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Introduction

“War is not just about defeating your enemy on the field of battle. A war can just as easily be won by averting it via diplomatic means, building super weapons designed in secret by your brightest minds, being the best at knowing other people’s secrets, earning economic dominance on the floor of a stock exchange, on the assembly lines at your factories, or within the cavernous interiors of mighty shipyards. But, in the end, the matter of galactic supremacy must be settled one way or another. Cry havoc and let slip the dogs of war...”

This book serves as an introduction to the Victory by Any Means (VBAM) Campaign System, a set of strategic gaming rules that allow players to wage war across the stars, pitting interstellar empires against one another in a battle for economic, military, and political dominance.

But what is a *campaign*? These rules define a campaign as a strategic gaming environment of the classic 4X style in which players use their empires’ forces to explore, expand, exploit, and exterminate in a science fiction setting.

The VBAM Campaign System offers players a modular set of campaign rules with a level of complexity that can scale based on the players’ preferences. When setting up a new campaign, players decide for themselves which rules to use for that game; they are not forced to use all of the rules found in this book if they don’t want. Furthermore, players can choose to omit or even replace entire campaign “modules” if they think that will improve their game play experience. This modularity is especially useful when players want to integrate the VBAM Campaign System with their favorite tactical combat systems. If your preferred rule set already includes rules for unit construction and research, you can continue to use those rules with only simple modifications to resolve how they interact with the basic campaign rules.

Another advantage of the VBAM Campaign System is that it provides players with a strategic combat resolution engine that can be used to quickly resolve both space and ground combat scenarios as they occur during the game. This allows players to either not use a separate tactical system at all if they don’t want to, resolving all combat encounters with the included strategic combat rules, or they can use

the strategic combat rules to resolve battles that wouldn’t be fun to play out using tactical combat rules. The average strategic combat scenario can be resolved in less than ten minutes, and the smallest may require six or fewer die rolls.

While the rules in this book may seem overwhelming at first glance, please keep in mind that the book contains multiple layers of complexity, and most players will not utilize all of these rules in any of their campaigns. In fact, most campaigns will only use a fraction of the rules included in this book at any one time.

Chapter I: **Getting Started**

Chapter 2: **Playing the Game**

“Unfortunately, many people do not consider fun an important item on their daily agenda. For me, that was always high priority in whatever I was doing.”

— Chuck Yeager

Scenarios

Sequence of Play

EXPLORATION PHASE

Exploration Missions

Emerging Empires

MORALE PHASE

System Loyalty Checks

Turn Orders

Chapter 3:

Stellarcartography

3.1 Campaign Maps

"The quality of a map is also in part an aesthetic matter. Maps should have harmony within themselves. An ugly map, with crude colors, careless line work, and disagreeable, poorly arranged lettering may be intrinsically as accurate as a beautiful map, but it is less likely to inspire confidence."

- John Kirtland Wright

MAP DIRECTIONS

Two dimensional galaxy maps like those used in this game are assigned four cardinal directions to describe the position of star systems and other locations on the map. The horizontal axis of the map charts the length of the map from rimward (west) to coreward (east), while the vertical axis are split between upspin (north) and downspin (south). Players can use their own preferred set of directional terminology in their own games but this book, either in part or whole, but this book uses that these terms are in play to provide a set context for discussing directions on its campaign maps.

3.1.1 HEX MAPS

3.1.2 JUMP MAPS

3.2 Star Systems

"Looking at these stars suddenly dwarfed my own troubles and all the gravities of terrestrial life. I thought of their unfathomable distance, and the slow inevitable drift of their movements out of the unknown past into the unknown future."

- H.G. Wells

In the Victory by Any Means Campaign System each star system is treated as a single object. The number

and type of planets that orbit the star aren't explicitly defined but are instead approximated by the system's three resource values (Carrying Capacity, RAW, and Biosphere). The amount of resources that are available in any given star system is determined by a combination of several different factors, including the system's type and the spectral class and luminosity of the system's primary stellar component. A system's importance is directly tied to the amount of resources it possesses.

Empires gain access to a star system's resources by establishing colonies or facilities there. Leveraging these resources provides an empire with wealth, food, and living space that it can use to fuel its future growth.

3.2.1 SYSTEM TYPE

A system's type describes how many stellar mass objects are present in the system. The number of special traits that a system receives during system generation is determined by its system type. These special traits provide the system with either bonuses to its system resource values or else indicate the presence of special system terrain or strategic resources. A star system still only receives one set of resource values even if it contains more than one star, however. The system's statistics describe the value of all of the planets in the system, even if they are geographically distant from one another and orbiting different stars in the system.

Single Star Systems

Single star systems are solar systems that contain a single star. These systems have the best chance of supporting robust planetary systems because there aren't any other stellar mass objects in the system that might interfere with planetary formation. They receive three special traits during system generation. This makes single star systems the most valuable as they tend to have higher resource values than other systems, all other factors being equal.

Binary Star Systems

Binary star systems contain two gravitationally-bound stars that orbit around a common center of mass. The system can either be a close binary where the secondary component orbits in close proximity to the system primary; or a distant binary where the secondary component is located some distance away, possibly far enough away to possess its own

planets. The gravitational effects of the second star can make it more difficult for planets to achieve stable planetary orbits. This results in binary systems only receiving two special traits.

Multiple Star Systems

Multiple star systems are comprised of three or more stars. The large number of stellar mass objects in these systems interfere with planetary formation and retention. Multiple star systems only receive one special trait. This single special trait greatly limits the value of a multiple star system but still leaves open the possibility of discovering one of these systems that is particularly rich in natural resources.

Black Holes

Black holes are singularities that are so massive that nothing — *not even light* — can escape their gravitational pull. Objects caught in the vicinity of a black hole are inevitably drawn into them where they are ripped apart by intense tidal forces. Black holes are invisible to detection but luckily they possess visible event horizons that alert observers to their presence so that they can safely identify and avoid them.

Black hole systems have no material value and can't be colonized, nor can facilities be built in them. They always have six jump lanes connecting to them and all resource values at zero. Any unit that ends its turn in a black hole system takes a point of damage regardless of its current supply state.

Star Clusters

A star cluster is a group of hundreds of thousands of gravitationally-bound stars that all formed at roughly the same time and are of the same or similar types/ages. These systems are uninhabitable because never contain habitable planets and their system resource values are all zero. The intense radiation in the star cluster makes facility construction in these systems impossible. The close proximity of stars in a cluster makes jump lane travel more dangerous. Star cluster systems always have two jump lanes connecting to them. Military units that end their turn in a star cluster system earn an extra out of supply level.

3.2.2 SPECTRAL CLASS

The Harvard classification system differentiates stars by surface temperature and assigns them one-letter alphabetic identifiers that can be remembered using the mnemonic “**Oh Be A Fine Girl, Kiss Me**” that arranges the seven spectral classes in order from hottest (class O) to coolest (class M).

A system's spectral class is used to determine its RAW and Biosphere values during system generation. Hotter stars are younger and tend to be more mineral rich and biosphere poor. Older, cooler stars conversely offer fewer mineral resources but are more likely to contain life-bearing worlds.

Class O Extremely Bright Blue Giant

Class O stars are the largest and most luminous. These bluish stars shine with a power equal to over a million times the luminosity of that of a class G star such as Sol and can be up to 50 times more massive. Class O supergiants are short lived, with an estimated lifespan of 10 to 50 million years.

Stars of this class generate a powerful stellar wind that is so intense that, over the period of about one million years, it can break down and destroy protoplanetary disks not only in their own system but in neighboring systems, too. The ultraviolet radiation put off by the blue giant evaporates the dust and gas in the disk and the star's stellar winds then disperse the material, preventing it from coalescing into planets. This is called the *photoevaporation effect*. Class O stars are unlikely to have any planets orbiting them, let alone any capable of supporting life, but some may still possess an embryonic planetary system.

Surface Temperature: > 25,000K

Example: Zeta Puppis, Lambda Orionis

Class B Bright Blue Star

Class B stars are bright blue suns that are extremely large and luminous, like those of class O. In fact, it is sometimes difficult to tell the two apart, giving rise to class OB stars that could be either class O, B, or maybe even a very hot class A. Unlike class O stars, class B stars aren't subject to photoevaporation effects. The amount of ultraviolet radiation emitted by these stars is less than that of class O stars, which prevents a class B from breaking down gas and dust in neighboring planetary space.

Surface Temperature: 10,000 – 25,000K

Example: Rigel, Spica

Class A Blue-White Star

Class A stars are bluish-white in color, and are the most common of the bright blue stars encountered in the galaxy. They are known for their strong hydrogen (Balmer) lines, which are at a maximum at a magnitude of A0. These stars are more apt to support planetary systems than larger, hotter stars, and some of these planets may even support tenuous atmospheres and maybe even primitive biospheres.

Surface Temperature: 7,500 – 10,000K

Examples: Vega, Sirius, Deneb

Class F White Star

Class F stars are white in color, though members of this class sometimes possess a trace of yellow. Unlike class O, B, or A classes, these bright stars trend towards the main sequence which improves the chances of finding planets in these systems.

Stars of this spectral class shouldn't be confused with class D white dwarfs. These are two entirely different types of stars, and the two terms aren't interchangeable.

Surface Temperature: 6,000 – 7,500K

Examples: Canopus, Procyon

Class G Yellow Star

Class G stars are relatively uncommon, as most stars usually only remain in this spectral class for a short period of time during between the young blue supergiant (O or B) and late life red/orange (K or M) phases of their stellar evolution.

Of all of the spectral classes, class G stars are the most likely candidates to find planets that are capable of supporting life because of the relative age of these systems and the size of their habitable zones. This translates into higher RAW and Biosphere values for class G stars.

Surface Temperature: 5,000 – 6,000K

Example: Sol, Alpha Centauri A, Tau Ceti

Class K Orange Star

Class K stars are slightly cooler than class G stars like our own sun but still hotter than the red class M stars that they will one day become. These stars are orange to red in color and can range in size from behemoth supergiants down to smaller dwarf stars.

Class K stars are much more common than class G stars in our own stellar neighborhood.

While orange stars aren't as attractive colonization targets, they still offer very good prospects for finding inhabitable, life-bearing planets.

Surface Temperature: 2,000 – 5,000K

Example: Alpha Centauri B, Aldebaran

Class M Red Star

These low mass stars can range from small dim dwarfs to extremely large red giants or supergiants. Class M stars are by far the most common class of stars. Red dwarfs make up nearly 80% of all the stars in the nearby stellar neighborhood.

Life around a red dwarf is extremely volatile. The size of the star's habitable zone is short, and most planets located within this zone are tidally locked to the star which has a profoundly negative effect on their climates. The net effect is that while class M stars have a better chance of supporting life than a blue/white star, they also tend to be poor in exploitable resources.

Special Rule: Dim red dwarfs are commonly flare stars (see 3.5 System Terrain). To simulate this, any red dwarf system with an importance of Very Low or Low automatically receive the Flare Star trait.

Surface Temperature: 2,000 – 3,500K

Example: Proxima Centauri, Wolf 359, Antares

Class D White Dwarf

White dwarfs (also called *degenerate dwarfs*) are planet-sized, low mass stars composed of carbon and oxygen. They represent the twilight existence of low to medium mass main sequence stars. At the end of their red giant stage, these stars eventually reach a point where they have insufficient mass to maintain the temperature required to fuse carbon. This prompts the star to shed its outer layers to form a planetary nebula. This leaves behind the core of the sun that becomes the white dwarf. Without the heat generated by fusion to support it against gravitational collapse, a white dwarf must instead rely on electronic degeneracy pressure; this requires the star to be extremely small and dense.

Planetary systems don't form around white dwarf stars. Any planets in these systems are inherited from the planetary systems that were orphaned when the stars became white dwarfs. The quality of

planets orbiting class D stars is typically much poorer than those found around other stars.

Special Rule: Class D stars can only have a luminosity class of VII White Dwarf. Additionally, these systems always receive the Emission Nebula system terrain to represent the planetary nebula that formed when the star shed its outer layers.

Surface Temperature: 1,000 – 1,500K

Example: Van Maanen's Star

3.2.3 LUMINOSITY CLASS

The Yerkes spectral classification system divides stars into different types based on their luminosity (brightness) rather than by surface temperature. This system measures the width and intensity of spectral lines caused by luminosity effects. The following luminosity classes are represented in these rules: 0 (*hypergiants*), I (*supergiants*), II (*bright giants*), III (*giants*), IV (*subgiants*), V (*main sequence or dwarfs*), VI (*subdwarfs*), and VII (*white dwarfs*).

A star's luminosity class is used to determine the size and value of its planetary system (Carrying Capacity) and the number of jump lanes that connect to the system, with the assumption that larger, brighter stars have the greatest number of jump lanes attaching to them. Players can choose to ignore luminosity's jump lane attraction effect if this isn't appropriate to their campaign setting.

Class O - Hypergiant

Class 0 hypergiants are the most luminous stars in existence, and the most massive. A stable hypergiant has a mass equal to nearly 100 solar masses and may have had a mass of as much as 200 to 250 times that earlier in its stellar evolution.

Hypergiants never possess planetary systems and always have Carrying Capacity, RAW, and Biosphere values of zero and the maximum of six jump lanes.

Special Rule: Hypergiants don't appear as a result on the Luminosity Table found in the system generation rules. Instead, players roll a D6 for each supergiant during system generation and on a roll of '6' the star becomes a hypergiant.

Example: Zeta-1 Scorpii, Rho Cassiopeiae

Class I - Supergiant

The largest and brightest stars in the galaxy are supergiants. These high mass stars have extremely

short lifespans, lasting only 10 to 50 million years on average. Because of their short lives, supergiants are typically found in areas populated with other young stars, such as in open clusters or the arms of spiral galaxies.

Example: Rigel, Betelgeuse, Antares

Class II - Bright Giant

Bright giants straddle the boundary between supergiants and giants. These stars are more luminous than a normal giant but are not bright or massive enough to be classified as a supergiant.

Example: Alpha Herculis, Theta Scorpii

Class III - Giant

A giant star is one whose size and brightness are greater than that of a normal star on the main sequence. A star leaves the main sequence and becomes a giant once all of the fusible hydrogen in its core has been consumed. Fusion reactions then migrate to layers surrounding the core where hydrogen remains available. Eventually, if the star is massive enough, it's core will begin to contract and its core temperature will increase until it's capable of fusing helium rather than hydrogen. Stars that lack sufficient mass to fuse helium (those with less than one-half solar mass when on the main sequence) will instead remain as hydrogen-fusing red giant stars.

Example: Pollux, Mira, Capella

Class IV - Subgiant

Class IV subgiants populate the boundary between normal main sequence stars and full-fledged giants. Subgiants are brighter than normal main sequence stars but aren't as bright as larger giants. Stars of this type have ceased fusing hydrogen in their cores, forcing hydrogen fusion reactions to migrate to the shell outside the core. This causes the star to swell, moving it on its way towards becoming a giant in the future.

Example: Procyon A, Epsilon Reticuli

Class V - Main Sequence (Dwarf)

The majority of stars are located along the main sequence. These stars, common called dwarfs, are less massive than other less luminous stars. Dwarf stars come in all spectral class; however, some don't spend very much time in the main sequence before

migrating towards other steps in their stellar development.

Example: Sol, Proxima Centauri, Barnard's Star

Class VI - Subdwarf

Stars with a luminosity 1.5 to 2 magnitudes lower than that of main sequence stars are considered to be subdwarf stars. They are known for their emission of an above-average amount of ultraviolet radiation compared to what is considered normal for their spectral type.

Example: Kapteyn's Star, Groombridge 1830

Class VII – White Dwarf

White dwarf stars are assigned a luminosity class of VII under the Yerkes system. This special classification is used to clearly divide white dwarfs from other luminosity classes, especially other dwarf stars.

Example: 40 Eridani B, Procyon B

3.2.4 SYSTEM RESOURCES

Each star system is assigned three system resource values. These are Carrying Capacity, RAW, and Biosphere. These three resources describe a system's material value and determines its overall importance. The amount of each resource that a system can be expected to possess is based on its system type and the spectral and luminosity classes of its primary star. Some systems are more likely to offer players greater concentrations of one type of resource than another and not every system will be able to satisfy all of an empire's resource needs. Home systems are an exception to this rule, as they typically offer a balanced array of system resources so that empires without other colonies can still support respectable military forces and population sizes.

Carrying Capacity

Carrying Capacity (or simply Capacity) represents the number and quality of planets that are available for colonization in a system. From a practical standpoint, a high Carrying Capacity can mean that a system contains a large number of planets or that there is an especially valuable planet in the system, depending on the campaign background.

The maximum value that any of system's population or infrastructure values can be increased to is equal

to its Carrying Capacity. This makes systems with high Carrying Capacity values extremely valuable as they are the only systems that can support large colonies.

Star systems that have Carrying Capacity values of zero don't contain any inhabitable planets or other orbital bodies that an empire can colonize. A player can still purchase facilities in these systems to make use of any local resources, however. This allows players to access these systems' resources even if they can't place colonies there.

RAW

RAW is an abstraction of the amount of exploitable *resources* present in a system, including their *accessibility* and relative *wealth*. Systems with high RAW values possess abundant natural resources that an empire can harness to fuel its economy. The planets found in orbit of hot, young stars tend to be more mineral rich and have higher RAW values than older stars. This makes class O, B, and A stars prized commodities for empires looking to increase their incomes.

Colonies use Economy infrastructure to convert a system's RAW into economic points. The amount of system income a colony produces for its owner each turn is equal to its Economy x RAW. Mining bases can be used to extract additional economic points from a system.

Biosphere

Biosphere describes a system's ability to support life, specifically as it applies to food production. Systems with high Biosphere values either possess their own unique, alien biospheres that can be readily harvested and turned into food for an empire's population or else be very accommodating to the transplant of genetically engineered flora and fauna that have been tailored to the environment or else they may.

Life bearing worlds that offer favorable conditions for planetary agriculture are most often found in orbit of class G or K stars. Class F or M worlds sometimes also have respectable Biosphere values.

The amount of food that a colony produces for its owner each turn is equal to its Agriculture x Biosphere. Orbital farms can also supplement a system's food production. Any food not consumed by imperial populations is then turned into

population points that a power can use to purchase population increases to expand colonial populations at its existing colonies.

3.2.5 SYSTEM IMPORTANCE

System importance provides a method for categorizing systems based on their system statistic values. This allows players to quickly evaluate a system's overall value based solely on its system importance. A system's importance is found by totaling its three system resources (Carrying Capacity, RAW, Biosphere) and then performing a lookup on the System Importance Chart.

SYSTEM IMPORTANCE CHART

Resource Total	System Importance
7 or less	Very Low
8-10	Low
11-12	Moderate
13-15	High
16 or more	Very High

When displaying star systems on a campaign map, it is customary for the size of a star system's marker on the map to correlate to its system importance so that systems of greater importance have larger star system symbols. This makes it easy for players to look at the map and instantly ascertain which star systems contain the most resources.

Very Low value systems are almost completely worthless to an empire because of their lack of exploitable resources. These systems offer few planets (if any) that an empire can colonize. Players normally avoid colonizing Very Low importance systems unless they occupy important positions in the galactic jump network, at which point a player might be forced to establish a presence in the system just to lay claim to it.

Low value systems are below-average when it comes to resource availability. A Low value system might have one resource that is mediocre at best, but all of the rest will be poor. These systems aren't usually high on a player's list of possible colony sites unless they are located in a strategic position on the map.

Moderate value systems are fairly average, as their name would imply. These systems provide empires with a reasonable mix of Carrying Capacity, RAW, and Biosphere that makes them appealing candidates for colonization even if none of their individual resource values are particularly notable.

High value systems offer either a more balanced mix of resource values or one or two extraordinary resource caches that make them high priority colonization targets. High RAW and Biosphere values are obviously the best case scenario for a High value system, but one that has high Carrying Capacity can be equally valuable for industrial, scientific, or intelligence purposes.

Very High value systems are rare finds. These systems have the highest possible system resource values in the game, and they are almost always rich enough to warrant going to war with another power to try and gain control of them. This is because these systems can be developed into massively powerful economic and industrial centers that dwarf the output of other lesser systems. Player home systems are generally all Very High value systems.

3.2.6 SYSTEM TERRAIN

System terrain is the term that is applied to all of the special types of astronomic formations or special aspects of a star system that go beyond its base resource statistics. Special rules apply to each type of system terrain that impact the way that players interact with the system. Some types of system terrain offer bonuses that are beneficial to the player while others institute penalties that limit a system's overall value.

Systems can contain multiple types of system terrain, and all terrain effects are cumulative. For example, a system that contains both a Flare Star and an Ion Storm would provide a surprise penalty from both terrain features. If the Flare Star modifier is -2 and the Ion Storm -1, the cumulative effect would be a -3 surprise penalty.

A system can also receive the same system terrain multiple times with cumulative effect. This is indicative of terrain features that are especially dense or exhibit extreme qualities that can either hurt or hinder an empire's attempts to develop the system.

Asteroids

Asteroids and other protoplanetary debris are commonly found in star systems. This special trait denotes that a system is home to abnormally high concentrations of these types of debris, enough to make the system a much more lucrative site for remote mining operations. This rich availability of natural resources provides a system with a +100% industrial capacity bonus and doubles the effectiveness of any Mining Bases that are established in the system.

