst, and when Xiong heroically tackled Aguilar to remove him from the line of fire, Lang's succeeding bursts went through the premier's body and fatally wounded both men.

Donovan Hock's collection contains two antique ivory-handled Locusts, modified to take thermal clips. A detachable data drive rests in the lining of the box, containing omni-tool specifications for fabricating copies. A quick trip to the extranet reveals one of the weapons has the same serial number as Lang's original. If it's a fake, it's extremely well-made.

Lady Liberty

The Statue of Liberty was the target of several terrorist attacks over its 210-year lifetime, but in 2096, a motley group called Freedoms First finally brought the statue down. Protesting the induction of Canada and Mexico into the United North American States, the New York chapter of Freedoms First wanted a symbol that they would secede from this new union if necessary.

In the early morning hours of November 1st, they smuggled small arms and 15.5 tons of high explosive onto Liberty Island. Shooting or capturing the guards, they planted the explosives under the pedestal and detonated them at 7:37 a.m.. The statue crashed to the ground in pieces, unexpectedly killing four of the Freedoms First terrorists. The remaining team members

were apprehended after long manhunts, but the damage was done. The outrage at the secessionists kindled the fires of the Second American Civil War.

On November 4th, President Kaitlin Cheung signed an executive order to rebuild the statue. Approximately one-tenth of the steel beams and copper plating from the destroyed statue was recovered and used in creating the new one. The original's head was put on display at the National Museum of American History in Washington, D.C.. It remained there for two years until the Battle of Washington. During heavy shelling by secessionist forces, the head disappeared.

A new statue was completed in 2101, and the fate of the original pieces was left for speculation and pulp novels. Interest flared up briefly in 2159 when photos surfaced of the head in the cargo hold of a star freighter, but by that time human media were far more concerned with the future. In the face of humanity spreading out among thousands of new planets, a statue titled "Liberty Enlightening the World" seemed small and quaint by comparison.

Planet: Bekenstein

"More glittering than diamonds, more expensive than surgery," is how travel agents describe this planet behind closed doors. Given the opportunity to colonize planets after the First Contact War, the Systems Alliance chose Bekenstein to be their trading arm, producing goods to be sold on the nearby Citadel. Cracking the vast galactic marketplace proved difficult -- the first human products sold on novelty alone, then lack of demand hit Bekenstein's economy hard. Only in the second generation of colonists did the planet find a sustainable niche in high-quality entertainment and luxury goods. Once brand awareness sunk in, aliens flocked to Bekenstein's many spaceports. The planet today boasts more millionaires and billionaires per capita than any other human colony.

Though its crime tends to be white-collar and nonviolent, Bekenstein is not without its dark side. Both its suicide rate and inflation are extremely high compared to other worlds. Unemployment is artificially low because few people immigrate to the expensive planet without having a job lined up, and the cost of living is so great that unemployed workers typically leave for kinder planets after just a few months. Those who stay see themselves as tougher, sharper, and more skillful than the rest, as well as capable of getting respect and employment on any lesser planet. As a popular song says, "If you can make it on the Bek, you got 'em by the neck."

The Veteran: Zaeed's Secrets*

M-451 Firestorm

The M-451 Firestorm flamethrower is a product of human ingenuity, ruthlessness, and industrial espionage. Its origin dates back to the 2160s, when human colonists to new planets used flamethrowers to clear vegetation or ice. The fuels performed erratically on planets with

extremely cold temperatures and differing air compositions from Earth. Realizing this could be a problem for military units, Systems Alliance intelligence operatives stole the turian design for the "Hieras" flamethrower, a battle-tested workhorse that functioned in nearly every environment.

The result was the Firestorm, an anti-personnel and anti-armor flame unit that can accept a variety of liquid fuels. The turian design used low-octane hydrocarbons thickened with dentra oil, which is taken from large marine animals similar to Earth's whales. Humans then reverse-engineered a synthetic composite with almost identical properties that could be fabricated from heavy weapon fuel cells using an omni-tool.

The result is a sticky spray that burns at approximately 1,600 degrees Celsius, a less intense fire than plasma weapons but covering a significantly wider target area. Adding to the trauma is the choking smoke produced by the spray, and if the target's armor is breached, the fires quickly consume the oxygen within. The Firestorm may not be the most efficient weapon in the Systems Alliance arsenal, but the sheer ugliness of how it kills ensures it is the most feared.