Space combat encounters generated in systems that contain dense asteroid fields afford the defender extra protection against enemy attack. They can use hidden asteroid bases to hide and resupply, taking the enemy by surprise. This is represented by giving the defender a +1 bonus to his task force's rolls on the Surprise Table during these encounters.

Dust Cloud

Young stars are often surrounded by dense clouds of particulate matter. The protoplanetary disks around these stars have not yet fully accreted and a dust cloud fills the entire system. Although often beautiful to behold, dust clouds pose a significant danger to orbital assets. Orbits must be kept swept clean of rubble to prevent facilities from being damaged or destroyed by errant debris. This has the effect of increasing the cost of any facilities that are purchased in the affected system by +50% (round fractions up).

Flare Star

Flare stars (also called variable stars) regularly undergo rapid, unpredictable increases in brightness that can last from ten to fifty minutes before ceasing as unexpectedly as they began. A variable surprise penalty is applied to every battle that takes place in a system that contains a flare star. Roll a D6 on the following table before each encounter. This modifier is applied equally to all parties that are present in the encounter.

**FLARE STAR
SURPRISE TABLE (D6)**

Roll	Surprise Penalty
1-2	-1
3-4	-2

5-6

-3

Ion Storm

Systems that are renowned for ion storm activity are prone to experiencing unpredictable interplanetary coronal mass ejections. These massive bursts of solar wind disrupt electrical systems and interfere with planetary infrastructure.

All participants in space and ground combat scenarios that are fought in these systems receive a -1 penalty to their surprise rolls at the start of the battle to represent the affect the ion storms have had on their command and control capabilities.

Infrastructure built in a system with ion storms must be hardened against its negative effects or risk being taken out by a particularly intense electromagnetic burst. This effectively increases the cost of all infrastructure purchases in the system by 50% (round up).

Nebula

Nebulae are vast interstellar clouds of dust and gas that give life to new seedlings that will be the elder suns of a later stellar generation. Nebulae are occasionally found in close proximity to a star system, either encroaching on its outskirts or else completely engulfing its interior. Empires can take advantage of a nebula's presence by hiding ships and facilities in these formations to prevent their discovery by other powers.

Five different types of nebulae are presented here: emission, reflection, variable, dark, and maser. Each provides a slightly different set of modifiers that apply to activities in their systems, but all apply at least some kind of penalty to space encounter detection rolls. These common penalties make it harder for opponents to find each other's units and turns battles in nebulae systems into a game of cat and mouse. It is important to point out, however, that these detection penalties don't affect ground encounters generated in the system, only space encounters.

The ability to hide things in a nebula increases the difficulty of X.X Espionage intel missions that target a nebula system. These systems receive a bonus to their defensive intel equal to the nebula's detection penalty. Variable nebulae are considered to have a detection penalty of -2 for this purpose.

Example: A system that contains an emission nebula (-2 detection penalty) would receive a +2 defensive intel bonus against all espionage missions that are targeted against it by other powers.

Emission Nebula

An emission nebula is a cloud of ionized gas that emits light of various colors. Emission nebulae can occur in areas of new star development, where young, hot stars are the source of the ionization, or in planetary nebulae that form after a star sheds its outer layers and the gases are then ionized by the exposed stellar core.

Emission nebulae are rich in heavy elements, a fact that will influence the properties of the future stars that are born in them. This high metallicity content provides Mining Bases in the system with a +100% bonus to their normal income.

The nebula also interferes with sensors and makes detection more difficult. All space encounters generated in a system that contains an emissions nebula are subject to a -2 detection penalty.

Reflection Nebula

Reflection nebulae are clouds of gas and dust that are located near stars that emit enough energy to illuminate the dust in the nebula but aren't powerful enough to ionize its contents. Light scattering is most efficient with blue and red stars, and most reflection nebulae have a blue color as a result.

All space encounters that are generated in a system that contains a reflection nebulae are subject to a -2 detection penalty. This makes it harder for the encounter's participants to detect each other.

Variable Nebula

A variable nebula is a special type of reflection nebula that demonstrates marked changes in brightness over time as the result of fluctuations of output from the local star that illuminates it. To simulate this effect, variable nebalue are assigned a random detection penalty that affects space encounters generated in their systems. Players must roll on the following table at the start of each space encounter to determine the applicable detection penalty for that encounter.

**VARIABLE NEBULA
DETECTION TABLE (D6)**

Roll	Detection
------	-----------

	Penalty
1-2	-1
3-4	-2
5-6	-3

Dark Nebula

A dark nebula is a form of nebulae without clearly defined borders that is located in the coldest, densest parts of space within which new suns are born. The concentration of interstellar dust within a dark nebula is so great that it can block out or obscure other light sources, such as the light reflected by background nebulae and stars.

It is almost impossible for a task force to detect enemy ships that are operating in a dark nebula. Space encounters in these systems are subject to a massive -4 detection penalty. Dark nebulae have no effect on ground encounter detection, however.

Maser Nebula

Maser nebulae are a form of dark nebulae that are home to stars that stimulate spectral line emissions in the microwave portion of the electromagnetic spectrum throughout the nebula's interior. These emissions damage electronics and impede navigation, even moreso than normal. This effect creates a vicious and deadly maelstrom that most spacefarers actively attempt to avoid if at all possible.

The energized nature of a maser nebula makes travel extremely treacherous. Space encounters generated in a system that contains a maser nebula are subject to a -4 detection penalty, and every non-ground unit that is in the system during the Supply Phase earns an extra out of supply level regardless of their current supply state. This is in addition to any out of supply levels these units would normally have taken this turn.

A maser nebula also prevents powers from establishing major fixed installations in the affected system. Empires can't purchase facilities in a maser nebula system as the long-term damage these facilities would sustain by being in the system precludes them from being built there in the first place.

Plasma Storm

A relative of the ion storm, a plasma storm is a dense field of ionized gas that is extremely treacherous to traverse. Small, fast ships can maneuver through a plasma storm with ease, but larger, bulkier craft can find themselves trapped within their deadly confines. Because of the inherent danger in charting a safe course through a plasma storm, all non-Fast units that end their movement in a system that contains a plasma storm take 1 damage. Ground forces are unaffected by plasma storms.

Radiation Field

Some stars emit dangerously high concentration of electromagnetic radiation that can cause injury, sterility, or death in living organisms that are subjected to long-term exposure. Some species have a natural immunity to these radiation effects, but that is rare.

The cost of population increases in systems with the radiation field terrain are increased by +50% to reflect that colonists in the system undergo extraordinary levels of attrition due to adverse health effects. This makes it harder to establish large population centers in these systems.

3.2.7 SPECIAL ENCOUNTERS

Many star systems hold untold secrets that can be unlocked by adventurers that are lucky enough to discover them. Examples of the kinds of special encounters that can be found in a system include strange abandoned alien cities, derelict starships, spatial anomalies, and stable wormholes. These points of interest offer the empires that find and control them advantages over their opponents.

Special encounters add a bit of extra excitement and mystery into a campaign and players can use these events to craft a richer narrative for their games. This is especially useful for solo campaign players that rely on these kinds of surprise discoveries to keep their games interesting.

Abandoned Colony

The presence of an abandoned colony in a star system indicates that one or more of the planets in the system was once home to an alien colony but the colony has long since been deserted – either voluntarily or involuntarily, it's hard to tell. In their haste the colony's former inhabitants left behind

infrastructure and equipment that future colonists can renovate for their own use. Cast off alien apparatuses can be jury-rigged, and the colonists can take up residence in the colony's abandoned edifices.

The amount of pre-existing infrastructure that a system receives from an abandoned colony is found by rolling on the table below. Round fractional infrastructure values up. Players should randomly apportion this infrastructure between the system's four colony infrastructure values (Economy, Industry, Agriculture, and Research).

ABANDONED COLONY SIZE TABLE (2D6)

Roll	Infrastructure
4 or less	1/2 x Carrying Capacity
5-6	1 x Carrying Capacity
7-8	2 x Carrying Capacity
9-10	3 x Carrying Capacity
11 or more	4 x Carrying Capacity

Modifiers:

-2 Very Low

-1 Low

+0 Moderate

+1 High

+2 Very High

Unlike ancient ruins, there are virtually no relics or artifacts present at abandoned colonies that can be collected for study. The colonies' original inhabitants took the most valuable equipment with them when they deserted the colony and what scraps they left behind are little more than worthless mechanical junk. This means that an empire won't earn any kind of tech bonus from colonizing a system that contains an abandoned colony.

Alien Derelict

Routine system surveys sometimes uncover the presence of alien derelicts drifting in deep space, in slowly-decaying orbits around long-forgotten planets, or crashed and abandoned on the surface of a distant world. The hulls of many of these derelicts show obvious signs of battle damage, indicating that they survive a battle only to later be deserted

by their crews. Other wrecks show no apparent signs of damage and offer few other clues as to why they were cast off. In any event, alien derelicts are lasting monuments to the empires that built them so many years ago.

After discovering an alien derelict, a player has to sit down and create statistics for the craft. The first step is to determine the cost of the alien derelict by rolling on the following table. The resulting build cost is normally used to "purchase" a single alien derelict, but players can choose to split some of the build cost between multiple derelicts. This can be helpful if you want to design a derelict carrier that still has some fighters or shuttles onboard or a flotilla of frigates instead of a single larger vessel.

DERELICT BUILD COST TABLE (D6)

Roll	Build Cost
1-2	2D6
3-4	4D6
5-6	6D6

The alien derelict's tech level is then found by rolling on the next table. Any of the derelicts created via this special encounter will be designed at the resulting tech level. Players should note that it's possible to encounter fairly primitive derelicts that have low Interstellar tech level or even be Interplanetary in nature. This range of values prevents every derelict from being a potentially earth shattering discovery.

DERELICT TECH LEVEL (2D6)

Roll	Tech Level
2-3	Interplanetary
4-5	1D6
6-7	2D6
8-9	3D6
10-11	4D6
12	4D6 + Highest Player Empire TL

Now that the unit's build cost and tech level are known it's possible to sit down and design our alien derelict(s). Because the unit's cost and tech level are

determined by separate rolls, players can encounter alien derelicts that are small and advanced, large but primitive, or anywhere in between. This variability means that all alien derelicts are never created equal and some may even be next to useless depending on their size and sophistication. Then again, an empire has just as much chance of stumbling upon a high-tech dreadnought as they do an archaic strikefighter — you just have to hope that luck is on your side!

It's recommended that the CM design all alien derelicts in moderated campaigns. This encourages a more random selection of alien derelicts and prevents a player from taking advantage of an alien derelict discovery to design a derelict specifically to counter one of his opponent's forces. CMs also are afforded the latitude to field derelicts of differing tech levels if they so choose or otherwise tailor the derelict's discovery to fit their campaign's setting, story, or narrative.

Alien derelicts are inactive and immobile until its engines are repaired. Repair ships can be brought into the system to repair the ship and reactivate its engines or tugs with the Towing ability can be used to tow it back to a location where it can be repaired. A third, largely impractical option is to establish a colony in the derelict's system and build it up to the point that a refit can be done on-site using colonial infrastructure and facilities. Empires that find themselves unable to take ownership of an alien derelict may be forced to destroy it to keep it from falling into enemy hands.

Optional Rule: Booby Trap. The reason that the derelict may have been trapped in the system is because someone placed a booby trap in the system that ensnared the ship and prevented it from escaping. This booby trap is still active and the fleet that discovered the [MORE]

Ancient Ruins

The stars were not empty before the current batch of sentient interstellar species emerged from their home systems to explore the galaxy. The crumbling remnants of countless fallen civilizations and long extinct species can be found littering thousands of worlds in our galaxy alone. Glittering cities, shrouded in darkness and abandoned for millennia. Hidden grottos, silent except for the slow but steady pulse of dormant machinery. Psychic echoes lingering like wraiths in the great halls from which

great empires rose and fell. These mysterious remnants of ancient empires can be of significant archaeological and technical interest to an empire.

The alien technologic secrets that are left behind on these worlds provide a bonus to research performed in these systems. A system's research capacity is doubled if it contains ancient ruins. This research capacity bonus not only increases the number of tech points that can be purchased there each turn but it also increases the number of free tech points an empire receives each turn from background research at the colony.

Dimension Portal

This system possesses a dimension portal that connects to a pocket of space in a parallel dimension. This pocket dimension contains 1D6 star systems, one of which is the location of the endpoint of the dimension portal that spawned on the main campaign map. Players must create a new campaign map to chart the geography of this alternate dimension.

Space combat units can move between these two connected systems as a free movement during the Movement Phase each turn as part of their movement orders, and units don't need FTL drives to move between the systems.

Players can decide for themselves whether or not they want all of the dimensional portals encountered in their campaign to connect to systems in the same alternate dimension or if they would rather have each one associated with its own pocket dimension. You could also have the dimensional portals transport ships to a parallel dimension that is nearly identical to the players own, with all of the same star systems and jump lanes present as on the original campaign map. That approach is far more ambitious than a simple pocket dimension but could be a far more interesting concept to explore during a game.

Guardian

This star system is protected by a sophisticated automated defense system that was left behind by an advanced technological power. Guardians are treated as starbases for the purposes of the rules. Players should refer to the rules for alien derelicts and use the set of tables included there to determine the guardian's build cost and tech level. Unlike alien derelicts there is always only a single

guardian present in a protected system. This guardian must be defeated for the system can be safely colonized. Guardians cannot be captured and should a player succeed in capturing a guardian using Marines or Cyber Warfare technology the craft will simply explode.

Space Monster

This system is a breeding ground for some kind of hostile spacefaring organism that has been known to attack passing spacecraft. The space monster is considered to be a starship, but it is special in that it isn't assigned a tech level, nor is it designed using the standard unit construction rules. Instead, the space monster's combat statistics are derived from its home system's statistics as follows:

Defense: Carrying Capacity + 2

Attack Strength: RAW + 2

Point Defense: Biosphere + 2

These creatures heal over time, repairing 1 damage per turn during the Construction Phase. Undamaged space monsters redirect their damage repair capabilities towards reproductive activities. A new space monster is born once the total stored damage repair is equal to its Defense value. This offspring has the same base statistics as its parent and starts in a crippled state to represent its immature status. It will then start using its own repair capability to "heal" itself to full adulthood. These new space monsters are born in the Construction Phase after all combat operations for the turn have been resolved.

Space monsters are incredibly territorial and multiple monsters won't willingly share the same star system. The largest (highest Defense) monster in the system will chase the others away, forcing them to flee to an adjacent star system. Rogue space monsters that migrate to another star system will attack any ships or colonies in that system. This harassment continues until the system is scoured of all life, a larger monster chases the smaller one away, or the monster is killed.

Space monsters cannot be captured by Marines or Cyber Warfare technologies. Any "captured" space monsters are simply destroyed.

Spatial Anomaly

Spatial anomalies are extraordinary phenomena that seem to defy the laws of physics as we know them.

Very often these anomalies take the form of disruptions of the space/time continuum, effectively tears in the fabric of space itself that allow other realities (and this associated physical laws and properties) to bleed through into our own galaxy. Observatories can be established to monitor these anomalies and gather valuable information on the structure of the galaxy. This doubles the number of free tech points that utilized Research infrastructure in the system produces for its owner.

Splinter Colony

Explorers have discovered a long-lost splinter colony in this system that was founded by the crew of a generation ship that the discovering empire launched prior to the advent of faster-than-light travel. The colony's inhabitants are happy to have been rediscovered by their starfaring cousins and will automatically join their empire.

The first empire to discover a splinter colony receives a free colony in the affected system at no cost. Roll once on the Splinter Colony Table to establish the size of the splinter colony. Splinter colonies that are located in systems that have Biosphere values less than 3 are always Outposts with 0 Census and 2 Morale because they are incapable of supporting larger populations.

SPLINTER COLONY TABLE (2D6)

Roll	Colony Size	Census	Morale	Infrast.
4 or less	Outpost	0	2	0
5-6	Outpost	1	2	2
7-8	Settlement	2	3	4
9-10	Settlement	3	4	6
11 or more	Minor Colony	4	5	8

Modifiers:

-2 Very Low

-1 Low

+0 Moderate

+1 High

+2 Very High

The splinter colony's tech level is 1D6 less than the empire's own tech level. Colony tech levels less than TL 0 indicate the colony's population has regressed to an Interplanetary tech level since making landfall in the system.

Splinter colonies start with a total number of economic points equal to five times their system income values to spend on military units. These units must have a tech level less than or equal to their own colony tech level. The discovering power takes ownership of these units during the Update Phase of the turn that the splinter colony is encountered, integrating them into its own armed forces.

Wormhole

A wormhole is a stable gateway through the fabric of space/time that connects two star systems together. Wormholes allow starships and flights to move between two connected systems at no movement cost, even if they are not equipped with FTL drives. Units can navigate a wormhole at any point during their movement, or it can even be their only movement action for the turn.

When a wormhole is first discovered, the discovering player or CM must locate the wormhole's destination system. The other wormhole terminus is placed in a system somewhere else on the map, preferably in an unexplored or uninhabited system. It's recommended that the other terminus be in a system that's at least 2D10 hexes away from the originating system when using a hex map.

When recording the wormhole trait for two systems in a matched pair players must remember to record the wormhole's destination system so that players will know where each wormhole leads. The easiest way to do this is to add the name of the destination planet in parenthesis after the *Wormhole* trait note (ex: "Wormhole (Procyon 2)").

3.2.8 STRATEGIC RESOURCES Δ

Strategic resources are rare substances that confer major advantages to the empires that control them. In popular science fiction, strategic resources often appear as types of unobtainium that are valuable either because they are very rare or impossible to synthesize. Access to and control of these resources is usually a major concern in these milieus.

Strategic resources are broken down into eight different classifications: census, morale, economic, industrial, agricultural, scientific, intel, and special. Most strategic resources increase a system's effective utilized infrastructure values.

Empires gain access to a system's strategic resources by establishing a colony in the system or building a mining base there. This permanent presence is sufficient to allow the power to begin exploiting the resource. Access to a strategic is lost if the colony or mining base that was extracting it from a system is lost.

By default, a strategic resource's effects are always applied to the system in which they are located, however a player can choose to transport strategic resources from the system where they are located to any other system that can trace a trade route to that system. This allows empires to extract strategic resources from a system and then have another system benefit from the resource's stated effects. Players usually exercise this option to maximize the effectiveness of their strategic resources by applying the bonuses to their largest colonies, usually their homeworld.

Empires can also take advantage of the ability to relocate strategic resources by selling strategic resources to their trading partners. In this scenario two players would negotiate a special deal where the power with the strategic resource would agree to transport it to one of the buyer's systems in return for some form of material consideration — economic points, military support, etc.

While its usually better for an empire to utilize its strategic resources rather than sell them, there are situations where trading away resources might be the superior option. For example, the strategic resource might be located in a system that is too far away from any of the owner's major colonies that would stand to benefit the most from the strategic resource. Selling the resource might then be worth more than applying its effects to a smaller colony. Strategic resource trades can be broken like any other treaty, but a player must continue to supply strategic resources to a trade partner for as long as the special trade deal remains in place — even if the trade partner is no longer able to trace a trade route to the resource system or vice versa.

Population Resource

Many systems exhibit unique organic or biochemical properties that make them especially compatible with life. Population increase costs are halved in systems that contain a population resource (rounding fractional costs up). This makes it much cheaper for an empire to build up massive populations in these systems. A population resource halves the cost of population increases in its system (round fractional costs up).

Morale Resource

Morale resources have a calming effect on a system's inhabitants. The most common example is a chemical substance that acts like an aphrodisiac or has hallucinogenic properties. These substances tend to be highly-addictive, which contributes to their effectiveness at keeping a system's population content. Any time that a system with a morale resource gains Morale it receive an additional +1 Morale.

Economic Resource

Economic resources are valuable commodities that are in such constant demand that an empire can readily convert them cash. Systems that refine economic resources for commercial or industrial use receive a +100% bonus to their commerce values (round up).

Industrial Resource

This strategic resource indicates that a system possesses large quantities of easily accessible mineral deposits that are in high demand by planetary industry. An industrial resource increases a system's industrial capacity by +50% (round up).

Agricultural Resource

Agricultural resources are used to accelerate food production. This usually takes the form of a fertilizer or biological additive that encourages rapid cell growth in flora or fauna that receive long-term exposure to the resource. An agricultural resource increases a system's food production by +50% (round up).

Scientific Resource

Explorers sometimes discover strange mineral deposits in a star system that seems to defy scientific explanation. Studying these anomalous ore veins

can help to unlock new avenues of research and accelerate technological growth. A scientific resource increases a system's research capacity by +50% (round up).

Intel Resource

Intel resources come in many varied forms. They might be naturally occurring psychotropic substances that can't be synthesized that are extremely effective at breaking down enemy mental conditioning during interrogations, or they might be a special material that is integral to the production of personal invisibility screens. An intel resource increases a system's intel capacity by +50% (round up).

Trade Resource

Lucrative trade resources have few practical industrial applications but are still highly valued by the galactic community for their sheer rarity. The commercial infrastructure that is established to export the trade resource to other worlds can be used to extend an empire's existing trade routes into new systems. A trade resource increases a system's commerce range by +50% (round up).

Supply Resource

Supply resources are used to produce high-quality consumables for a nation's armed forces. The ease with which these resources are converted into supplies allows an empire to deliver a greater volume of supplies to more systems than it would otherwise be able to do by conventional means. A supply resource increases a system's supply range by +50% (round up).

Military Resource

Military resources represent special materials that can be used to build more effective military units. Each military resource provides a +25% bonus to a single unit statistic or special ability value (round up). Players must determine what kind of bonus a military resource confer when the strategic resource is first applied to a system during system generation. The name of the affected statistic is then included in parenthesis after the resource declaration. For example, a system that has *Military Resource (Attack Strength)* in its special notes field contains a military resource that gives units that are built with the resource a permanent +25% bonus to their Attack Strength values.

While bonuses to unit combat values (Defense, Attack Strength, Point Defense) are the most likely options for a military resource, players can also implement military resources that instead affect a unit's command rating or special abilities, such as FTL, Scout, or Assault.

3.3 Jump Lanes

"Today's flight marks a critical turning point in the history of aerospace. We have redefined space travel as we know it."

- Burt Rutan

Star systems are connected to one another by a series of interstellar travel routes that are called jump lanes. Each star system can have up to six jump lanes connecting to it, and the number of lanes that a system has influences its strategic value. Starships and flights use jump lanes to travel from one star system to another during the Movement Phase of the campaign turn. Units can use either their own FTL drives to move across jump lanes (3.3.1 FTL Movement) or else move between systems that contain dedicated jump gate facilities (3.3.2 Non-FTL Movement).

Jump lanes serve the purpose of creating a network of artificial terrain on the campaign map that constrains movement along specific predefined paths. This produces strategic defensive chokepoints at various points on the map that players can fortify to protect their empires against invasion while preparing for their next wave of exploration and expansion. Empires are forced to seek out and secure these defensive positions or risk leaving their borders exposed to enemy attack.

But what does a jump lane really represent? Because of their abstract nature, jump lanes can be used to simulate everything from fixed hyperspace corridors, well-surveyed flight paths that have been pre-programmed into shipboard flight computers, or the shortest distances connecting two points in real space. This approach allows the same set of movement rules to be used in all campaigns regardless of the specific type of FTL travel that is employed in each setting. This improves rules consistency and makes it so that players don't have to create special movement rules or exceptions for each form of FTL propulsion system they might

expect to encounter. The assumption is that a ship with a warp drive and another with a folding drive might violate physics in different ways to achieve faster-than-light flight, but they should be subject to the same basic movement limitations for the sake of making the game easier to play.

Under the default system generation rules, massive stars usually have more jump lanes connecting to them than smaller stars do, but every star system has at least one jump lane connecting to it. These same systems also tend to have fewer system resources, which creates an environment where the systems with the most jump lanes and the greatest strategic value also have the least intrinsic material value. Players have the option of divorcing the correlation between stellar luminosity class from jump lane concentration in their campaigns if they believe that this isn't applicable to their particular setting.

Jump lanes facilitate unit movement from one star system to another. Movement orders are recorded during the Turn Orders Phase and then performed during the Movement Phase of the same turn. Any starship or flight that is equipped with a FTL drive can use jump lanes to perform jump lane movement, but non-FTL units can only move between systems that contain jump gates.

3.3.1 FTL MOVEMENT

Starships and flights that have the FTL special ability can use jump lanes to move from one system to another. The maximum number of jump lanes that a unit can traverse during a single Movement Phase is equal to its FTL value. A FTL 4 unit could therefore cross four jump lanes per turn while a FTL 2 unit could only cross two jump lanes per turn.

Units that are capable of performing multiple jumps lper turn receive several marked advantages over those that can't. From a strategic standpoint, they are more versatile and can be quickly redeployed between a player's systems to react to changing wartime conditions. They are also very good at performing basic reconnaissance and responding to enemy incursions as they happen.

Units make space *and* ground detection rolls for every system that they visit during their movement (see X.X Detection). This allows them to try to ascertain the size and disposition of opposing forces

in these systems even if they choose to decide to keep moving after unexpectedly encountering an opposing force in one of the system they were ordered to visit this turn.

3.3.2 NON-FTL MOVEMENT

Non-FTL starships and flights can't travel across jump lanes on their own and must rely on jump gates to move from one system to another. Jump gates are special facilities that allow spacecraft to traverse jump lanes as if they were FTL 1 units as long as both systems contain jump gates. This limits non-FTL units to a maximum of one jump lane movement per turn, but it at least lets them to move between systems — a feat they would otherwise be unable to achieve due to their lack of FTL.

3.3.3 FLEET MOVEMENT

Fleets comprised of multiple starships and flights can be issued movement orders and perform movement as a single entity. Fleets always have a strategic speed equal to their lowest FTL value. Units that are being based aboard other craft in the fleet have an effective FTL value equal to their transport's in these instances and don't affect their fleet's strategic speed.

Fleets that contain one or more non-FTL units that aren't being transported aboard other units are also restricted to using jump gates and relays to move between systems until the offending non-FTL are removed from the fleet.

Example: A fleet consists of one battleship (FTL 2), three light carriers (FTL 3) carrying two flights each (FTL 0), five frigates (FTL 3), and two military freighters (FTL 1). The flights based aboard the trio of light carriers have the lowest FTL value in the fleet, however they are being transported by other units and don't impact the fleet's strategic speed. The slowest non-based units in the fleet are the military freighters, which gives the fleet an effective FTL value of 1 when performing jump lane movement.

Should the fleet's owner choose to remove the two freighters from this fleet, its strategic speed would increase to FTL 2 because the battleship is the next slowest unit and it is FTL 2.

3.3.4 CONTESTED MOVEMENT

Contested movement occurs when units that have been ordered to perform multiple jump lane moves

during a single Movement Phase pass through a system that contains potentially hostile fleets (i.e., the opposing force is owned by an empire that the moving power hasn't signed a non-aggression treaty with). Contested movement is resolved by having each affected fleet perform one jump at a time. Each of these jumps is a movement impulse. Space and ground detection rolls (see X.X Detection) are made after each impulse. Players receive the results of their forces' detection rolls at the end of each movement impulse. They can then use this detection information to decide whether or not to continue moving a fleet as previously ordered or else cancel its remaining movement orders and have it remain in the current system for the remainder of the campaign turn.

Empires can only make one detection roll of each type (space and ground) per system every campaign turn and the results of these detection rolls carry through to the Encounters Phase turn and should be recorded for later reference. In other words, if one of a player's fleets rolls *Limited Detection* for space detection and *Normal Detection* for ground detection in a system for one fleet during one movement impulse any of its forces that move into that same system during a later step of contested movement or remain in the system through the Encounters Phase will also be bound to those detection results — *the player doesn't make separate detection rolls for each of his fleets that move into the system this turn!*

When attempting to move through a system that contains one or more enemy starships or flights, a fleet must either cancel its remaining movement or else leave behind a force whose total Command Cost is at least half the Command Cost of enemy starships or flights (but not starbases) that the it has detected in the system (round up). These units that the player leaves behind in the system are used to cover its retreat as it moves on to the next system listed in its movement orders. This leaves the fleet's owner in the unenviable position of dividing his fleet's strength in an attempt to push through the enemy lines and continue its movement. Maintaining maximum force concentration in the main fleet leaves it in a better combat position but the token force left behind is likely to get slaughtered by the enemy. On the flip side, leaving a larger force to cover the main fleet's movement increases its survival odds at the expense of blunting

the primary force's firepower as it moves on to the next system.

An exception to the above occurs when a fleet moves into a system and a system and rolls a *No Detection* result for its space combat detection roll. This poor detection result indicates that the fleet was completely unaware of the enemy forces in the system. This of course means that the fleet's owner doesn't have any indication of how many units its opponents have in the system. Enemy forces in the system have the option of either allowing the fleet to continue moving through the system unmolested, but they can also choose to completely block the fleet's movement, trapping them in the system for the remainder of the turn.

Example: A 32 CC fleet has been ordered to move into three systems this turn (A, B, and C). The fleet first moves into A and makes its space and ground detection rolls. System A contains 5 CC of enemy non-starbase space combat units. To continue moving the fleet would have to leave behind at least 3 CC of space combat units. The player decides to leave 8 CC of space combat units behind in system A, and the remaining 24 CC of units in the fleet move on to system B.

The fleet makes another series of detection rolls upon arriving in System B. There are two enemy fleets in this system, one with a construction cost of 12 CC and one with a construction cost of 9 CC. This produces a total of 21 CC of enemy ships in the system. The player must leave at least 12 CC of space combat units behind in System B if it hopes to move on to system C. Doing so would split his fleet into two 12 CC segments, however, and there's a good chance that a larger enemy fleet might be waiting in System C. The player decides to cancel his fleet's remaining movement and keep all 24 CC of his units in System B to participate in an encounter there this turn.

3.3.5 CONCEALED MOVEMENT

Units with the Stealth special ability are capable of moving through star systems without being detected. A fleet can only perform concealed movement if each of its units has a Stealth value greater than zero. This indicates that all of the units in the fleet possess some form of stealth technology that they can use to mask their presence during movement. Fleets can be ordered to perform concealed movement during the Movement Phase as long as this condition is met. Units such as flights or ground forces that are being transported by other units in the fleet don't affect its ability to perform

concealed movement, but they also don't contribute their Stealth values towards their fleet's total, either.

A special detection roll is required whenever a fleet that is performing concealed movement enters a system that contains units owned by another power. The percentage chance that the fleet successfully concealed its movement into the system is equal to its total Stealth value divided by the sum of its Command Cost plus the opponent's total Scout value. Each opposing force in the system makes a detection roll against the fleet, however military treaty partners make a single roll using their combined Scout value. This usually improves their chances of discovering hidden movement in the system.

A defender's planetary scanners provide an additional line of defense against concealed movement. A player adds his colony's utilized Intel value to his force's Scout total during concealed movement attempts. This makes it harder for an empire to move into or through a system that contains a major colony without their presence being detected by the system's owner.

Nebulae interfere with long range sensors and make it harder for Scouts to detect concealed movement. An empire's total Scout value is halved in nebula systems for the purposes of concealed movement (round down).

Any fleet whose total Stealth value is greater than its own Command Cost can therefore move through enemy territory with no chance of detection as long as an opponent doesn't have any Scout craft or Intel rich colonies available to stand guard against them.

An opposing force can't contest the movement of a fleet that successfully performed concealed movement in their system this turn. Fleets that are detected by an opponent while attempting concealed movement however are still subject to the standard contested movement rules. Task forces that include units that failed their concealed movement attempts in their current system shall receive a -1 penalty to their surprise roll during the first space combat scenario they fight in that system during the Encounters Phase this turn.

Instead of continuing its movement, a fleet that passed its concealment roll can elect to cancel its remaining movement orders and stay in the system so that it can generate encounters against an enemy during the Encounters Phase. The fleet receives a +4

surprise bonus in its first space combat scenario that it fights with an opponent that failed to detect it. That same opponent receives a -4 surprise penalty in that scenario. These modifiers demonstrate that the opponent has been taken completely off guard by the sudden attack and is unprepared for combat. This gives the concealed fleet an opportunity to massacre its enemies before they have a chance to reach battlestations.

Example: A fleet consisting of three cruisers (3 CC, 2 Stealth) and five frigates (1 CC, 3 Stealth) are attempting to perform concealed movement in a system where its opponent has a total of 12 Scout value and a colony with 2 Utilized Intel. The fleet's chances of successfully completing its concealed movement is $9 \text{ Stealth} \div (14 \text{ Command Cost} + 12 \text{ Scout} + 2 \text{ Utilized Intel}) = 32\%$. A roll of '27' on a D100 indicates that the opponent was unable to detect the fleet. The concealed fleet can either continue its movement or else stay in the system and receive a bonus to its surprise.

3.3.6 JUMP LANE ENCOUNTERS

Opposing fleets that try to traverse the same jump lane during the Movement Phase generate a jump lane encounter against each others forces. This typically occurs when two fleets that are resolving contested movement move in opposite directions across the same jump lane during the same contested movement impulse. Jump lane encounters are resolved during the Movement Phase immediately after two fleets meet in a jump lane using the standard encounter resolution rules with the exception that players can only generate X.X Hyperspace Scenarios against their opponents. Hyperspace scenarios are extremely unpredictable because both sides in the battle are subject to persistent combat penalties that make it difficult for either side to gain a definitive advantage.

Rarely, opposing fleets may generate a jump lane encounter in which each of the fleets avoid enemy detection by passing their concealed movement attempts. When this happens neither of the participating fleets even noticed each other as they moved across the jump lane. No hyperspace scenarios are generated during such an encounter, and movement progresses as if the encounter never actually happened.

After resolving a jump lane encounter, each fleet has the option to either continue moving on to its original destination or else fall back to the last

system they visited. A fleet must do one or the other, it can't end the Movement Phase in the middle of a jump lane. Fleets that choose to move back to their system of origin cancel their remaining movement orders for the turn.

3.3.7 JUMP LANE CLASSES Δ

Jump lanes can be assigned jump lane classes that vary the amount of FTL value a unit must spend to move across them. This optional rule introduces four different jump lane classes — restricted, minor, normal, and major.

Restricted lanes are tenuous routes that have been only tentatively mapped by previous explorers and are hardly worthy of being called jump lanes. The adventurers that discovered the lane encountered various navigational hazards along its path that prevented them from completing a more comprehensive survey, which is part of the reason it's so difficult to cross a restricted lane.

Minor lanes are infrequently-traveled jump lanes that suffer from a lack of reliable navigation data. These lanes are often found on the frontier where no one has deemed it necessary to invest the time and resources to perform more detailed surveys of the lane.

Normal lanes are dependable jump lanes that support a consistent level of both civilian and military traffic. The quality of maps available for these lanes ensures travelers a safe and uneventful journey. As an empire expands, it is common for it to upgrade most of its internal jump lanes to this class.

Major lanes are heavily-traveled jump lanes that have been thoroughly mapped and provide the quickest, most reliable movement between galactic destinations. It is not uncommon for all of an empire's major colonies to be connected together via a network of major lanes.

A jump lane's class is assigned by rolling on the Jump Lane Class Table during map setup. Jump lanes that are supposed to be unexplored at the start of the game defer their rolls on the Jump Lane Class Table until after they are successfully explored (see X.X Exploration). When using real world star data, players can alternatively choose to use the distances between stars to determine the effective jump lane class of the jump lanes that connect them.

JUMP LANE CLASS TABLE (D10)

Roll	Jump Lane Class	FTL Cost
1-4	Restricted	4
5-7	Minor	2
8-9	Normal	1
10	Major	1/2

Jump Lane Movement Costs

Each jump lane class is assigned its own movement cost as shown on the accompanying chart. The maximum movement cost of jump lanes that a fleet can traverse each campaign turn is equal to its FTL value. However, an FTL-capable unit can always move across at least one jump lane per turn regardless of the jump lane's class.

Jump Lane Class Upgrades

Jump lanes can be upgraded by financing a series of costly navigational surveys. These surveys pay for more comprehensive mapping of a jump lane and the placement of additional navigation buoys along its length to help guide spacecraft safely from one system to another.

The cost to upgrade a jump lane depends on its current jump lane class, as shown on the following chart. An empire can't upgrade jump lanes that connect to systems that are owned by other powers unless it has signed a border treaty with them. Jump lane upgrades take effect during the Colony Phase.

**JUMP LANE CLASS
UPGRADE COST CHART**

Current Class	New Class	Upgrade Cost
Restricted	Minor	50
Minor	Normal	100
Normal	Major	200

Jump Lane Class Downgrades

Just as jump lanes can be upgraded through careful mapping and the placement of navigation aids, they can also be downgraded by removing buoys, deleting map data from civilian and military navigation cores, and/or placing obstacles along previously-mapped safe routes. Any of these

methods can be used to effectively reduce a jump lane's class.

The cost to downgrade a jump lane is determined by its current jump lane class, as shown on the chart below. An empire can't downgrade jump lanes that connect to systems that are owned by other powers unless it has signed a border treaty with them. Jump lane downgrade take effect during the Colony Phase.

**JUMP LANE CLASS
DOWNGRADE COST CHART**

Current Class	New Class	Upgrade Cost
Major	Normal	100
Normal	Minor	50
Minor	Restricted	25

3.3.8 JUMP LANE ALTERNATIVES



While jump lanes are excellent tools for constraining movement and creating artificial terrain on a campaign map there are some sci-fi settings where they may not be thematically appropriate. Perhaps more importantly, some players also detest the concept of jump lanes *because* they create artificial terrain and would prefer to use alternate movement options that better capture the feeling of FTL travel in their preferred campaign setting. The following are a few alternatives that players can use if they don't want to use jump lanes in their campaigns.

Freeform Hex Maps

An easy option for players that want to do away with jump lanes is to continue using a hex map to track system locations as per the standard campaign system rules but allow units to move between adjacent systems on the map as if they were connected by jump lanes. This constrains movement to a two-dimensional surface, which may not be optimal for the type of campaign environment you're trying to simulate, but it is very effective at increasing the number of movement options that a player has available. Most importantly, it eliminates the natural chokepoints on the map that jump lanes create and makes imperial borders more fluid.

Distance Based Movement

Another option is to use the distance between two systems on a campaign map to determine how long a ship has to be in transit to move from one system to the other. The recommended number of Movement Phases required to travel between two systems is equal to their light year distance divided by 5 (round fractions up). A FTL 1 starship moving from Sol to Alpha Centauri (4.4 ly) would make the journey in 1 turn, but that same ship would need 3 turns to move from Sol to Epsilon Eridani (10.5 ly). Note that a faster starship with FTL 2 could cover that distance twice as fast, and it could make the trip from Sol to Epsilon Eridani in just 2 turns.

An advantage of this jump lane alternative is that players can use online star catalogs or mapping software like *Celestia* to calculate the distance between two stars. Meanwhile, players that are using flat, two-dimension maps can select a scale for their map and then use a grid or ruler to measure between points on the map to determine the distances between systems. Enterprising players can easily add a z-axis to the flat map to give it three-dimensional depth, too, and then use math to calculate the distance between any two systems.

3.4 Colonies

"Since, in the long run, every planetary society will be endangered by impacts from space, every surviving civilization is obliged to become spacefaring — not because of exploratory or romantic zeal, but for the most practical reason imaginable: staying alive."

- Carl Sagan, *Pale Blue Dot*

Colonies are the source of an empire's political, economic, and industrial power. A colony's population is used to exploit local natural resources, produce finished goods, raise and harvest native food sources, pursue technological research, conduct intelligence missions, and provide logistical support for nearby friendly military and civilian assets.

3.4.1 COLONIZATION

Empires establish new colonies by dispatching colony missions to nearby star systems. Colony missions can only colonize star systems that are located within the commerce range of an empire's

colonies, and then only if the system has a Carrying Capacity greater than zero. These systems don't contain any inhabitable planets or other system bodies and therefore can't be colonized by any power. Empires can only colonize uninhabited systems unless the 5.1.4 Multi-Colony Systems optional rule is being used in your campaign.

Colony missions are organized and launched from an empire's capital systems. The cost to establish a new colony is 40 economic points plus an additional 10 economic points per jump that the colony fleet must travel to get to its destination. This expenditure covers the costs associated with recruiting and training colonists, manufacturing prefabricated colony structures, and outfitting a colony expedition to the destination system. Because colony missions originates at a capital system, an empire can't purchase new colonies if they don't have an imperial or sector capital.

Colony missions can't move into or through contested systems due to the threat of violence, and a player may have to choose a costlier, more circuitous route to reach a destination system. Any colony mission that can't reach its target without entering a contested system is automatically cancelled and its colonization cost refunded. The player can attempt the colony mission on a future turn or else quick a different route for the colony fleet to take that avoids the contested systems.

New colonies are placed in systems during the Colony Phase of the turn that they were purchased. They start with 0 Census, 2 Morale, and a colony tech level equal to the current tech level of the capital that launched the colony mission. Colonies don't start with any infrastructure in place unless there is preexisting infrastructure already in the system prior to colonization. New colonies can't perform any population or infrastructure increases/decreases on the same turn that they are colonized.

Pre-interstellar empires can only establish colonies in other systems if they have signed a trade treaty with an interstellar power. Even then, these powers are restricted to only being able to colonize systems that are located within the commerce range of its trade partner's colonies. This reflects that the pre-interstellar empire is contracting with the other power's civilian shipping to transport its colonists to the destination system.

3.4.2 POPULATION

The size and happiness of a system's population are indicated by its Census and Morale values, respectively. These population values are improved by population increases or reduced by population decreases. A colony can only perform one population increase or decrease per turn, and then only if it isn't in a state of rebellion or located in a contested star system.

Colonies with large populations are inherently more productive and can operate more infrastructure. This makes them imminently more valuable targets for an enemy that is seeking to capture or destroy your empire's means of production.

Population points can be spent to increase a colony's population. The cost to purchase a population increase in a system is equal to 10 times the system's new Census value and increases its Census and Morale values by 1, to a maximum value equal to the system's Carrying Capacity. Population increases take effect during the Colony Phase.

Population increase costs are higher for colonies that have pre-interstellar tech levels to represent that these worlds haven't advanced the agricultural sciences to the point to be able to support large planetary populations. These increased population point costs force low tech population to grow more slowly.