Mercenaries: Blue Suns (Full History)

Founded in 2160 by the human mercenaries Zaeed Massani and Vido Santiago, the Blue Suns were initially a Skyllian Verge protection racket. As they expanded in numbers and influence, the two co-founders disagreed vehemently on many issues. Finally, after arguing about whether to recruit the slave-trading batarians into their ranks, Vido ambushed Zaeed and shot him in the head.

Believing Zaeed dead, Vido took full control of the Blue Suns and hired whatever batarians he pleased. Soon, he had crowned one named Solem Dal'serah as titular head of operations. It was a move designed to placate his batarian investors and draw fire from would-be assassins. It worked on both counts, and the partnership has lasted to this day.

Over the decades, the Suns grew into a fearsome combat force spanning dozens of planets in Citadel space, the Verge, and the Terminus Systems. Knowing that a good logistical team is key to fielding an army, Vido diversified the Suns, selling arms, training, and supplies as often as taking contracts to crack skulls. Even when the Suns suffered heavy losses, Vido's entrepreneurial expertise ensured new recruits could replace the old. All that was lost was the truth -- today, only a handful of trusted mercs even know who Vido Santiago is, let alone his old partner Zaeed.

Planet: Zorya

"Bring firearms and antihistamines" is what veteran guides say about this lush garden world. First colonized in 2160, Zorya's temperate and tropical zones are overrun with plants and fungi of all kinds. As a result, the air in most habitable areas is choked with pollen and spores that range from benign to deadly. The scattered colonies across the planet have resorted to

clear-cutting and slash-and-burn farming to create habitable zones, and the more rural areas, where the spores are thickest, are populated only by vorchas. Lax ecological laws allow mining and manufacturing industries to flourish and pollute cheaply, as the planet's carrying capacity far outstrips the current size of its colonies.

Zorya is also home to the Blue Suns mercenary company, who dominate the colonies' security forces. The Suns enjoy nearly unlimited influence with local politicians and judges, ensuring no other private military contractors can compete with them economically. Nearly every colony has a Suns recruiting station, if not a training camp, though this has hardly made the planet any safer. Piracy, drugs and vice, and political violence are commonplace.

Weapons, Armor and Equipment

Collector Particle Beam



The Collectors' particle beam weapon is strangely crafted, possessing few moving pieces, lacking any obvious means for disassembly, and containing organic parts. The amount of energy required to create a destructive beam is several orders of magnitude more than the energy required to launch a physical projectile at high velocity via a mass effect field. Lacking any clear ammunition or fuel source, the device likely uses heat sinks or compensators to maintain firing during sustained combat. Current Cerberus efforts to understand the technology and replicate it have failed.

Kinetic Barriers (“Shields”)



Kinetic barriers, commonly called 'shields', provide protection against most mass accelerator weapons. Whether on a starship or a soldier's suit of armor, the basic principle remains the same.

Kinetic barriers are repulsive mass effect fields projected from tiny emitters. These shields safely deflect small objects traveling at rapid velocities. This affords protection from bullets and other dangerous projectiles, but still allows the user to sit down without knocking away their chair.

The shielding afforded by kinetic barriers does not protect against extremes of temperature, toxins, or radiation.