POPULATION INCREASE MODIFIER CHART

Colony Tech Level	Population Increase Cost
Pre-Industrial	50 x New Census
Industrial	40 x New Census
Information	30 x New Census
Interplanetary	20 x New Census
Interstellar	10 x New Census

Example: A system has 4 Census, 5 Morale, and is TL 5 (Interstellar). The cost to purchase a population increase in this system is 50 population points (10 x 5 Census). This increase would give the colony 5 Census and 6 Morale.

Players may sometimes want to actually reduce the size of populations at their colony worlds. This usually happens during times of war when a

colony's owner starts evacuating a system's population ahead of the enemy invasion so that as many inhabitants as possible can escape back to other worlds in its empire. A population decrease reduces a system's Census and Morale values by 1, to a minimum value of 0, and the colony's owner receives a number of population points equal to 5 times the system's original Census value.

Example: An inhabited system has 4 Census and 5 Morale. Performing a population decrease in this system would give its owner 20 population points and reduce the system to 3 Census and 4 Morale.

Census

Morale

3.4.3 INFRASTRUCTURE

A colony's capabilities are largely defined by its infrastructure. Each system has five infrastructure values: Economy, Industry, Agriculture, Research, and Intel. While each of these infrastructure types operate differently they are all subject to the same basic set of rules. They each require Census to operate them, can be purchased using economic points (or torn down to recoup some of their costs), have a maximum value equal to a system's Carrying Capacity, and can be disrupted by the presence of enemy ground forces.

An empire can only build (infrastructure increase) or remove (infrastructure decrease) points of infrastructure from systems that it controls, and then only if the system isn't in a state of rebellion or currently contested by another power.

Economy

Industry

Agriculture

Research

Research infrastructure represent the various laboratories, universities, skunkworks, and other

research institutions that a colony has available that its owner can use to carry out research and development (R&D). Colonies produce a number of free tech points each turn equal to their utilized Research values.

Infrastructure Increase

System infrastructure values can be investing economic points into infrastructure development. The cost to increase one of a system's infrastructure values by 1 is equal to 10 times the system's new infrastructure value. An infrastructure value can't be increased if it's already equal to its system's Carrying Capacity.

Example: An inhabited system has 5 Research. It would cost 60 economic points to increase this infrastructure value to 6.

Infrastructure Decrease

An empire can sell off infrastructure at its colonies in return for cold, hard cash. Liquidating a point of infrastructure reduces the specified infrastructure value by 1 and provides a player with a number of economic points equal to 5 times the colony's original infrastructure value. The economic points earned from an infrastructure decrease are recorded as miscellaneous income for the turn.

Example: A player is removing Industry from a system with 6 Industry. This infrastructure decrease reduces the system to 5 Industry and gives the player's empire 30 economic points.

Infrastructure Utilization

Population is required to operate a system's infrastructure in order for it to provide any benefit. Each Census can utilize one point of each type of system infrastructure. A system's utilized infrastructure for each type of infrastructure is then equal to the lower of its Census or infrastructure values.

Systems that are experiencing unrest or rebellion are subject to infrastructure utilization penalties (see 5.5.1 Morale States). A colony's utilized infrastructure values are halved when it is in a state of unrest (round up) and reduced to zero when it is in a state of rebellion.

Example: A system has 3 Census, 2 Morale, 4 Economy, 3 Industry, and 2 Agriculture. The system is in good order. The system's 3 Census can operate three of each type of infrastructure present in the system (Economy, Industry, and Agriculture, in this

example). Its Economy value exceeds this value, however, and the colony can only utilize 3 Economy in the system. The fourth point remains unused and provides no benefit to the player. The system's utilized infrastructure values are as follows: 3 Economy, 3 Industry, 2 Agriculture.

If this system's Morale dropped to 1, it would be in a state of unrest and all of its utilized infrastructure values would be halved (rounding up). This reduces the system's utilized infrastructure values to 2 Economy, 2 Industry, and 1 Agriculture.

Infrastructure Disruption

Enemy ground forces disrupt the normal operations of a system's infrastructure whenever the total command cost of enemy troops on the ground in the system is greater than the command cost of friendly ground forces defending the system. The disruption reduces the system's utilized infrastructure values to half that of normal (round fractions up). This effect is cumulative with the effects of being in a state of unrest, and colonies that are affected by both conditions reduce their utilized infrastructure values to one-quarter of normal (round up).

Example: A system has 4 CC of defending ground forces, but the enemy has landed 7 CC of its own troops in the system this turn. The system's infrastructure is now disrupted. The colony was utilizing 5 Agriculture before the disruption, but this is now reduced to 3 utilized Agriculture. If the colony was in a state of unrest, it would instead be reduced to 2 utilized Agriculture.

3.4.7 COLONY SIZE

Colony size describes how large a colony is based on its total Census. More important colonies always have higher Census values because Census is required to utilize infrastructure and make a colony productive.

Colony Importance Chart

Census Colony Size

0-1	Outpost
2-3	Settlement
4-5	Minor Colony
6-7	Major Colony
8 or more	Core World

Outpost

Settlement

Minor Colony

Major Colony

Core World

3.4.8 PLANETARY BASING

An empire can base atmospheric flights at planetary airfields at its colony worlds. Each colony has a flight basing capacity equal to its system's Carrying Capacity times Census. Flights based from planetary sites are regularly sent out to perform system patrols and can be included in space combat scenarios even if there aren't any carriers present to base them. Similarly, ground-based atmospheric flights can be sent out to participate in ground combat scenarios where they provide air support for friendly ground forces.

Fighter Garrison facilities can be used to expand a system's basing capacity. A Fighter Garrison increases a system's planetary capacity by an amount equal to its Carrying Capacity and allows friendly flights to be based in uninhabited systems, too. Non-atmospheric flights can't be based at an owner's colonies unless a system has a Fighter Garrison. They can still be stored at a colony as cargo, however, they just can't be launched to protect the system in case of attack.

Flights that aren't based by a colony or carrier in a system can't attack and are instead crated and stored as cargo until such time as they are transferred aboard a carrier, activated into planetary basing, or embarked aboard a cargo ship for transport to another system. Any flights that are being based or stored as cargo at a colony that is conquered by another power are automatically captured and become the property of the invading power. They cannot use these units offensively until they refit them, however.

3.4.9 COLONY LOYALTY

A colony's loyalty is constantly being challenged by campaign events. Loyalty checks are performed during the Morale Phase to see if the colony's Morale has changed that turn. Roll a D10 for each colony. Good order colonies lose 1 Morale if they roll a '1', colonies in unrest lose 1 Morale if they roll a '1' or '2', and colonies in rebellion lose 1 Morale if they roll a '1', '2', or '3'. A colony gains 1 Morale if it rolls a '10' on its loyalty check regardless of its current morale state.

3.4.10 BLOCKADES

[as printed]

3.4.11 REBELLIONS

A colony descends into rebellion when its Morale value reaches zero. This precipitous loss of support for the ruling regime prompts a complete breakdown of local governance as armed rebel militias form to seize control of the colony. Rebel colonies are treated as if they are under a X.X blockade for as long as they are in rebellion.

The total cost of rebel forces that appear at a colony when it falls into rebellion is calculated by rolling a D6 die and multiplying the result times the colony's Census value. These economic points are spent to purchase ground forces that are then placed in the system to represent the rebel militia forces. The rebel have access to any of the ground forces that appear on the colony owner's force list that have a tech level less than or equal to the colony's tech level.

Rebel forces are reinforced every time a colony that's in rebellion takes an additional Morale loss. The rebels gain an additional D6 times Census in economic points to spend on additional rebel ground forces.

Rebels don't spend economic points to maintain their forces. Instead, the local population supports the insurgents by providing them with needed supplies to keep them fighting for as long as the colony is at 0 Morale. The maximum Command Cost of ground forces that a rebel colony can resupply in this manner is equal to its Census value. For example, a 4 Census colony could supply 4 CC of rebel ground forces. Eight 1/2 CC rebel ground

forces could conduct guerilla warfare in the system without any ill effects. Any ground forces beyond this Command Cost limit experience the effects of being out of supply normally. This leads to rebel forces suffering higher attrition rates than conventional military forces would in a similar situation and is somewhat representative of the poorer training and unit cohesion that these ad hoc rebel forces must struggle to overcome.

Rebellions can be quashed by increasing a system's Morale to a value greater than zero and eliminating all of the rebel forces operating in the system. This breaks the back of the resistance and ends the immediate threat to the colony's stability, but there's nothing stopping the colony from partisans reigniting the rebellion should Morale drop to zero again. These former rebel colonies are considered to be conquered colonies and are subject to the penalties that entails. This represents that while the system's loyalty has been restored the population at large is still generally hostile to the occupying force.

Rebel colonies become independent if there aren't any loyalist ground forces deployed to their systems during the Morale Phase. This indicates that all of the loyalist troops have either been killed, disbanded, or retreated from the system. Loyalist ships and troops might still be waiting in orbit but without forces on the ground there's no way for them to contest the rebel's control of the system.

After any successful rebellion, the players must ask themselves a few questions to decide how the rebels are going to proceed now that the rebellion is over. First, does the colony produce enough food to fall of its Census? A colony can't remain independent for long if its people are slowly starving to death. Rebel colonies that don't produce enough food will be forced to align themselves with another power that can meets its food requirements and petition them for swift annexation before it's too late.

Another question to ask is whether or not the colony is large enough to support a viable economy? More specifically, can the colony generate enough income each turn to pay to maintain a military force and still give it enough economic points left over to make a meaningful contribution to the campaign? Empires with very low incomes and limited infrastructure aren't much fun to interact with or maintain because their impact on the game is so minimal. There is a point at which a minor power becomes largely

insignificant, and any colony that produces less than 5 economic points per turn should definitely be absorbed by another nearby power rather than be allowed to carry on as its own nation.

Finally, rebel colonies that spawn from the same empire will share social and cultural bonds that may encourage them to work together after they secede. It's recommended that colonies that belonged to the same empire should be combined to form a single larger political union instead of establishing each as a single system powers that could be easily reconquered. Geography is the most important factor here as rebel colonies that are close to one another are much more likely to form natural alliances than those on opposite sides of an empire. Colony size is also an issue and colonies with larger populations are more likely to prefer going it alone even if they are in close proximity to one another. Smaller, less populous colonies however tend to coalesce into a single entity to increase their chances of surviving a protracted revolutionary war scenario against their former colonial masters.

A newly-independent rebel colony starts with an empire tech level equal to its colony tech level. The empire receives all of the economic and tech points that were sequestered at the system during the rebellion and seizes control of any and all facilities that the previous owner had in the system. The power's force list contains all of the units from the former owner's force list that the rebel colony is actually capable of building. This indicates that plans for these military unit designs were present at the colony before the rebellion. Rebel colonies in systems without Shipyard facilities are at a disadvantage because they won't have any non-atmospheric starship classes available on their force lists. This makes sense, though, because these colonies wouldn't have possessed any of the required technical schematics to build such vessels in the first place.

On the diplomatic front, the rebel government's culture values are determined by rolling D100 for each and averaging the result with the former owner's own culture values (round down). Diplomatic relationship values must be rolled for every power this empire is currently in contact with, including its forum owner. The rebels start with a war declaration against their former owner. This triggers a war for independence that will only end

with the signing of an armistice treaty or the conquest of the rebel colonies.

3.4.12 MARTIAL LAW

Declaring martial law at a colony allows an empire to use its ground forces to keep the peace at the risk of further aggravating the local population. A colony's morale state is considered to be one level higher than normal for the purposes of infrastructure utilization only when it is in a state of martial law. For example, a colony in rebellion that is placed under martial law would continue to function as if it was in a state of unrest, while a colony in a state of unrest would continue to produce as if it were in good order. Colonies that are in good order receive no benefits from being placed under martial law.

Regardless of race or creed, all colonial populations chafe under the yoke of martial law and show strong resentment against the strongmen that are charged with using violence (or at least the threat of violence) to keep the peace. Roll a D6 any time that a colony under martial law loses Morale. On a 4+ the colony loses an additional 1 Morale.

3.4.13 REPRISALS

Empires can conduct reprisal attacks against their own civilian populations in an attempt to eliminate dissident factions and restore order. These attacks can increase a colony's Morale but the resulting mass killings run the risk of reducing a colony's Census in the process. The outcome of a reprisal is determined by a 2D6 roll. The system gains 1 Morale if the roll is 6, 7, or 8 or it gains 2 Morale if the roll is 9 or greater. However, if the die result is an odd number the attacks were especially heinous and the system loses 1 Census and 1 Morale. This loss is in addition to any Morale increase the colony received from the reprisal.

Conducting reprisals against your own colonies is frowned upon by the galactic community. Any foreign power that has a trade route connecting to the system learns about the attack and must roll a D100 against their own Aggressiveness (AG) to gauge their reaction. Empires condone the attack if their die roll is less than or equal to their AG. Otherwise, if the die roll is greater than the empire's AG, it views the reprisals as an unwarranted act of aggression and its relationship with the power is

reduced by 1D6. This relationship penalty is doubled to 2D6 if the reprisal resulted in the loss of Census at the colony.

Example: An empire is conducting reprisals against one of its colonies. The player rolls 2D6 and gets a '9'. The roll is greater than or equal to 9 which means that system gains +2 Morale, but it's also an odd number and that means that system also loses 1 Census and 1 Morale. The net change is -1 Census and +1 Morale.

Two foreign powers are currently trading in the system and have Aggressiveness values of 92 and 22, respectively. The first power rolls '38' against its AG 92 which is less than its AG and thus results in no relationship penalties. The second power rolls a '49' against its AG 22. This empire is completely appalled by the attack, and its relationship with the reprising power is reduced by 2D6 because not only does it know about the reprisals it also knows that they resulted in a loss of life at the colony.

3.4.14 CONQUERED COLONIES

Colonies are conquered when all of the defending ground forces in the system have been eliminated and the attackers assume control of a system. Ownership of a colony is transferred to the occupying power once this condition has been met. When two or more empires are fighting together to conquer a system, the power with the largest army (by Command Cost) on the ground takes ownership after the conquest.

Roll a D6 for every Census in a conquered system. The colony loses 1 Morale on a roll of '3' or less. This can lead to a sudden, catastrophic loss of Morale that represents the formation of resistance cells that are prepared for a long, drawn out fight against the occupying forces. Conquered colonies can even be forced into rebellion as a result of these Morale losses at which point actual rebel militia forces will form to openly contest ownership of the system. The rebel ground forces purchased at the colony must be purchased off the force list of the colony's original owner as they are comprised of native combatants and don't have access to occupying ground unit classes.

A conqueror can't exert complete control over a conquered colony until has eliminated the enemy freedom fighters and fully integrated it into his own political and bureaucratic system. During the Morale

Phase, a 2D6 roll is made for each conquered colony, adding the number of turns that have passed since it was conquered to the roll. A conquered colony is fully integrated on a modified die result of '12' or higher.

A conquered colony is liberated when it's recaptured by friendly ground forces and all occupying enemy ground forces at the colony have been eliminated. Rebel militias that form at the colony are considered to be friendly ground forces for this purpose. Liberating a colony restores full control of the conquered colony to its original owner. Any rebel ground forces at the colony become the property of the liberating power.

3.5 Facilities

100 EP + 25 EP per jump away from the nearest capital to build

2 EP per turn to maintain

crippled by first bombardment, destroyed by second

Command Post

+1 readiness roll bonus within 3 jumps

Fighter Garrison

Base flights extra flights (including non-atmospheric flights)

planetary basing limits are increased to twice Carrying Capacity

Habitats

+1 Carrying Capacity

Jump Gate

Non-FTL movement

Mining Base

+2 Utilized Economy

Orbital Factory

+2 Utilized Industry

Orbital Farms

+2 Utilized Agriculture

Planetary Defense Guns

Planetary Defense Shield

Research Lab

+2 Utilized Research

Shipyard

non-atmospheric starship construction

Supply Depot

establishes supply center with 3 jump range

Trading Post

establishes a center of trade in the system with a 3 jump range

3.6 Exploration

“We shall not cease from exploration and the end of all our exploring will be to arrive where we started... and know the place for the first time.”

- T.S. Eliot

The exploration of the unknown is one of the common themes of space strategy games. A classic starting campaign scenario is one in which each player's empire is limited to its own solar system at the start of the game and must explore nearby systems to see what kind of resources they offer and open up new avenues for colonization and expansion. To achieve this effect, star systems and jump lanes on a campaign map can begin a campaign in an unexplored state. Unexplored jump lanes are innavigable and can't be traversed until they are successfully unexplored. An unexplored star system is then defined as a system that only has unexplored lanes connecting to it, which prevents any power from moving forces there until at least one of the lanes is explored.

Unexplored systems and jump lanes should be clearly identified on a campaign map to make their presence obvious to the players. Campaign scenarios don't have to include unexplored regions on their maps, and they are a completely optional addition to a campaign. On the other hand, players can create scenarios where jump lane exploration is a central component of play.

3.6.1 EXPLORATION MISSIONS

Jump lane exploration is accomplished by assigning units or fleets to exploration missions. An exploration mission directs a fleet to attempt to explore a specific unexplored jump lane that connects to their current system location. At least one of the units in the fleet must have a Scout value greater than zero, and all of the units must be capable of independent FTL movement or be transported by a unit capable of basing them. Fleets that have effective FTL values of zero can't perform jump gate exploration under any circumstances.

It's important to clearly note which unexplored lane that a fleet is trying to explore because an empire's previous exploration attempts can give bonuses to future exploration missions. If for some reason the player doesn't specify a lane to explore, an exploration fleet will simply attempt to explore a random unexplored lane that connects to its system instead that is not already being probed by another exploration fleet.

Exploration missions are resolved before movement during the Exploration Phase. Fleets can only attempt exploration. Units that perform exploration during that phase can't also perform movement during the Movement Phase.

The success or failure of an exploration mission is determined by rolling on the Exploration Table. Fleets receive a +1 bonus to their rolls for every full 5 Scout value their units possess. Previous exploration progress can also provide bonuses to these rolls. Exploration successes are rare and almost always require a power to spend multiple turns probing an unexplored lane until it has racked up enough *Partial Exploration Success* to all but ensure an exploration success.

EXPLORATION TABLE (2D6)

Roll	Effect
2-4	Exploration Force in Peril. The player must roll on the Exploration Peril Table to determine what unfortunate circumstance has befallen his exploration force.
5-8	No Effect
9-11	Partial Exploration Success. The exploring empire receives a cumulative +1 to future attempts

		to explore this jump lane.
12 or more	or	Exploration Success. The unexplored lane has been mapped successfully. Move the exploration force into the connecting system.

Modifiers:

+1 per 5 Scout value (round down)

3.6.2 EXPLORATION PERIL

Exploration is dangerous, however, and some ill-fated expeditions may never return home. Exploration forces that find themselves in peril by rolling an *Exploration Force in Peril* result on the Exploration Table are in danger of becoming hopelessly lost. The player must roll on the Exploration Peril Table to discover what exactly has happened to his exploration force. A natural '2' on the Exploration Table *always* results in an *Exploration Force in Peril* result.

EXPLORATION PERIL TABLE (2D6)

Roll	Effect
2-8	Out of Supply. The exploration force journeyed too far away from the existing supply lines. Each unit receives 1 damage.
9-10	Systems Failure. A random unit in the exploration force has suffered a malfunction and takes an amount of damage equal to its Defense value.
11	Unit Abandoned. The most expensive unit in the exploration force has been abandoned due to some unforeseen crisis.
12	Exploration Force Lost. the entire exploration force has disappeared without a trace. All units assigned to the exploration order are lost.

3.6.3 PREWARP NATIVES

Explorers will sometimes encounter unexplored systems that are already inhabited. These civilizations can be of any tech level, though they tend to be low tech more often than not, but the one feature they have in common is that they

haven't developed FTL drives and have never left their home systems.

The percentage chance that a newly-explored system is inhabited by prewarp natives is equal to its Carrying Capacity times Biosphere. A system with 6 Capacity and 3 Biosphere would have a 18% chance, for example.

Alien home systems need a minimum of 3 Biosphere available to be able to feed all of a prewarp empire's Census. Players should increase the Biosphere value of a system that contains prewarp natives to at least 3 Biosphere to prevent them from starving. Alternatively, if advanced rules are in use, players might decide that low Biosphere systems are home to lithovores, autotrophs, or synthetics that don't consume food at all.

The tech level of a prewarp civilization is determined by rolling on the table below. The tech level that an empire rolls on this table is both its overall empire tech level and the tech level of its sole colony (i.e., its homeworld).

Prewarp Tech Level Table (2D6)

Roll	Tech Level
2-4	Pre-Industrial
5-6	Industrial
7-8	Information
9-10	Interplanetary
11-12	Interstellar

Prewarp empires that roll an *Interstellar* result on this table begin with a tech level that is equal to D100% times the tech level of the most advanced player empire (round fractional tech levels down). These powers are as technologically adept as any other Interstellar empire at the same tech level but due to unforeseen circumstances they never developed the FTL drive. The first tech advance that one of these powers achieves doesn't increase its empire tech level as normal but instead unlocks the FTL special ability so that it can begin building jump capable craft.

The size of the population in a prewarp home system is then based on its tech level. This demonstrates that low tech powers haven't achieved the breakthroughs in the agricultural and

medical sciences that are required to sustain larger populations. Interplanetary and Interstellar level societies also have the ability to move populations into orbit or to other planets in their solar systems, increasing the possibilities for expansion in their own systems.

PREWARP HOME SYSTEM COLONY SIZE

Tech Level	Colony Size	Census	Morale	Infrastructure	Facilities
Pre-Industrial	Settlement	2	3	6	0
Industrial	Minor Colony	3	4	9	0
Information	Minor Colony	4	5	12	0
Interplanetary	Major Colony	5	6	15	1
Interstellar	Core World	6	7	18	2

Only Interplanetary and Interstellar prewarp natives are allowed to start with facilities in their star system. Interplanetary powers start with one facility while Interstellar powers receive two. It's recommended that Interplanetary powers start with a Trading Post or a Shipyard for their single facility choice as this would allow them to conduct solar trade or build non-atmospheric starships, respectively. Interstellar powers usually start with both of these facilities, but the player has ultimate authority over what type of starting facilities to give to these nations.

Prewarp natives can spend up to five times their system income values to purchase their initial military units or extra facilities. These starting funds can't be used to purchase additional infrastructure at their homeworld, however. They also start with a total number of tech points in their tech pools equal to D100% of their current tech advancement costs (round down). This infusion of research can potentially put prewarp natives very close to advancing technology after they are first activated. This is especially useful for Pre-Industrial or Industrial powers that have extraordinarily high tech advancement costs due to their inferior technological position.

3.6.4 EMERGING EMPIRES

The appearance of unknown drive fields on the edge of one of your explored or inhabited systems indicates the discovery of a new spacefaring nation. These emerging empires have been conducting their own exploration missions into nearby space but have gone unnoticed until now.

The chance of encountering a new emerging empire starts at 0% and is increased by +1% per turn that none of the active empires in the game successfully explore a jump lane. The percentile emerging empires check is made at the end of the Exploration Phase after all of the extent powers' exploration missions have been resolved.

The new empire appears on the edge of the campaign map and one of its scout forces will arrive in a previously-explored star system via an unexplored jump lane. Players should randomly select one of the unexplored lanes on the edge of their map to determine the direction from which the emerging empire arrived.

The number of system that an emerging empire has already explored prior to entering the campaign (including its home system) is determined by rolling on the following table:

EMERGING EMPIRE SYSTEMS TABLE (2D6)

Roll	Systems Explored
2-4	1
5-6	2
7-8	3
9-10	4
11-12	Roll Twice

Emerging empires start with D100% of these systems already colonized (round up). One of these systems must be designated as its home system, preferably the one with the highest system importance. If any of the home system's resource values (Carrying Capacity, RAW, Biosphere) are less than four they should be increased to four now.

Players must check each of the systems (other than the empire's home system) to see if they contain prewarp natives. The emerging empire will have established diplomatic contact with each of these

powers. If their relationship is positive they will have signed the highest level treaty possible with them. Otherwise, if the relationship is negative, the empire has already fought a war with the natives at least once in the past. The war will still be ongoing if the natives' total system income is greater than half the emerging empire's own. Otherwise, the emerging empire has already successfully conquered the natives and absorbed them into their empire, but the native home system is still considered to be conquered and is subject to the usual morale penalties that entails.

Next, roll on the Colony Size Table to discover the size of each of the empire's starting colonies. Systems that are home to prewarp natives instead receive colony values as shown in the previous X.X Prewarp Natives. None of a system's colony values can be increased beyond its Carrying Capacity.

COLONY SIZE TABLE (2D6)

Roll	Colony Size	Census	Morale	Infrastructure	Facilities
2-3	Outpost	0	2	0	0
4	Outpost	1	2	2	0
5	Settlement	2	3	4	0
6	Settlement	3	4	6	0
7	Minor Colony	4	5	8	0
8	Minor Colony	5	6	10	0
9	Major Colony	6	7	12	1
10	Major Colony	7	8	14	2
11 or more	Core World	8	8	16	3

Modifiers:

-2 Very Low

-1 Low

+0 Moderate

+1 High

+2 Very High

+2 per system the empire has explored (home system only)

Next the players must roll to determine the emerging empire's starting tech level. The empire's tech level is expressed as a percentage of the most advanced player empire's tech level (rounding fractional tech levels down). All of the empire's colonies start with a tech level equal to its own empire tech level. The exception is that any prewarp natives that it absorbed from pre-contact wars retain their original tech levels.

On average, most emerging empires will start with a tech level similar to that of the highest tech level player; however, there's still the rare chance that players could end up encountering a new power that is significantly more advanced than themselves.

EMERGING EMPIRE TECH LEVEL (2D6)

Roll	Tech Level
2-3	10% x Highest Player Empire TL
4-5	25% x Highest Player Empire TL
6	50% x Highest Player Empire TL
7	75% x Highest Player Empire TL
8	100% x Highest Player Empire TL
9	125% x Highest Player Empire TL
10	150% x Highest Player Empire TL
11	175% x Highest Player Empire TL
12	200% x Highest Player Empire TL

Emerging empires receive an amount of economic points to spend on their starting forces equal to five times their total system income. These points can only be spent to purchase military units or facilities and can't be used to purchase infrastructure improvements. Infrastructure investment can only occur after they enter play. The empire must possess at least one Scout unit class capable of performing jump lane exploration. One of this empire's scout fleets, comprised of one or more of these Scouts, must be placed in the contact system to represent the exploration fleet that appeared out of nowhere

and introduced the emerging empire to the rest of the galactic community.

Finally, emerging empires will have completed part of their research towards their next tech advance. Roll D100% and multiply it times the empire's tech advancement cost (round fractions down). This is the number of tech points currently in the empire's tech pool.

This rule encourages players to continue exploring throughout the game. Without this gentle nudge some players could decide to explore one system at a time and suspend their exploration missions after each system discovery so that they could colonize and build up a presence in the system before resuming exploration. Such a strategy is defensively sound from a meta-gaming perspective, but it makes for a very static and uneventful campaign.

Example: It's been 13 turns since the beginning of the turn and empires have successfully explored jump lanes on 4 turns. On the 14th turn the emerging empire's chance is 9%, meaning that a D100 roll of 9 or less will result in the introduction of a new high tech empire.

Assuming that a new emerging empire was discovered this turn, the first required roll will determine how many systems the power will start with. A roll of 9 gives the power four explored star systems: Alpha (8 CAP, 1 RAW, 1 BIO), Beta (6 CAP, 3 RAW, 3 BIO), Gamma (5 CAP, 3 RAW, 5 BIO), and Delta (7 CAP, 4 RAW, 3 BIO). One of these systems must be designated as this power's home system. Of the four candidates, Delta is the most obvious candidate because it has the best balance of Carrying Capacity and RAW. Delta's Biosphere values is increased to 4 because any of the system's resource values that are less than 4 are automatically increased to 4. Beta meanwhile is inhabited by a prewarp Industrial civilization.

D100% of this empires four explored systems are colonized at the start of play (round up). A roll of 29% indicates two of the systems are inhabited. Delta has to start with a colony in it because it's the home system, but the players have to choose which of the other systems the aliens have colonized. In this case the choice is pretty easy and the colony is placed in Gamma.

Next we determine the size of these colonies. Delta rolls a '3' but receives +8 for systems explored and +1 from being a High importance system. This indicates that Delta is a core world with 7 Census, 7 Morale, and 28 infrastructure (as home systems receive twice the normal amount of infrastructure). The system's totals are reduced because Delta only has 7 Carrying Capacity. Gamma rolls a '5' and gets +1 from being High value. This makes Gamma a

Settlement with 3 Census, 4 Morale, and 6 Infrastructure. The Industrial nation in Beta is a Minor Colony with 4 Census, 5 Morale, and 16 Infrastructure.

Pre-contact diplomacy between the two empires gives them a -8 relationship. This means that two empire have been in conflict with one another. Assuming the emerging empire has 37 system income and the prewarp empire has 12 system income, the result is that the Beta natives lost the war and are now a conquered colony that is controlled by the emerging empire. These system income totals are added to give the power a combined system income of 49 economic points per turn. This gives them 245 economic points to spend on its starting military units and facilities.

A '6' is rolled for the empire's tech level which gives it a tech level equal to 50% of the highest tech player empire in the campaign (rounding down). If the move advanced player empire in the game is TL 9 then this emerging empire and its colonies start at TL 4. The colony in Beta starts with an Industrial tech level because that was the tech level the natives had achieved before they were conquered.

3.6.5 VARIABLE EXPLORATION DIFFICULTY Δ

This optional rule assigns each unexplored jump lane an exploration difficulty modifier that influences how easy they are to survey. Roll on the Exploration Difficulty Table for every unexplored lane on the campaign map and record its exploration difficulty modifier. This modifier is added to an exploration fleet's Exploration Table roll when it attempts to explore the jump lane.

EXPLORATION DIFFICULTY TABLE (2D6)

Roll	Exploration Modifier
2-3	-2
4-5	-1
6-8	+0
9-10	+1
11-12	+2

This rule adds a significant amount of bookkeeping to a campaign because the players have to track difficulty modifiers for every unexplored lane in the game. It's only recommended for players that would like to vary the rate of exploration in a campaign by making certain jump lanes easier to explore while

others are harder to explore. Unexplored lanes with negative modifiers are much more likely to place exploration fleets in peril which in turn will lead to higher attrition rates among empires' scout forces.

3.6.5 SIMPLIFIED EXPLORATION Δ

Players that would prefer a more basic approach to exploration can forego normal exploration attempts and instead require an empire to "spend" a set amount of Scout value to explore an unexplored jump lane. The default exploration cost for unexplored lanes is 50 Scout value, but players can adjust this to fit the rate of exploration and expansion they want to see in their campaigns. At this exploration cost, it would take a long range explorer with 5 Scout value (enough to give it a +1 exploration bonus under the standard rules) one campaign year (10 turns) to fully-explore a jump lane.

Players can also choose to vary the exploration cost of unexplored lanes if they would prefer some to be easier to explore than others. The most obvious means of implementing this option is to assign each lane an exploration cost equal to $1D10 \times 10$. This provides a fixed cost range between 10 and 100.

Chapter 4: Politics

4.1 Empires

"In the various states of society, armies are recruited from very different motives. Barbarians are urged by the love of war; the citizens of a free republic may be prompted by a principle of duty; the subjects, or at least the nobles, of a monarchy, are animated by a sentiment of honor; but the timid and luxurious inhabitants of a declining empire must be allured into the service by the hopes of profit, or compelled by the dread of punishment."

- Edward Gibbon, *The History of the Decline and Fall of the Roman Empire*, Chapter XVII

// control colonies, military units, conduct diplomacy

4.1.1 PLAYER EMPIRES

A player empire (PE) is a power that is controlled by a human player. Player empires are the default empire type and they follow all of the normal campaign rules provided in this rule book. Most campaigns will feature at least two player empires: one for each individual player in the game. Player empires compete against one another to achieve one or more predetermined victory conditions as dictated by their campaign scenario to determine the game's winner.

Players can also run solo campaigns that feature a single player empire. Solo campaigns are less focused on achieving victory conditions and instead offer the player a more open-ended game experience where they can expand, explore, and interact with other non-player empires in a sandbox environment without having to worry about direct competition with other player empires.

Should a player be forced to quit a campaign, the players or CM must decide whether or not to find a replacement player to take over control his empire or else convert the player empire into a non-player empire. The only difference between a player empire and a non-player empire is that the latter requires some special rules in order to automate its diplomatic relations and influence other campaign actions.

4.1.2 NON-PLAYER EMPIRES

A non-player empire (NPE) is a power that is being run by the CM rather than by a player. While X.X NPE Diplomacy is largely automated, players must still make specific decisions as to the empire's overall strategy, including what it should build, move its forces, etc. Players can use the results of a NPE's diplomatic rolls as a guide to determine the power's likely goals and intentions.

When setting up a campaign, players can decide how many NPE they want to include in their game. NPE contribute to the campaign experience by giving players additional powers to interact with during the game. Each is a potential friend or foe that players must deal with during the game. They can also be used to add additional military and diplomatic challenges that the players have to overcome to achieve their goals. New players or those that want a faster play experience should keep the number of NPE in their game to a minimum to reduce the amount of bookkeeping that they have to manage turn-to-turn. Players looking for a campaign that features more diplomatic maneuvering are instead encouraged to add extra NPE to the game to keep things interesting.

NPE are a core staple of solo campaigns where they provide valuable foils for the player's empire. Each unexplored star system that is explored in a solo campaign has a chance of revealing a new NPE that the existing powers will have to deal with.

A player empire can be converted into a NPE should its player find himself unable to continue playing in the campaign. This is preferential to letting the player empire remain completely inactive for the rest of the campaign. It can always be converted back into a player empire later on if a replacement player is finally found to take over the position.

Players in unmoderated campaigns can include NPE into their games but the lack of a neutral third-party to guide these powers means that the players must come to a consensus on who will control each of the NPE in their game. In most cases the best solution is to have a NPE be controlled by the player whose empire has the highest relations with it. Alternatively, players can use their own empire's system income totals to divide up management of the NPE in their game. For example the player whose empire has the lowest system income would be in charge of the NPE with the highest system

income and the player with the highest system income would control the NPE with the lowest system income. This gives players to have some fun with an empire that is doing better or has more resources available than their own player empire. Control of the NPE should shift between players in this case to keep things interesting as their system income totals change and prevent a single player from consolidating power using his assigned NPE as battering rams to antagonize his opponents.

4.1.3 NON-ALIGNED EMPIRES

Non-aligned empires (NAE) are a type of minor non-player empire that earn less than 15 economic points per turn from their star systems. These powers usually only control a single star system and have limited economies that can barely support the cost of fielding a meager planetary defense force. This distinct lack of resources makes it difficult for them to have a substantial impact on a campaign.

Recognizing the precarious position that they're in, NAE always pursue a policy of steadfast neutrality with their neighbors. A NAE will automatically sign almost any treaty it is offered if its acceptance chance for that treaty is greater than zero. Non-aligned powers won't sign mutual defense, protectorate or alliance treaties with another empire, however, because such collective defense agreements run counter to their neutrality policy.

Should relations with a NAE deteriorate far enough that the NAE's treaty acceptance chance for a treaty drops below zero it will automatically break the treaty. No breaking attempt is necessary; the treaty is simply broken without malice. The empire that it broke the treaty with doesn't receive any of the normal declaration or breaking bonuses from the broken treaty because its government realizes that the NAE didn't have much choice in the matter and succumbed to internal political pressure.

NAE never issue declarations against other powers or start wars with their neighbors. The majority of NAE powers won't have enough military units to be able to back up such belligerent actions, and what few ships and troops they have available will need to remain in their home systems to protect them against outside attack.

A NAE becomes a NPE when its total system income increases to 15 EP per turn or more. This transition

occurs at the end of the campaign turn during the Update Phase of the sequence of play. Conversely, a NPE that suffers significant setbacks that reduce its system income below 15 EP per turn reverts back to being a NAE until it can get back on its feet.

Non-aligned empires are controlled by the CM in moderated campaigns. In unmoderated campaigns control is granted to whichever player whose empire has the highest relationship with the NAE. The player with the lowest system income total wins any ties.

4.2 Capitals

"Bureaucracy expands to meet the needs of the expanding bureaucracy."

- Anonymous

Capitals serve as the administrative centers from which an empire's authority radiates outwards through its sphere of influence. It is within the walls of these capitals that political leaders make the important decisions that shape the destiny of empires. Whether history remembers their actions with reverie or disdain is a matter for future historians to debate.

There are two different types of capitals: imperial capitals and sector capitals. An imperial capital acts as an empire's political nerve center and is the seat of government at which its rulers gather to conduct affairs of state. All of an empire's other capitals are sector capitals. Sector capitals serve as provincial administrative bases that are used to extend an empire's political influence into new sectors of space.

Unless a scenario indicates otherwise, every empire starts the game with an imperial capital at one of its inhabited systems. Imperial capitals are normally located at an empire's largest, most populous system -- usually its home system. This isn't a strict requirement, however, and when setting up a new empire players can decide to place an empire's imperial capital in any of its inhabited systems.

4.2.1 CAPITAL CONSTRUCTION

The economic cost to build a new imperial capital is equal to 10 times an empire's total Census, and it takes 10 turns to build a new imperial capital. This

cost and built time is halved if the imperial colony is being built at a colony that already has a sector capital (round fractional costs up). This expenditure finances the construction of a new administrative facility that is large enough to accommodate the amount of government activity that will be conducted there. Smaller empires pay less for their capitals because they require less space and fewer bureaucrats to administer their holdings. Nations that control expansive colonial and/or commercial empires have higher administrative overheads because they have more citizens to govern, ships to inspect, tariffs to levy, etc. Their high-level officials also tend to expect a higher standard of living as a way of displaying a symbol of their nation's wealth to foreigners that visit the capital to conduct state business.

Sector capitals are special facilities that follow all of the standard rules for facility construction and maintenance (see X.X Facilities) with the notable exception that they can only be built at core worlds that have at least 6 Census. In contrast, empires can build their imperial capitals at any of their colonies regardless of their colony importance. This ensures that an empire can establish or reestablish an imperial capital even if it doesn't control any colonies that have populations large enough to qualify them for core world status.

An empire can only have one imperial capital at any given time.

4.2.2 ZONES OF CONTROL

The maximum distance that a capital can administer friendly colonies is called its zone of control and is equal to its system's commerce range. This zone of control defines the distance that imperial power extends outwards from the capital system and determines the size of the sector that the capital is directly administering.

Colonies that are located within a capital's zone of control are more politically stable because they are more tightly integrated into their empire's bureaucracy. This gives them greater access to an empire's leaders and/or representation in its governing bodies which in turn gives these colonies greater influence over imperial decision making. In contrast, frontier colonies that exist beyond the zone of control of any of their empire's capital systems are politically isolated and less likely to

support their empire's actions or policies. These frontier colonies receive a +1 penalty to their system loyalty checks that reflects that their colonial populations are more likely to come into conflict with their ruling government.

4.2.3 LOSING AN IMPERIAL CAPITAL

An empire can only lose its imperial capital if its colony is conquered, destroyed, or abandoned. The imperial capital is automatically razed and remains destroyed even if friendly forces successfully liberate the colony or the system is later recolonized. The damage has already been done and the capital is lost. Sector capitals are comparatively easier to destroy because they are treated as normal facilities, and they can be destroyed using Anti-Facility bombardment missions or Sabotage: Facility intel missions.

The successful conquest of an imperial capital gives an invading army the opportunity to loot the imperial treasury before burning the capital to the ground. Pillaging an imperial capital nets the conquering power half of the economic points in the defender's economic pool at the time of conquest (round up).

The loss of an imperial capital leaves a nation without a central, recognized authority to administer its territories and other assets. Surviving government officials will try to hold the empire together during the interregnum until a new seat of government is established but the splintered nature of their political efforts leads to even more challenges, as described below. The empire's colonies receive a +1 loyalty check penalty during this period of turmoil as the colonial leadership openly challenges the provisional government's mandate to rule. Colonies are more likely to suffer morale failures in these times of crisis, falling into unrest or rebellion as the vestiges of the former government breakdown all around them. If enough colonies go into rebellion, an empire may find itself fighting a civil war in addition to dealing with the crisis that sparked the loss of its imperial capital in the first place.

An empire can't offer, sign, or break treaties with other powers without an imperial capital nor can it issue new declarations against foreign powers until a new imperial capital is established. The provisional

government is incapable of enforcing any of the treaties or declarations that it might endorse, and too many governors, admirals, and generals would simply choose to ignore them in favor of policies that favored their individual personalities and ambitions.

4.3 Spheres of Influence

“Two important characteristics of maps should be noticed. A map is not the territory it represents, but, if correct, it has a similar structure to the territory, which accounts for its usefulness.”

- Alfred Korzybski

A sphere of influence is the territorial region, consisting of one or more star systems, that an empire directly controls or hold legitimate claims to, either through natural expansion or treaty. The size of an empire's sphere of influence is determined by two factors: the number of colonies the empire controls, and the supply range those colonies possess. Barring outside factors, powers *control* any system where they have a colony and *claim* any uninhabited systems that within the supply range of their colonies. Disputed systems that contain mutually hostile forces are *contested*. Claimed, controlled, and contested empires are all part of an empire's sphere of influence. These basic concepts drive the formation, expansion, and contraction of imperial spheres of influence.

4.3.1 POLITICAL STATES

Each of the star systems on the map are assigned a political state and affiliation. A system's political state (neutral, claimed, controlled, contested) tells the player what level of control an empire is exerting over the system, while its affiliation tells you who owns the system.

Controlled Systems

Empires control inhabited star systems where they own colonies. Controlled systems are an integral part of a power's sphere of influence and nothing short of a full military conquest will wrest them from its control. This is in contrast to claimed systems that can change ownership based solely on whose military forces are stationed there or who has the greatest effective supply range in the system. Any

player that wants to be sure that a system is part of his empire's sphere of influence should make establishing a colony there a top priority.

While rare, an empire can cede ownership of its controlled systems to other powers. Surrendering colonies to an opponent usually only happens when a player is forced to give up territory as part of the terms of a particularly harsh armistice treaty.