Mass Accelerators

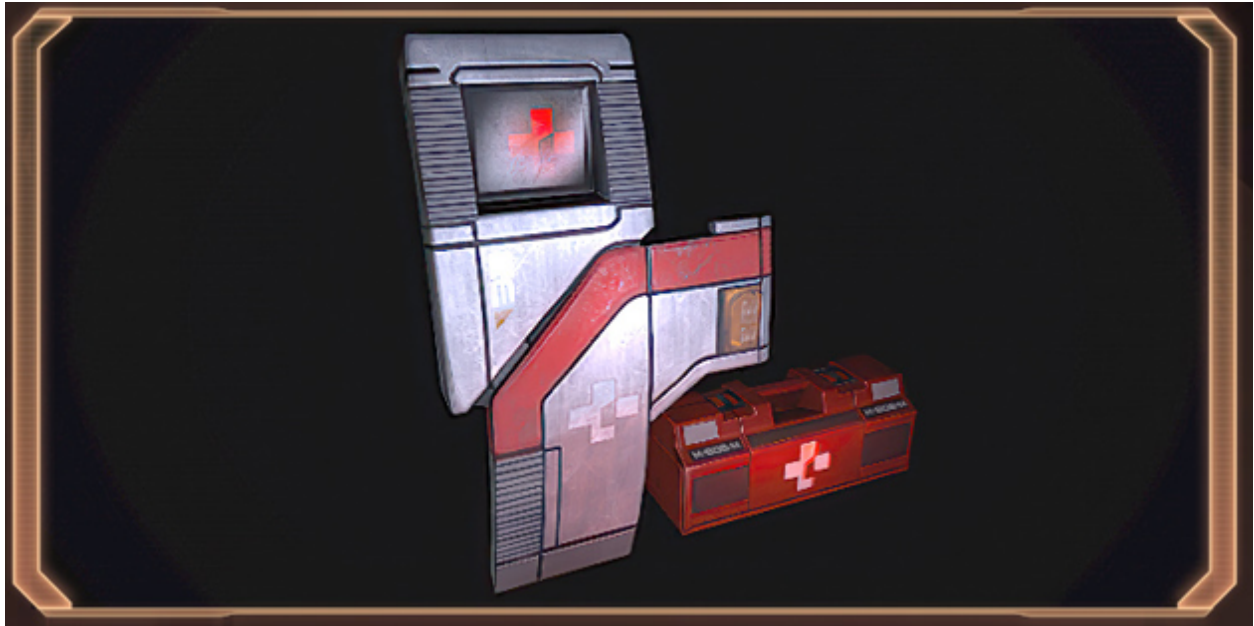


A mass accelerator propels a solid metal slug using precisely-controlled electromagnetic attraction and repulsion. The slug is designed to squash or shatter on impact, increasing the energy it transfers to the target. If this were not the case, it would simply punch a hole right through, doing minimal damage.

Accelerator design was revolutionized by element zero. A slug lightened by a mass effect field can be accelerated to greater speeds, permitting projectile velocities that were previously unattainable. If accelerated to a high enough velocity, a simple paint chip can impact with the same destructive force as a nuclear weapon.

However, mass accelerators produce recoil equal to their impact energy. This is mitigated somewhat by the mass effect fields that rounds are suspended within, but weapon recoil is still the prime limiting factor on slug velocity.

Medi-Gel



Medi-gel is a common medicinal salve used by paramedics, EMTs, and military personnel. It combines several useful applications: a local anesthetic, disinfectant, and clotting agent all in one. Once applied, the gel is designed to grip tight to flesh until subjected to a frequency of ultrasound. It is sealable against liquids - most notably blood - as well as contaminants and gases.

The gel is a genetically-engineered bioplasm created by the Sirta Foundation, a medical technology megacorp based on Earth. Technically, medi-gel violates Council laws against genetic engineering, but so far, it has proved far too useful to ban.

Small Arms

Modern infantry weapons are micro-scaled mass accelerators, using mass-reducing fields and magnetic force to propel miniature slugs to lethal speeds. Nearly every gun on the battlefield is laden with features, from targeting auto-assists to projectile shavers that can generate thousands of rounds of ammunition from a small, internal block of metal.

It was long thought that personal weapons had plateaued in performance, but the geth proved all theories wrong. Mathematically reviewing their combat logs, the geth found that in an age of kinetic barriers, most firefights were won by the side who could put the most rounds down-range the fastest. But combatants were forced to deliberately shoot slower to manage waste heat, or pause as their weapons vented.

To eliminate this inefficiency, the geth adopted detachable heat sinks known as thermal clips. While organic arms manufacturers were initially doubtful this would produce a net gain, a well-trained soldier can eject and swap thermal clips in under a second. Faced with superior enemy firepower, organic armies soon followed the geth's lead, and today's battlefields are littered with these thermal clips.

Body Armor

Modern combat hard-suits have a "triple canopy" of protection: shields, armor, and self-repair. The outermost layer is created through kinetic barrier emitters, which detect objects incoming at a high rate of speed and generate deflecting "shields" provided they have enough energy in their power cells.

If a bullet or other incoming object gets past the barrier, it contends with the more traditional body armor. A sealed suit of non-porous ballistic cloth provides kinetic and environmental protection, reinforced by lightweight composite ceramic plates in areas that either don't need to flex or require additional coverage, such as the chest and head. When the armor is hit by directed energy weapons, the plates boil away or ablate rather than burning the wearer.

The last level of protection is provided by the suit's microframe computers, whose input detectors are woven throughout the fabric. These manage the self-healing system, which finds rents in the fabric and, assuming any such tear would wound the flesh underneath, seals the area off with sterile, non-conductive medi-gel. This stanches minor wounds and plugs holes in the suit that could prove fatal in vacuum or toxic environments. Soldiers are not always fond of the "squish skin" that oozes gel on them at a moment's notice, but fatalities have dropped sharply since the system was implemented.