Claimed Systems

An empire can lay claim to any uninhabited system that is both located within the supply range of one or more of its colonies and connected via a jump lane to one of its other claimed or controlled systems. If multiple powers can trace supply into a system, the empire with the largest military force in the system (by Command Cost) has a claim to the system. Otherwise, if there aren't any military forces in the system, the empire with the highest effective supply range (i.e., the colony's supply range minus distance between the two systems) holds the superior claim. In the case of a tie, neither of the powers can claim the system and it becomes a neutral system.

Empires can voluntarily relinquish claims on their claimed systems to other powers as part of a treaty agreement. Players may choose to sign away their empires' rights to certain claimed systems in order to diffuse tensions and demonstrate that they have no interest in owning those systems. Any empire that has ceded its territorial claims to another power have an effective supply range of zero in these systems. Territorial claims are renewed if the treaty that relinquished them is broken or withdrawn.

Contested Systems

A system is contested if it contains assets belonging to two or more mutually hostile empires that are currently in a state of war. Systems remain in a contested system state until all hostile forces are driven from the system or the attacker successfully capture the colony and remove all of the remaining defenders. Contested systems are considered to be part of the spheres of influence of both empires that are fighting for ownership of them.

Neutral Systems

Neutral systems are located outside the supply ranges of any nearby colonies and are therefore unclaimed and not part of any empire's sphere of

influence. A system remains in a neutral state until a power can extend supply into the system at which point it will become a claimed system.

Systems usually don't stay neutral for very long and the race to control neutral systems is one of the great sources of conflict during the early stages of a campaign. Galactic real estate is a limited resource and many of these unclaimed worlds may be worth going to war to control.

4.3.2 SECTORS

An empire's sphere of influence is divided into multiple sectors based on the number, location, and zones of control of its capital systems. Each capital assumes administrative control of its own sector, which includes all of the empire's controlled systems that are located within the capital's commerce range. In the event that a system is within the zone of control of multiple capitals, it is added to the sector administered by the capital with the greatest effective commerce range in the system (commerce range minus distance). Systems that are located outside the zones of control of any of their owners' capitals aren't part of any sectors.

4.3.3 BORDERS

Empires that sign a border treaty agree to respect each others borders and can't intentionally move military assets across the border into the opponent's sphere of influence unless they have also signed a separate military treaty that grants them that access.

4.3.4 NEUTRAL ZONES

A neutral zone is a demilitarized zone that can be created between two empires to separate their spheres of influence with the intent of minimizing future antagonism. Players can opt to create a neutral zone as part of a normal border treaty. Such a treaty would include special provisions indicating that one or more claimed or neutral systems located along the mutual border are to be set aside and purposefully excluded from either signatory's sphere of influence. These systems become de facto neutral systems regardless of either empire's effective supply range into the system, at least until the border treaty is broken or a third-party absorbs them into its own sphere of influence.

Neither empire is allowed to move forces into the neutral zone without the express consent of the other party, nor may either party establish colonies in these systems. Either of these actions would violate the terms of the border treaty that created the neutral zone.

4.3.5 CUT OFF REGIONS

Enemy attacks, natural disasters, or other national crises can end up cutting off portions of an empire's sphere of influence. A region is considered to be "cut off" if none of the colonies in the affected region can trace a continuous route of jump lanes back to their imperial capital that doesn't pass through a contested system or territories owned by a non-military treaty partner. All of the colonies and facilities in a region that are similarly affected but can trace jump lanes paths to one another are part of the same cut off region.

All of the campaign resources that are generated in a cut off region are stored in separate resource pools. Any purchases that a player makes in the cut off region can only be paid for using this special reserve of resources. The economic, population, tech, and intel points that a cut off region accrues during its time of isolation are returned to its owner's own resource pools once contact is restored.

A cut off region must rely on its own food production capabilities to feed all of its Census, and none of the food produced in a cut off region can be transferred to any of its owner's other colonies that are located outside the cut off region.

New unit classes that completed prototyping after the region was cut off can't be built in the cutoff region. Similarly, any new units that are prototyped in the cut off region won't be available in the rest of the empire unit after contact is restored.

4.4 Culture

“A nation's culture resides in the hearts and in the soul of its people.”

- Mohandas Gandhi

Culture is a representation of a society's attitudes and values that influence its diplomatic relations with other powers. All empires are assigned three culture values: Aggressiveness (AG), Integrity (IN), and Xenophobia (XE). These values range from 1 to 100 (low to high). Player empires are normally assigned culture values of AG 50, IN 50, XE 50. A culture value of 50 is a neutral baseline, and an empire with all of its culture values at this level won't receive any diplomatic modifiers, either positive or negative. Players have the option of changing their empire's culture values before the start of the game if they so choose, however.

Culture values can be assigned to non-player empires in a number of ways. Non-player empires that are included as part of a pre-generated campaign scenario are usually pre-assigned culture values that reflect their own unique personalities and diplomatic inclinations. Manually assigning culture values to a non-player empire is best when you're attempting to model the culture of a nation from an existing science fiction universe. Another option for assigning culture values is to randomly assign culture values to new empires by rolling a D100 for each culture value. This is most appropriate when randomly generating new non-player empires that a player encountered during the course of an ongoing campaign.

While non-aligned empires are assigned culture values, they have less impact on its interaction with other powers than those that are assigned to player or non-player empires (see X.X NAE Diplomacy).

4.4.1 AGGRESSIVENESS

Aggressiveness (AG) represents a power's tendency to resort to violence in order to solve its problems. Powers with high Aggressiveness values are hostile, quick to go to war, and less likely to agree to a peaceful resolution to conflicts. Powers with lower Aggressiveness values are pacifistic and prefer to avoid conflict if at all possible. An empire's Aggressiveness modifies its relationship values with

other powers when it attempts to issue declarations against them.

AGGRESSIVENESS OVERVIEW CHART

AG	Diplomatic Overview
20 or less	Extreme Pacifist. This empire is unlikely to resort to violence even when beset by hostile foes intent on its destruction.
21-40	Peaceful. This empire is reluctant to go to war unless faced with sufficient provocation.
41-60	Neutral. This empire doesn't exhibit any extreme tendencies towards war or peace.
61-80	Hostile. This empire is more inclined to use violence to achieve its goals.
81 or higher	Extremely Hostile. This empire is so belligerent that it makes diplomacy almost impossible.

4.4.2 INTEGRITY

Integrity (IN) is a measure of a power's willingness to honor its past agreements. It is more difficult for empires with high Integrity values to break the treaties they have signed with other powers. Conversely, empires with low Integrity values assume a more laissez faire attitude towards politics and treaties signed with them may not be worth the paper they were written on. An empire's Integrity modifies its relationship values with other powers when it tries to break treaties it has previously signed with them.

INTEGRITY OVERVIEW CHART

IN	Diplomatic Overview
20 or less	Deceitful. This empire has no intention of honoring the treaties it signs and will break them at the first opportunity.
21-40	Unreliable. This empire is willing to abrogate its treaties if it finds that it is in its best interests to do so.

41-60	Honest. This empire honors most of the treaties it signs, but can still break them when the need arises.
61-80	Reliable. This empire prefers to honor its treaties with other powers and doesn't like breaking treaties.
81 or higher	Honorable. This empire is dedicated to honoring the treaties that it signs with other powers and reacts very negatively to those that dishonor their treaties.

4.4.3 XENOPHOBIA

Xenophobia (XE) determines a power's attitude towards other empires. Powers with high Xenophobia values openly dislike other alien species and take every precaution possible to limit their contact with outsiders. Powers with low Xenophobia values tend to be more "xeno-friendly" and actively pursue relations with the empires they come in contact with. An empire's Xenophobia modifies its relationship values with other powers for purposes of signing treaties with them.

XENOPHOBIA OVERVIEW CHART

XE	Diplomatic Overview
20 or less	Universalist. This empire enthusiastically greets each foreign power it encounters and is extremely interested in forging lasting relations with them.
21-40	Friendly. This empire encourages interactions with other empires and species and make good friends.
41-60	Open. This empire entertains diplomatic relations with some powers while openly distrusting others.
61-80	Insular. This empire minimizes its contact with other powers to limit outside influence upon its society.

81 or higher	Isolationist. This empire doesn't want anything to do with the outside world and prefers to be left alone.
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4.4.4 CULTURAL REVOLUTIONS

Empires can attempt to change their culture values by initiating cultural revolutions. These revolutions spark a period of turbulent social upheaval that can lead to permanent changes in the nation's cultural outlook.

Intel points are spent to fund a cultural revolution, representing the use of state propaganda and social programs to try and manipulate public opinion and make them more open to embracing social change. Each intel point spent on the revolution increases its chance of success.

It takes 10 turns to complete a cultural revolution. On the tenth turn, the player takes the number of intel points spent on the revolution and divides it by 10 times the empire's total Census to calculate its percentage chance of success. A percentile (D100) die is rolled against this chance to see if the revolution was a success or failure. A successful cultural revolution allows the player to increase or decrease his empire's culture values by a total of up to 50 points. The player always chooses which culture values are affected by the cultural revolution.

A failed cultural revolution can spark a reactionary counter-revolution if the D100 roll was greater than or equal to twice the chance of success. Counter-revolutions cause each of an empire's colonies to lose 1 Morale as the counter-revolutionaries rollback the social policies put in place during the revolution and purge the political elements that supported those policies. Such harsh acts to return to the status quo can incite additional violence and lead to even greater political instability.

4.5 Diplomacy

"Diplomacy is a disguised war, in which states seek to gain by barter and intrigue, by the cleverness of arts, the objectives which they would have to gain more clumsily by means of war."

- Randolph Bourne

Conducting diplomacy is one of the most vital enterprises an empire can engage in. While some nations can survive and even thrive in a state of "Splendid Isolation," the futures of all empires — even those that are staunchly non-interventionist — are determined by the whirlwind of diplomatic intrigue and real politick that is carried out within the shadowed halls of foreign capitals and embassies.

4.5.1 DIPLOMATIC STATES

Diplomatic states describe the level of diplomatic contact that exists between two opposing empires. Empires that have never met or have lost contact with one another are in a state of no contact. Relations progress to normal relations after contact is established. Finally, powers that are engaged in an armed military conflict are in a state of war.

No Contact

A state of no contact exists between empires that have never encountered each other before. This diplomatic state transitions to non-intercourse once the powers make first contact.

Non-Intercourse

Empires that have encountered one another before but haven't signed a border treaty are in a state of non-intercourse. The only treaty that two empires in this state can sign is a border treaty.

Normal Relations

Normal relations are established when two empires sign a border treaty. Empires that have normal relations with another power can offer and sign treaties with that nation.

War

A state of war exists between two empires when one party or the other issues a declaration against their opponent. The war continues until an armistice

treaty is signed, and this is the only type of treaty that the warring powers can sign while they are at war.

4.5.2 FIRST CONTACT

Initial Relationship

When two empires meet for the first time they are assigned a relationship value that describes how they feel about one another after making first contact. Initial relationship values are calculated as shown below:

$$50 - (D100 + AG_1 + AG_2) \div 3$$

(round up)

This formula takes the average of a D100 roll plus the two empires' Aggressiveness values and subtracts it from 50. The D100 die acts as a randomizer that can shift the starting relationship up or down depending on the die result, but their Aggressiveness values play a major role in determining their initial relationship. Two empires that are both generally hostile towards outsiders are almost always going to start with poor relations and inevitably end up at war with each other.

First Contact War: chance equal to $AG / 5$ (round up), -1% times Diplomatic value in first contact fleet (friendly and enemy both). results in highest level declaration that the empire is currently capable of declaring against the opponent

Establishing Communications

One of a first contact team's primary jobs is to establish communications with the alien power that they have just encountered. Computer, cryptographic, and linguistic specialists must pool their efforts to find some way of communicating with the aliens. First contact teams have to find a means of communications and institute a common language framework that both parties can use to exchange ideas and information. This makes establishing communications with a new species an extremely difficult and time consuming endeavor.

Beginning in the Diplomacy Phase of the turn in which first contact takes place, any time that two empires that haven't established communications

with each other end up in the same system they'll make an attempt to open a line of communications. The outcome of these attempts is found by rolling on the Communications Table below.

COMMUNICATIONS TABLE

Roll Effect

4 or less Communications Rejected. The first contact teams are growing increasingly frustrated and this is leading to a breakdown in relations. The empires receive a -1D6 modifier to their relationship.

5-8 No Effect

9-11 Partial Communications. First contact teams report that significant headway has been made in translating the alien language. The empires receive a +1 bonus to their future communications rolls.

12 or more Communications Established. The empire have established full diplomatic contact and can now begin negotiating treaties.

Empires that are populated by the same species usually share a common language that allow them to automatically establish communications when they make contact with one another. Similarly, an empire that has successfully established communications with a third-party can use that power's language to negotiate with another power that the intermediary has already established communications with.

Powers can't negotiate treaties until they have established communications with each other. They can still issue declarations against one another, but these declarations are never communicated to the target of the declaration because there is no way to express the declaration except through commensurate acts of violence.

Example: The Kili have made first contact with the Senorians. These empires haven't met before and they don't have any common contacts that could be used to bridge the language gap. On the first turn the empires roll a '3' on the Communications Table for no effect.

On the next turn the Kili move a fleet of diplomatic vessels into the contact system (they just happened to be sitting a jump away!). This fleet has 7 Diplomacy value. This provides a +1 bonus to the attempt to establish communications this turn. The die roll is '8' and the Diplomatic ability modifier increases it to a 9. This is a Partial Communications result which itself provides a cumulative +1 to future communication attempts.

On the third turn the powers roll a '10' on the Communications Table. Adding the +1 from Diplomatic units and +1 from the Partial Communications result last turn brings this to a 12. Communications have been established and now the Kili and Senorians can begin negotiating treaties with each other!

First Contact War

4.5.4 DIPLOMATIC RELATIONS

TREATIES

Every treaty is assigned a **treaty modifier** that determines how difficult it is for an empire to sign a treaty of that type. Treaty modifiers are added to an empire's relationship with a target before calculating its treaty acceptance chance.

An empire's willingness to offer or accept a treaty is called its **treaty acceptance chance** and is calculated by taking its relationship with the target plus 50 minus its Xenophobia and then adding the treaty modifier for the specified treaty. An empire can only offer treaties for which it has a treaty acceptance chance greater than zero. When it comes to signing treaties, player empires can sign any treaty for which its treaty acceptance chance is greater than zero. NPE empires must install roll D100 against their acceptance chances to see whether or not they are willing to sign the treaty. NAE empires automatically sign treaties that it has treaty acceptance chance greater than zero for (see X.X Non-Aligned Empires).

Example: A XE 87 nation that has a +18 relationship with another power. The empire has an effective relationship of -19 with the target. It could offer the target border (+21) or trade (+1) treaties, as their treaty acceptance chance for these treaties are both greater than zero after adding the applicable treaty modifiers (as shown in parenthesis). The empire can't offer any other treaties because its acceptance chance for the next highest level treaty, a non-aggression treaty, is -19%.

If this empire is a player empire, its player could accept an border or trade treaties he was offered by the target power without having to roll for success.

A NPE under the same circumstances would have to roll D100 against their treaty acceptance values. This

gives it a 21% chance of accepting a border treaty and a 1% chance of accepting a trade treaty.

Finally, a NAE would automatically sign both the border and trade treaty with the target because the treaty acceptance chances are greater than zero. It automatically break any of the treaties without penalty when its treaty acceptance chance drops to zero or less.

Border Treaty (+40)

// normalizes relations; no other treaties can be signed until a border treaty

Trade Treaty

Treaty Modifier: +20

A trade treaty is an agreement that authorizes merchant shipping to cross over the border and begin engaging in commerce in another empire's territories. A power can only establish trade routes to systems in an opponent's sphere of influence if the two empires have signed a trade treaty. Two parties must have a border treaty in place before they can sign a trade treaty.

When signing a trade treaty an empire is obligated to inform their new trading partner where their nearest Trading Post is located, including the path of systems that their ships must take to reach the center of trade from their mutual border. Empires that don't have any active Trading Posts must instead report the location of their imperial capital system so that foreign merchants can visit that world to setup their trading presence.

Trade routes are automatically severed if the trade treaty that allowed them to be put in place is broken or the system is captured by another empire. Players must be careful when building trade routes into foreign systems because all of their trade investments can be undone with a stroke of a pen.

Non-Aggression Treaty (+0)

// requires border treaty

Co-Belligerency Treaty (-10)

// requires non-aggression treaty

Military Treaty (-20)

// can use the other power's supply network

// can enter the other's territories

// allows sale of military units

// requires non-aggression treaty

// must tell location of nearest Supply Depot

Research Treaty (-20)

A research treaty authorizes the exchange of scientific data between two empires' scientists. This free exchange of information increases research efficiency.

// can freely share research data

// bonus to the other empire's research capacity equal to 10% of the empire's own (round up)

// can sell unit schematics

// requires trade treaty

Example: The Seniorians have signed a research treaty with the Kili. The Seniorians have a total research capacity of 74 while the Kili have a research capacity of 58. This research treaty

Mutual Defense Treaty (-40)

// requires military treaty

// empires are obligated to come to one another's defense

// when activated, another power has 3 turns to come to the other player's aid

// +50% bonus to declaring against common enemy

// if after 3 turns a declaration is not successfully made against the common enemy, the mutual defense partners' relationship drops by 25.

Alliance Treaty (-60)

//requires mutual defense

Protectorate Treaty (-60)

// requires mutual defense

// one-sided alliance; the more powerful nation takes control of the lesser one

Unification Treaty (-80)

// requires alliance or protectorate

// two empires merge and become a single amalgamated empire

NPE DIPLOMACY

Offering Chance

A NPE has a chance of offering a treaty to other empires each turn during the Diplomacy Phase. This offering chance is calculated as follows:

$$(100 - XE + \text{Relationship}) \times 10\%$$

(round to nearest)

A separate offering chance roll is made for every empire that a NPE is currently in contact with. The NPE's Xenophobia and its relationship with the target influence its likelihood of offering a treaty. If successful, the NPE offers the next highest level treaty (by treaty modifier) that it has available with the target power. The target then decides whether or not to sign the treaty.

In the event that the NPE doesn't have any treaties available that it can offer, players should interpret the successful offering chance as a sign that the NPE wants to develop better relations with the target. Whoever is controlling the NPE should consider having it dispatch diplomatic missions to the other power to improve relations so that it can sign additional treaties in the future.

Breaking Chance

A NPE has a chance of breaking a treaty to other empires each turn during the Diplomacy Phase. This breaking chance is calculated as follows:

$$(100 - IN - \text{Relationship}) \times 10\%$$

(round to nearest)

A separate breaking chance roll is made for every empire that a NPE is currently in contact with. A combination of the NPE's Integrity and its relationship with the target is used to determine how likely it is to try and break a treaty with that power. If successful, the NPE will attempt to break the highest level treaty (by treaty modifier) it has with the target power.

Declaration Chance

Peace is fleeting and one never knows when an empire will decide to resort to war. A NPE has a chance of declaring against other empires each turn during the Diplomacy Phase. This declaration chance is calculated as follows:

$$(AG - \text{Relationship}) \times 10\%$$

(round to nearest)

A separate declaration chance roll is made for every empire that a NPE is currently in contact with. Aggressive NPE empires are more likely to attempt to declare against their neighbors. If successful, the NPE will attempt to declare the next highest level declaration (by declaration modifier) it can against the target power. The normal progression is hostilities, war, and final war.

NPE have a chance equal to their Integrity values

Whenever a NPE passes its declaration chance but fails to issue a declaration against another power it will continue to harbor enmity for the target. The player that controls the NPE should move additional military forces towards the common border to indicate its increased hostility towards the target and get ready for the inevitable conflict.

4.6 Intelligence

"It is only the enlightened ruler and the wise general who will use the highest intelligence of the army for the purposes of spying, and thereby they achieve great results."

- Sun Tzu

Offensive Spies: roll above difficulty

Mission successful on roll above difficulty

Critical Failure on '1' [D6]

1-2: Spy escapes without being discovered

3-4: Spy escapes but mission discovered

Spy killed, mission undiscovered

5-6: Spy killed, mission discovered

Defensive Spies: roll below difficulty

Each Defensive success D6

1-2: Spy detected but escaped; identity unknown

3-4: Spy killed, identity unknown

5-6: Spy killed/captured, identity known

4.7 Releasing Empires

"The best of all government is that which teaches us to govern ourselves."

- Johann Wolfgang von Goethe

Empires have the option of releasing territories they control to form new non-player or non-aligned empires. There are several reasons why a player might decide to have his empire release one or more colonies to create a new empire. The most likely is to reduce the empire's total Census to reduce its tech advancement costs and accelerate that rate at which it can research new technologies. This can be especially important for an empire that has recently conquered a number of enemy colonies and needs to shed Census to get its tech advancement costs back in line with its ability to generate tech points.

New empires are also commonly created as the result of armistices after major powers go to war. The loser in a war might be required to release some of its colonies to create a new buffer state between itself and its opponent. The creation of this state along the border denies its resources to the previous owner while at the same time creating a small nation that the opponent can easily decapitate should the two nations return to a state of war.

Another scenario where an empire might choose to divest itself of its holdings is when its colonies are in unrest or rebellion and it doesn't have the resources available to deal with them because those resources are needed to deal with another crisis situation. Granting these bothersome systems independence can forestall a nasty civil war and allow an empire to continue concentrating on more pressing matters.

An empire can select one or more contiguous systems (i.e., you can trace a continuous path of jump lanes between them) to release as a new empire. These systems must be capable of producing enough food to feed all of their Census. Empires aren't allowed to release colonies if they'll inevitably starve to death from a lack of food. Any starbases or facilities that the empire controls in these systems will become property of the new empire. Other military forces, including starships,

flights, and ground forces, are given ten turns to withdraw from the new empire's territories or else they'll be confiscated by the new power.

The first order of business when setting up a newly-released empire is to establish a provisional government. If one of the new empire's colonies already has a sector capital present, that capital is automatically upgraded to an imperial capital. Otherwise, one of the provisional government's first major objectives is going to be to build a new imperial capital in one of its systems. The player must roll a D100 for each of the power's three culture statistics (Aggressiveness, Integrity, and Xenophobia) to determine its cultural outlook.

Next, we determine the empire's relationship with the empire that released it. Divide the power's total Morale by its total Census and multiply the result times 100, then subtract 50. Round fractions down, max +100 relationship. All of the new power's diplomatic relationship values with other powers are the same as those that the releasing empire has with those foreign governments. The exception is that a new empire receives a +50 relationship bonus to its relationship with any powers that forced the empire's previous owner to release it as part of an armistice or other treaty.

New empires start with an empire tech level equal to that of the power that released them regardless of the tech level of the colonies that they now control.

Each of the newly-released empire's colonies receive a Morale bonus equal to half its Census value (round up) to reflect the people's elation at having been granted independence. This increases Morale enough that most of the empire's colonies should start out in good order and puts an end to any rebellions that were already underway when the colonies were released.

A released empire's force list contains all of the units on the releasing power force list that colonies in the new empire are actually capable of producing. This reflects that the construction facilities at these colonies only have plans or schematics for units that could actually be purchased there. After all, an empire wouldn't leave plans for one of its cutting-edge battleships in a system whose industry was incapable of reproducing it.

Empires are released during the Diplomacy Phase of the turn. They receive their first orders on the Turn Orders Phase of the following turn.

4.8 Civil War

“Look to the past and remember no empire rises that sooner or later won’t fall.”

- Al Stewart

Disloyalty can spread like wildfire across an empire’s sphere of influence as its colonies fall one after another into rebellion. This loss of political stability can even threaten to erupt into a civil war that forces colonial governors and military leaders to choose sides and take up arms either for or against their government.

Each empire that has one or more colonies in a state of rebellion are required to make a D100 roll during the Loyalty Phase to examine whether or not the rebellion has sparked a civil war. If the power’s D100 roll is less than or equal to its total number of rebel Census, then it will find itself plunged into a bloody civil war!

4.8.1 BEGINNING A CIVIL WAR

Battle lines are drawn at the start of a civil war and all of an empire’s assets – including its colonies, facilities, and military units – are divided between loyalist and rebel factions. These two factions are treated as separate empires for the duration of the civil war. The loyalist faction takes control of all of the empire’s colonies that have Morale values greater than zero. All of the facilities in these systems are also controlled by loyalists. The rebel faction in turn controls all of the colonies that are currently in rebellion at the start of the civil war as well as all of the facilities located in those rebel systems. Any units under construction at a rebel colony automatically become rebel property when they join the rebellion. The rebel colonies increase their Morale value so that they are equal to their current Census, demonstrating that they are no longer in a state of rebellion and are ready to fight for their independence. More importantly, this ensures that the rebel colonies are in good order and capable of producing income for the rebel faction.

The rebels also receive militia reinforcements at their colonies to help them maintain order. Each of the

Rebel colonies receives a total construction cost of ground force equal to 5 times their Census. Without these ground forces a rebel colony would find itself conquered by loyalist forces almost immediately after a civil war begins. The rebel player chooses which types of ground forces to purchase with these points. Any unused economic points are placed into the rebel faction’s economic pool to be spent on future campaign turns.

An empire’s military forces are also split between the loyalist and rebel factions. Special loyalty checks are rolled in each system where an empire has units to test their loyalty. This is accomplished by rolling on the Unit Defection Table to determine the percentage of units (by construction cost) that have defected to the rebel faction (round down). One loyalty check is made for the fleets in the system and another for its planetary defense forces (including starbases, ground forces, and flights based from planetary sites). Ground forces are more likely to side with the rebels, and they receive a +2 bonus to their loyalty checks. Colonies also receive a modifier to their rolls based on their colony importance, indicating that civil wars that are incited by more important colonies have a much better chance of garnering rebel support from the local population. Civil wars sparked by the secession of smaller colonies, meanwhile, will draw fewer defections and have a comparatively lower chance of success.

Defecting units change their faction affiliation immediately during the Loyalty Phase.

UNIT DEFECTION TABLE (2D6)

Roll	% Defecting
2 or less	0%
3-4	10%
5-6	20%
7-8	40%
9-10	60%
11-12	80%
13 or more	100%

Modifiers:

Planetary Defenses +2 (*see rules*)

Outpost -2

Settlement -1

Major Colony ± 0
Core World: +1

Internal political stability is often difficult for a rebel faction to achieve, especially in the early stages of a civil war. This adds to the social problems that the rebels must face as they fight for their survival against loyalist forces. Establishing a permanent ruling body that can assert legitimate control over all rebel forces requires the rebels to build an imperial capital at one of their colonies. However, if one of the original rebel colonies already possesses a sector capital, the rebels can instead promote the capital to an imperial capital. In the rare case that an empire's imperial capital is one of the original rebel colonies, the rebel faction can actually start in control of its own imperial capital. Under these strange circumstances, it is the *loyalist* faction that will be forced to build or promote a new imperial capital in order to reestablish its administrative authority.

Rebel factions adhere to a different set of cultural values than those espoused by their loyalist brethren. As such, rebel nations are assigned separate culture values. Roll a D100 for each of the three culture statistics (Aggressiveness, Integrity, Xenophobia). Add each roll to the loyalist's culture value and then halve the total, rounding fractions to the nearest whole number. This average of the original empire's culture values and the results of a random die roll demonstrate that as much as the rebel faction's beliefs deviate from those of the loyalists they still have quite a bit in common.

Rebels always start with a -50 relationship with the loyalist faction. Their diplomatic relationships with other powers are the same as those the empire had with them prior to the civil war, with one important caveat. The rebels receive a +50 bonus to their relationship with any empire that is currently in a state of war with the loyalists and a -25 penalty to their relationship with any empire that has signed a mutual defense treaty with the loyalists. This shows that rebels are likely to believe the old mantra that "the enemy of my enemy is my friend" and seek entente with the loyalist's foes in order to forge an alliance of convenience to help defeat them.

All of the treaties and declarations that an empire has active prior to a civil war are inherited by the loyalist faction. None of these agreements apply to

the rebel faction as they were negotiated with the empire's existing government.

The rebel faction can begin conducting diplomacy with other powers, including the rival loyalist faction, once an imperial capital is established at one of its colonies. Rebels are treated like any other empire for the purposes of conducting diplomacy. It will track diplomatic relationship values with its neighbors, offer and sign treaties, issue declarations, etc. just like any other empire. Rebels can use diplomacy to encourage other states to get involved in their battle for independence. Overt military support from foreign powers is of the most benefit to the rebel faction, but covert assistance undermining the loyalist's political position can also be beneficial.

The rebel faction's ultimate diplomatic goal is to sign an armistice treaty with the loyalists that will put an end to the civil war. It is unlikely that the loyalist faction will be prepared to sign such a treaty at the start of a civil war however, after enough blood has been shed and lives lost, the rebels may find their enemy more amenable to peace negotiations.

4.8.2 FIGHTING A CIVIL WAR

Colonies that belong to an empire that is embroiled in a civil war receive a -1 penalty to their loyalty checks, increasing the odds that they'll lose Morale each turn. Civil war also tends to promote acts of piracy, and each of the empire's systems are also subject to a -1 piracy check penalty.

Loyalist colonies that fall into rebellion during a civil war automatically join the rebellion and shift their allegiance to the rebel cause. These colonies don't receive any rebel militia to reinforce them like the original rebel colonies did, nor do they receive a Morale bonus after they rebel. This demonstrates that systems that join the rebels after the start of a civil war aren't as emotionally invested in the fight for secession as those that first rallied to the cause. Luckily for both sides in the conflict, colonies that are in a state of rebellion don't provide material support for either side in the conflict, which is as close to neutrality as you'll find in a civil war.

4.8.3 ENDING A CIVIL WAR

Civil wars can end under four conditions: 1) all rebel colonies and military units have been captured or destroyed; 2) all loyalist colonies and military units have been captured or destroyed; 3) an armistice is signed that puts an end to the civil war; or 4) all loyalist and rebel colonies and military units have been captured or destroyed, rendering the entire civil war extremely pointless. A military victory for either faction ensures that a single nation will remain in control of the empire's territories at the end of the war. However, if the loyalist and rebel factions sign an armistice treaty to end the civil war, two separate empires will emerge from the conflict, each controlling their own spheres of influence as determined by their colonial holdings when the armistice was signed.

When an armistice is used to end a civil war, the internal Rebel and Loyalist lines are dissolved and the territories controlled by both factions are recognized as legitimate successor states by the galactic community. Their new empires inherit the assets that their particular faction possessed at the end of the war. The powers are considered to be completely independent of one another from this point forward.

Several difficult questions remain for rebel factions that survive a civil war concerning their territorial integrity. It is possible for a rebel force to survive a civil war with sections of its territories cut off from each other. This is more common after civil wars that end in an armistice, but can also happen if a third-party captured some of the original empire's systems during the war. In these cases it might make more sense to divide the surviving rebel territories into multiple empires that each controls a portion of the empire's remaining sphere of influence.

Empires resume making civil war checks beginning on the turn after the current civil war ends. There is nothing stopping a power from immediately falling back into civil war on the turn after the previous one was concluded, however the chances of that happening are fairly remote. In any event, the next civil war will prompt the creation new rebel and loyalist factions and start the cycle of destruction all over again, continuing until the social upheaval runs its course once more.

The chaos and destruction wrought by a civil war can bring even the strongest of empires to its knees

regardless of who eventually achieves victory. The war itself can leave the nation economically devastated and unable to respond to outside threats. Worse, the Morale losses sustained during the civil war can make it all but certain that another bloody civil war will start immediately after the current one is finished.

Chapter 5: Economics

5.1 Income & Expenses

5.1.1 SYSTEM INCOME

5.1.2 COMMERCE INCOME

5.1.3 MISCELLANEOUS INCOME

5.1.4 PURCHASES EXPENSE

5.1.5 MAINTENANCE EXPENSE

5.1.6 MISCELLANEOUS EXPENSE

5.2 Technology

“Any sufficiently advanced technology is indistinguishable from magic.”

- Arthur C. Clarke

Developing new technologies can give an empire a military edge over its opponents and it's important for empires to continue investing resources into R&D to keep from falling behind their neighbors.

X.I TECH LEVELS

Tech levels are divided into two distinct categories: Interstellar and Pre-Interstellar. Interstellar empires are assigned numerical tech level values that describe how advanced they are relative to a baseline Interstellar power that has only just developed FTL drives (TL 0). Pre-Interstellar tech levels aren't assigned numerical values and are instead limited to three pre-defined tech levels: Pre-Industrial, Industrial, and Interplanetary. Each of these tech levels forms a chain that takes a

civilization from technological barbarity to the precipice of interstellar flight.

Every empire, colony, and unit in a campaign is assigned a tech level (TL) that demonstrates how advanced it is:

- **Empire tech levels** determine an empire's overall level of technological advancement. An empire can't increase the tech level of any of its colonies beyond its own empire tech level, nor can it design or build military units that have a tech level greater than its own.
- **Colony tech levels** describe the level of technology that is demonstrated by a colony's infrastructure. Colonies can only build units that have tech levels that are less than or equal to their own. This prevents colonies from building units that are more advanced than their own technological baseline. The cost to increase a colony's tech level is equal to 10 times the system's Census (minimum cost of 10). Colony tech levels can't be increased beyond the tech level of the empire that controls them.
- **Unit tech levels** set limits on where military units can be built. A unit can only be purchased at colonies that have tech levels that are greater than or equal to its own tech level. A TL 5 starship could only be built in a system that has a tech level greater than or equal to TL 5, for example. It couldn't be built in a TL 3 system, let alone a system with a Pre-Interstellar tech level.

Pre-Industrial

Pre-Industrial civilizations range in technological sophistication from primitive Stone Age savages to fairly advanced Iron Age city-states. These powers are not sufficiently advanced to have a major impact on a campaign, and their chance of achieving industrialization (let alone spaceflight!) during the course of the campaign is remote.

Pre-Industrial empires are extremely primitive and don't possess the factories or other infrastructure required for most military construction projects and can only be used to produce ground forces. Native ground forces fielded at a Pre-Industrial tech level are horribly inefficient and largely impotent when it comes time to protect their world against a

planetary invasion. Empires with a Pre-Industrial tech level aren't allowed to build facilities of any kind because they lack the technology to do so.

Military Units: Ground Forces

Facilities: None

Industrial

The Industrial tech level spans the gap of history between the dawn of a civilization's Industrial Revolution through to the point just before it begins building its first permanent orbital structures. Early Industrial empires possess a level of technology roughly equivalent to that of late 18th century Europe, having mastered the art of modern warfare with their equivalents of firearms, artillery, cavalry, etc. By the end of this era, however, the power will have achieved a level of technological sophistication equivalent to that of the present day (i.e., early 21st century) and will be capable of building relatively sophisticated ground combat units.

Industrial empires can only produce ground forces and Atmospheric flights (i.e., aircraft). Non-Atmospheric flights or any other type of military unit remain out of their reach, unfortunately. This forces Industrial powers to rely on ground-based flights to defend their home systems against enemy attack from space. Luckily the ground forces these nations can field are just strong enough to make an opponent think twice before committing to an invasion.

Military Units: Flights (Atmospheric Only), Ground Forces

Facilities: Fighter Garrison, Research Lab

Information

xxx

Military Units: Starbases, Flights, Ground Forces

Facilities: Fighter Garrison, Research Lab

Interplanetary

An Interplanetary power has achieved a level of technological sophistication that finally allows them to build manned spacecraft capable of interplanetary travel. This breakthrough allows an empire to begin actively exploring the worlds of its solar system, conducting detailed planetary surveys first hand rather than relying on data collected by robotic probes. Colonization teams often follow

these surveyors, establishing an empire's first off world colonies on the various planets and moons in their solar system that they deem worthy of scientific study or material exploitation.

Interplanetary powers have unrestricted access to all unit types, but they can't build units with the FTL special ability because they lack the technical skill to reproduce this technology. Interplanetary empires are further restricted from purchasing any type of facility or other technology that they could use to perform jump lane movement. These powers can purchase FTL-capable starships or flights from other powers or contract with them for the construction of Jump Gates in their systems, they just can't build these on their own.

Military Units: Starships, Starbases, Flights, Ground Forces

Facilities: Fighter Garrison, Research Lab

Interstellar

Interstellar empires represents the pinnacle of technological achievement. The defining features of these civilizations is that they have all successfully developed some form of faster-than-light (FTL) propulsion system that allows them to build spacecraft that are capable of traveling from one star system to another via the galactic jump lane network. Interplanetary powers that develop FTL drives become TL 0 Interstellar powers. Future tech advancement leads to the development of new technologies that improve the effectiveness of an Interstellar empire's military forces.

While all Interstellar empires possess FTL drives, the difference in capabilities from one spacefaring empire to the next can be vast. Fledgling nations that are just taking to the stars are still vastly outmatched by the ancient powers that lurk in the shadows and wield unspeakable powers thanks to their intimate understanding of advanced technologies. The gulf that separates these two polar opposites of the Interstellar tech level can be truly frightening.

X.2 TECH INVESTMENT

The maximum amount of economic points that an empire can spend on tech investment each turn is based on its research capacity. All of an empire's

colonies offer a limited ability to carry out scientific research and these worlds provide their owner with a base research capacity equal to their total utilized Economy values. The majority of an empire's research and development takes place at its Research Labs, however, and a system's research capacity is doubled if it contains a Research Lab.

An empire can receive additional bonuses to its overall research capacity from other sources. Signing research treaties with other governments provides an empire with a research capacity bonus equal to 10% of the other power's research capacity, for example. Scientific strategic resources and spatial anomalies can also boost an empire's research capacity in affected systems.

Every economic point spent on tech investment is converted into a tech point and then added to the empire's tech pool. These tech points are automatically used to purchase tech advancements once the number of tech points in the pool is greater than or equal to the power's tech advancement cost.

Example: An empire controls eight systems with the following utilized Economy values: 7, 4, 3, 3, 2, 1, 0, 0. The first system contains a Research Lab, which doubles its research capacity to 14. This gives the power a total research capacity of 27.

X.3 TECH ADVANCEMENT

The amount of tech points that an empire requires to advance its empire tech level is called its tech advancement cost. This cost is based on two factors: the power's current tech level and its total Census. The more advanced an empire is the lower its tech advancement costs are. Specifically, empires that have achieved an Interstellar tech level have the lowest tech advancement costs while primitive Pre-Industrial powers have significantly higher costs. This demonstrates that the less advanced an empire is the more research is required to achieve their next major technological breakthrough.

The size of an empire's population is factored into its tech advancement cost because larger empires tend to become complacent and settle into periods of technological equilibrium during which technological progress stagnates. While individual worlds within the larger empire might possess technologies that are more advanced than the

imperial norm they are aberrations, and it takes a lot more research effort (represented here as tech points) to achieve noticeable advances in technology on an empire-wide scale. Smaller empires that have fewer colonies and fewer Census can focus their research efforts more efficiently.

Tech Advancement Cost Chart

Tech Level	Tech Cost
Interstellar	25 x Census
Interplanetary	50 x Census
Industrial	100 x Census
Pre-Industrial	200 x Census

Example: An Interstellar (TL 7) empire that has a total of 25 Census would have a tech advancement cost of 625 tech points. An Interplanetary empire with the same number of Census would instead have a tech advancement cost of 1,250 tech points.

X.4 RESEARCH DATA

Empires can acquire advanced research data from their research partners, conquered colonies, alien artifacts, special events, etc. This research data gives an empire's scientists vital new information that accelerates their ongoing research and development efforts.

Transferring Research Data

Research data can be freely traded or sold between empires that have signed a research treaty with one another.

Empires may also offer to give up research data to a non-research partner

// an empire can sell research data to other players that they have signed research treaties with

// the research data is for a specific empire tech level

// an empire's tech advancement costs are halved for as long as its empire tech level is lower than the tech level for which it received research data

// selling research data can be extremely lucrative; the trick is setting the cost of the research data at a point where it's cheaper for the buyer to purchase

the research data than to pay to independently reproduce it at their own expensive

An empire can be forced to give up research data to another power as part of the terms of a treaty; can be used as a form of reparations

This is the only condition under which an empire can provide non-research treaty partners with research data outside of losing control of their research facilities

Capturing Research Data

if an empire conquers the research center of an enemy that has a higher tech level than its own, it can receive a tech investment bonus

tech potential = research capacity x difference in tech levels

pre-interstellar empires consider tech difference differently; +25 per level difference

The enemy's actual Interstellar tech level has no affect on tech potential in these cases

Round tech gains from stolen research down

Stolen Research Table (2D6)

5-	10% x Tech Potential
6-7	25% x Tech Potential
8-9	50% x Tech Potential
10-11	75% x Tech Potential
12+	100% x Tech Potential

Modifiers:

Outpost (+0)

Settlement (+1)

Minor Colony (+2)

Major Colony (+3)

Core World (+4)

Example 1: The Brindaki have conquered a 5 Census system (Minor Colony) that was serving as an enemy research center. The enemy's empire tech level is six levels higher than the Brindaki's own, and the colony had a research capacity of 25. This provides a tech potential of 150 tech points. The Brindaki player rolls a '7' on the Captured Research Table and adds +2

because this was a Minor Colony for a final modified die result of '9'. The conquest of the research center nets the Brindaki $50\% \times 150 = 75$ tech points, a major windfall that should accelerate their research and development efforts.

Example 2: The Gromt are an Industrial empire that has somehow managed to capture an enemy research center in a system with 4 Census (Settlement) that belonged to an Interstellar nation. The opponent's tech level is considered to be 50 tech levels higher than the Gromt's own for the purposes of calculating captured research potential. This is +25 TL for Industrial => Interplanetary and a second +25 TL for Interplanetary => Interstellar. The total tech potential from this research center capture is 1,000 tech points. The player rolls an '9', adds +1 because this is a Settlement, for a total of a '10'. This gives the Gromt a tech bonus equal to $75\% \times 1,000 = 750$ tech points!

REVERSE ENGINEERING

// requires 1 utilized Research and unit

// roll 2D6; on 8+ the player earns tech points equal to the difference in tech levels between the unit and the empire studying it; on '2' the unit is scrapped

// low tech powers add 10 per Pre-Interstellar tech level difference; for example, an Interplanetary power reverse engineering a TL 7 Interstellar unit would receive 17 tech points from a reverse engineering success where a TL 0 empire would only gain 7 tech points. An Industrial empire would earn 37 tech points from a reverse engineering success on the same unit.

SCAVENGING TECHNOLOGY

One of the duties that conquering ground forces are charged with is stripping down alien infrastructure at advanced alien colonies to send back to imperial research labs for further study. Technology scavenging takes place during the Tech Phase at colonies that have tech levels greater than the empire's own empire tech level, starting on the turn after a colony is conquered. The colony's tech level is reduced by 1 in return for a tech point bonus equal to its 5 times the colony's Census.

Example: The Loran (TL 4) conquest of the Brindaki colony at Morizaban (TL 6, 4 Census) gives the voracious Lorans access to Brindaki technology that

they can scavenge and research. On the turn after Morizaban was conquered its tech level is reduced to TL 5 and the Lorans receive 20 tech points. The next turn reduces the system's tech level to TL 4 and the Lorans receive another 20 tech points. Morizaban is now at TL 4 which is equal to the Loran Imperium's empire tech level. The Lorans are unable to scavenge any additional tech points from the system.

5.3 Population Growth

"Civilization as it is known today could not have evolved, nor can it survive, without an adequate food supply."

- Norman Borlaug

5.4 Commerce

"Historically, trade has been a source of the economic and cultural development of quite a number of civilizations. Today, efficiently functioning trade is an important prerequisite for a more stable and prosperous world."

- President Vaclav Havel, Czech Republic

X.1.1 Centers of Trade

Centers of trade (COT) are major commercial hubs that empires rely on to administer their civilian shipping networks. These systems extensive space ports, warehouses, fuel depots, financial exchanges, and other facilities that can support a large volume of civilian shipping.

All of an empire's trade routes originate from its centers of trade.

Imperial and sector capitals serve as an empire's primary centers of trade, but it can establish additional centers of trade in other systems by building Trading Posts there.

X.1.3 Trade Routes

Trade routes connect star systems together for the purposes of interstellar trade. Merchant vessels rely on trade routes to move goods from one system to another, and they can only actively trade in systems

that are connected to their empire's trade network.

An empire can establish a trade route to one of its own system or a system that is controlled by a trade partner. The cost to establish a new trade route is equal to five times the distance between the target system and the empire's nearest COT (minimum cost 5 EP). The path of jump lanes that link these two systems together can't pass through hostile systems (including any contested systems) or systems that are owned by another non-trade partner.

Establishing a trade route to a system adds that system to the empire's trade network. The system's trade value is then added to the value of the trade network as long as the trade route remains active. Trade routes can be temporarily suspended as the result of economic sanctions or enemy blockade

enemy intel missions or conquest

A trade route to a system is severed if the colony there is conquered or destroyed. Trade routes can also be destroyed by enemy intel missions.

Empires can spend economic points to create new trade routes. The cost to establish a trade route is equal to 10 times the number of jumps

// must be able to trace a path of jump lanes through uncontested space to earn income

// trade route lost if the target is ever outside your commerce range

// can always connect trade routes to your territories, but can only establish trade routes to foreign controlled systems if you have a trade treaty

// trade routes severed if trade treaty broken

Pre-Interstellar colonies lack the required infrastructure to support interstellar trade and their centers of trade always have effective commerce ranges of zero. These empires are incapable of establishing trade routes to other nearby systems, but they can still establish trade routes in their own systems. These trade routes represent the basic internal, domestic trade that the nation is operating on a planetary or solar system scale.

X.1.2 Trade Value

A system's trade value determines how much commerce income an empire earns when it has an

active trade route in the system. Trade values are calculated by taking the system's highest utilized infrastructure value (Economy, Industry, Agriculture) and multiplying it by the system's Census. An empire earns 10% of this value as commerce income each turn.

Empires always knows the current trade values of systems that they have trade routes connecting to. Players can monitor changes in a system's trade value over time estimate its current capabilities as an increase in trade value indicates an expansion of population or infrastructure in the system. Intel missions are still required to learn a system's actual stats, but this basic level of intelligence can at least provide helpful hints as to a system's capabilities.

Example: The Juno system has 4 Census, 2 Economy, 1 Industry, and 3 Agriculture. The system's highest utilized infrastructure value is Agriculture (3), which gives the system a trade value of $3 \times 4 = 12$. Empires trading in Juno can expect to earn 1.2 economic points per turn from the system.

Trade Network

Each empire has a trade network that is comprised of all of the systems where it is currently maintaining active trade routes. The value of this trade network is equal to the combined trade value of each of these systems. Systems that contain inactive trade routes don't contribute their trade values towards this total.

The names and trade values of all of the systems that are part of an empire's trade network should be recorded on its imperial record sheet. This makes it easier for players to keep track of which systems their empires are trading in and what the total trade value of their trade networks are from turn to turn.

Commerce Income

5.5 Piracy

"Forbid a man to think for himself or to act for himself and you may add the joy of piracy and the zest of smuggling to his life."

- Elbert Hubbard

Empires are required to make piracy checks during the Piracy Phase each turn. An empire must make a piracy check in a random system for every 10 star

systems that are in their sphere of influence (round down). Powers that have fewer than 10 systems in their spheres of influence instead roll a D10 against their total number of systems and are only required to make a piracy check if the die result is less than or equal to that total.

// require piracy check for systems that are on a trade route???

A D10 die is rolled for each system that is part of one or more imperial trade networks

D10

- A colony in the system is in unrest (-1)
- A colony in the system is in rebellion (-2)
- The system contains an imperial or sector capital (+1)
- The system is outside the zone of control of a friendly capital (-1)
- The system's owner is experiencing a civil war (-1)
- The total Command Cost of space combat units in the system is greater than or equal to the system's Carrying Capacity (+1)
- The total Police value in the system is greater than or equal to the system's Carrying Capacity (+1)

System Importance	Pirate Force Size
Very Low	1D6
Low	2D6
Moderate	3D6
High	4D6
Very High	5D6

A system's owner can choose to forego the creation of a new pirate force if the total construction cost of space combat units on patrol in the system size is greater than or equal to twice the pirate force's size. Instead, the player's empire takes a financial loss from piracy equal to the pirate force's size. This miscellaneous expense covers the costs of eliminating the pirates before they can take root in

the system. Players can use this option to reduce the number of pirate forces that form in their games. This is especially helpful in larger campaigns where each empire has the possibility of generating multiple raids against their systems every turn.

Pirate Forces

The Black Market

Pirates and other underworld elements rely on the black market for the ships, arms, equipment, and personnel they need to carry out their illegal enterprises. The amount of black market activity active in a system (called its black market value) is determined by its system importance and the size of the largest colony in the system (if any). Refer to the two charts below to determine the amount of black market value contributed by both of these factors. A system's black market value is doubled if it contains a pirate base.

System Importance	Black Market
Very Low	1
Low	5
Moderate	10
High	15
Very High	20

Colony Size	Black Market
Outpost	1
Settlement	5
Minor Colony	10
Major Colony	15
Core World	20

Governments can deploy Police units to patrol systems to crackdown on the black market and make it harder for pirates to operate there. Each point of Police value in a system reduces its black market value by 1. A small group of anti-piracy ships or ground forces can effectively reduce the black market value of most systems to zero, but pirates

can still expect to find black market contacts in high importance systems that support larger colonies.

The maximum number of economic points that a pirate force can spend in a system each turn to build or repair units is equal to the system's black market value. Most systems won't have black market values greater than 20, and a large number of uninhabited systems will average 10 or less. This limits the size and expense of purchases that a pirate force can make in these systems. The largest starship that most pirate forces will be able to purchase is a light cruiser, with the rare pirate force coming into possession of a heavy cruiser or battlecruiser if they are lucky enough to move into a system whose black market is capable of supporting the construction of one of these larger warship classes.

Pirates can strike deals with arms dealers to acquire "surplus" starships or hire mercenary forces to bolster their existing forces. When purchasing new military units off the black market, a pirate force can always purchase any of the generic pirate units presented below but they can also purchase older units from the force lists of any empire that owns the system. A pirate force is allowed to purchase units that are at most two tech levels lower than the empire's current tech level. For example, pirates could purchase TL 6 units off a TL 8 empire's force list, but they would be restricted to TL 5 or lower if the empire was TL 7.

Pirates can only make purchases off the black market in systems where they currently have one or more units present. This prevents a pirate force from purchasing new units in systems where they aren't currently operating. All pirate purchases off of the black market are subject to the normal unit construction rules. Military units that pirates purchase off the black market have to undergo retrofitting to prepare them for their new life as commerce raiders.

Units are especially vulnerable to enemy attack while they're under construction. Pirates must maintain a military presence in the system to keep them safe. Pirates that are driven off or destroyed lose control of any units they own that are under construction in the system. These abandoned units are effectively destroyed, having been commandeered by rival pirate gangs or destroyed by government agents before they can be activated. It's recommended that pirate forces only purchase

new units in systems that they are reasonably sure they can hold onto for as long as they're under construction. This is part of the reason most pirates rely on escorts (Command Cost 1/2) as they are cheap and can be built in a single turn using minimal black market value.

The black market also gives pirate forces the opportunity to purchase spies in a system. Pirates have fewer reasons to pay to conduct intel missions, and the cost of maintaining spies is usually greater than your average pirate force can bear, but it's still an option for the larger pirate organizations that are looking to solidify their hold over their own underworld empires.

Example: A Moderate (+15) value system containing Settlement (+10) would have a black market value of 25. A pirate force in this system could spend up to 25 economic points per turn to purchase or repair units.

Pirate Succession

Pirate Base

Pirate Bases are thriving centers of black market activity that offer pirates a refuge where they can conduct business discretely without attracting unwanted attention from government authorities. A pirate base doubles a system's black market value, giving pirates the ability to spend more money and make larger purchases.

Chapter 6: Warfare

"In my view it will not be long before space becomes a battleground."

- Lieutenant General Edward Anderson,
Deputy Commander, US Northern Command

6.1 Military Units

"And all I ask is a tall ship and a star to steer her by."

- James Masfield, "Sea-Fever"

X.1.1 Starships

The ultimate goal of virtually every intelligent civilization is to take to the stars and explore the vast unknown that exists beyond their solar systems. Starships are the vehicle for that exploration and expansion and it is these craft that decide the fates and power of empires.

Starships can only be built in systems that have Interplanetary or Interstellar tech levels. Systems that meet the basic tech level requirement for starship construction possesses planetary shipyards that can be used to produce atmospheric starships. Construction of non-atmospheric starships requires an operational Shipyard facility in the star system.

Starships come in a multitude of sizes and mission roles, ranging from small gunboats and corvettes to massive battleships and super carriers.

A starship's hull type, which is a general description of its size, is based on its Build Cost. This demonstrates that Build Cost is directly proportionate to hull types based on their Build Costs.

Hull Type	Abbr	Build Cost	Command Cost
Gunboat	GB	1	1/2
Corvette	CT	2	1/2
Frigate	FF	3	1/2

Destroyer	DD	4	1/2
Light Cruiser	CL	5-9	1
Heavy Cruiser	CA	10-14	2
Battlecruiser	BC	15-19	3
Battleship	BB	20-24	4
Dreadnought	DN	25-29	5
Superdreadnought	SD	30-34	6
Titan	TN	35+	7+

Type	Abbr	Build Cost	Command Cost
Escort Carrier	CVE	1-4	1/2
Light Carrier	CVL	5-9	1
Heavy Carrier	CVA	10-14	2
Fleet Carrier	CVB	15-19	3
Super Carrier	CVD	20+	4+

X.1.2 Flights

Type	Abbr	Build Cost	Command Cost
Light Fighter	LF	1	1/2
Standard Fighter	SF	2	1/2
Medium Fighter	MF	3	1/2
Heavy Fighter	HF	4	1/2
Superheavy Fighter	SHF	5+	1+

X.1.3 Starbases

X.1.4 Ground Forces

X.1.5 Ground Bases

Ground bases are planetary fortifications that are used to defend a system against invasion.

X.1.6 Unit Statistics

X.1.6.1 Economic Factors

Build Cost (BC) is the number of economic points that an empire must spend to purchase a unit of a given class.

Built Time (BT) is the number of turns that a unit has to be under construction at a colony before it is finally completed.

Maintenance Cost (MC) is the number of economic cost to maintain a unit for an entire campaign year (10 turns) . Empires pay 10% of a unit's MC every turn as maintenance expense.

Tech Level (TL) describes how advanced a unit is. Units can only be built in systems that have tech levels that are greater than or equal to their own TL.

X.1.6.2 Combat Factors

Defense (DV)

Because of how strategic combat is resolved in the Victory by Any Means Campaign System, capital ships are considerably more powerful than lesser starship types because they typically have higher Defense ratings. Units continue to fight at full strength until they are crippled, which occurs when a unit takes an amount of damage equal to their Defense rating. A capital ship's high Defense rating makes them harder to cripple and increases the number of combat rounds that the capital ship will remain at full combat strength.

Attack Strength (AS)

Point Defense (PD)

X.1.6.3 Command Factors

Command Rating (CR)

Command Cost (CC)

X.6.4 Special Abilities

Armor (25% x BC)

Permanent +1 formation level bonus

Assault (1)

Assault is used to transport friendly ground forces and coordinate planetary invasions. Each point of Assault value allows a unit to base 1 BC of ground

forces. Troops that invade a system from Assault basing receive their full combat factors during an Invasion combat scenario. By comparison, ground forces that invade from Cargo receive only half their normal combat factors (rounded up). This makes Assault craft an extremely important component of any ground campaign.

Ground forces that are deployed to a system can use their Assault value to base other ground forces at that location. The troops that these units carry are automatically added to any ground combat scenario that the basing ground unit is drawn into in the same way that flights based aboard a Carrier accompany it into battle. As such, the Command Costs of these based ground forces are covered by the Assault unit and don't count against the command element's Command Rating limits.

Carrier (1)

1 BC of flights

Catapult (2)

Catapults are larger versions of the basic Fighter Rail technology. Each Catapult gives a unit the ability to base a single 1/2 CC flight. This limits Catapults to flights that cost less than or equal to 4 economic points. These systems are usually installed aboard cruisers or capital ships to provide basic small craft support, especially in the reconnaissance role.

Command (2)

+1 CR bonus

Compact (66% x BC)

Compact units have been engineered to require half the normal amount of space when they are based aboard other units. For example, a 1 BC flight with the Compact ability would have an effective BC of 1/2 for purposes of being based using the Carrier or Cargo abilities. The key benefit of the Compact ability therefore is that it allows an empire to base twice as many units in the same amount of space.

Diplomatic

Move diplomats and spies

Endurance (1/2 x Command Cost)

Reduced functionality version of Supply; can only resupply the unit with this ability, not other units.

Fighter Rail (1/2)

A Fighter Rail is an external docking port that can accommodate a single 1 BC flight. These rails allow carriers to deploy twice the number of light fighters than would be possible with a comparable amount of Carrier value, but Fighter Rails can't be combined to allow for larger, more expensive flights to be based from them.

FTL (50% x BC)

1 jump per turn

FTL costs are doubled for flights

Jump (50% x BC)

Allow extra units to transit with the unit when it jumps; CC x Jump value

Police (2)

Police forces are used to run anti-piracy patrols or perform peacekeeping operations in friendly system.

As part of their anti-piracy mandate, Police units are used to crackdown on illicit criminal activity in their systems. This interferes with the underworld's ability to conduct business on the black market. Police units reduce a system's black market value by an amount equal to their total Police value. This makes it harder for pirate forces to make purchases, such as conducting repairs on their damaged units.

Ground forces with the Police special ability are used to maintain order at the colonies where they're deployed. Colonies receive a +1 bonus to their loyalty checks if the total Police value in the system is greater than its Census.

Scout

Stealth (2 x Command Cost)

Supply (1)

Carries enough supplies to resupply 1 CC of units; for example, a Supply 4 ship could resupply 4 CC of units before it's Supply would be exhausted

Tender (1)

Allow 1 BC of starships to dock and be carried

starships carried by Tenders can't have FTL drives of their own

Some empires employ dedicated gunboat tenders that are designed to transport gunboats from system to system and deliver them into combat situations. While these tenders could conceivably transport larger starship classes on their external moorings gunboats remain the most popular options

X.1.7 Unit Design

Build Cost = Set by player

Build Time = 1/2 Build Cost (round up)

Command Cost is equal to Construction Cost divided by 5 (round down, minimum 1/2).

X.2 Construction

X.2.X PROTOTYPING

X.5 Maintenance

"Another flaw in the human character is that everybody wants to build and nobody wants to do maintenance."

- Kurt Vonnegut

X.6 Supply

Supply Center

// capital systems or supply depots

// supply range equal to Census / 2 (round down) or fixed 3

Supply capacity

Every inhabited star system has a supply capacity equal to its industrial capacity (Utilized Industry x Census). This is the total Command Cost of military units that the unit can resupply during the Supply Phase each turn. A colony's supply capacity can only be used to resupply friendly units in its own system. Supply depots are required to transport supplies to units operating in other nearby star systems.

Reveals the system's supply range. If this is not a supply center, it instead indicates the distance to the nearest supply center.

Sabotage: Supply

Difficulty Level: 4

The system's supply range is halved this turn.

Propaganda: Supply

Difficulty Level: 2

1D6 units being serviced by this supply center are out of supply this turn

X.4 Encounters

X.7 Bombardment

Espionage: Trade

Difficulty Level : 1

This mission reveals the target system's trade value and the name of all of the empires that have a trade route connecting to the system.

Sabotage: Trade

Difficulty Level: 2

This mission reduces the system's trade value to zero this turn.

Propaganda: Trade

Difficulty Level: 2

This mission severs one trade route of the player's choice.

Espionage: Supply

Difficulty Level: 2

Each center of trade has a *commerce range* equal to half its utilized Economy value (rounded down). This is the maximum number of jumps that civilian shipping based from the COT can travel to trade with colonies in other nearby star systems. The COT's commerce range is based on its utilized Economy because this statistic demonstrates the robustness of the system's space ports, warehouses, refueling facilities, and other qualities that would influence the volume of civilian shipping it can support. Trading Posts provide their systems with a flat 2 jump commerce range regardless of what their utilized Economy value might be.

"The crossing of space ... may do much to turn men's minds outwards and away from their present tribal squabbles. In this sense, the rocket, far from being one of the destroyers of civilisation, may provide the safety-value that is needed to preserve it."

— Arthur C. Clarke, *The Exploration of Space*, 1951

Appendix: Unit Archetypes

X.1.1 Escorts

Escorts are small warships that are individually weak but can be effective in large numbers. Starships of this type are traditionally fielded as escorts for larger cruisers and capital ships, thus their designation. Escorts are cheap to build and maintain and can be fielded in large quantities. Empires routinely assign escort ships to system patrols to defend and monitor activity in the various star systems in their sphere of influence. These patrols can deal with

minor incursions into their empire's territories and deal with any errant pirate forces as they appear. Even if the escorts can't repulse an attack against their system location, they can at least warn their owner that an opponent is making a move against their territories. This information is especially important in moderated campaigns where the fog of war may not otherwise inform the player as to why his empire lost ownership of a system that was previously within its sphere of influence.

One of the key benefits of escort starships is that they are extremely cheap to build and maintain. Small colonies with limited industrial capacities can usually build or repair a few escorts at a time. This makes it easier for an empire to replace its escort losses, both in terms of total economic cost and time spent under construction.

In combat, escorts typically provide supporting fire to their force's larger combat units. An escort's unit statistics are rarely impressive, but in aggregate they can substantially increase their squadron's overall offensive and defensive capabilities. Escorts are also useful as "damage sponges" that a player can score damage against in preference to damaging his more powerful starships during a battle.

Gunboat (GB)

Gunboats are the smallest escort class. These weak combat units are typically used for short-range planetary defense missions. Because of their small size, gunboats are rarely equipped with FTL drives unless they are intended for non-combat missions. This is because FTL drives are space-intensive enough that their inclusion on a gunboat hull would nearly preclude the craft from being armed with weapons or defenses of any kind.

Corvette (CT)

Corvettes are diminutive fighting ships that have limited combat capabilities and are typically restricted to system patrol duties. They are however twice the size of a gunboat, which gives naval architects substantially more flexibility when it comes time to design new corvette classes.

Frigate (FF)

Frigates are mid-sized escorts that are massive enough to be outfitted for a number of different mission roles. They are more powerful than a corvette but still weaker than a destroyer.

Destroyer (DD)

The destroyer is the strongest of the escort classes. While historically destroyers were created as a counter to enemy torpedo boats (thus their original designation as torpedo boat destroyers), in this parlance "destroyer" refers to a light warship that has sufficient size and capabilities to provide meaningful firepower and support assistance to a fleet. While a destroyer's capabilities can never rival those of a full light cruiser, they are far more capable than a frigate, corvette, gunboat.

Wolf Packs

Once common strategy when fielding escorts is to form light attack squadrons that place a single light cruiser or heavy destroyer in command of as many escorts as possible. A 4 CR light cruiser for example could command 10 escorts. This heavy concentration of escorts provides a reasonable amount of firepower and their low Command Costs mean that it is cheaper to increase their formation levels using friendly Point Defense which in turn makes the escorts better able to weather enemy weapons fire.

Empires can build their entire order of battle around wolf pack tactics, fielding escort classes almost exclusively with the exception of the few larger light cruisers needed to provide superior command and control functionality to their fleets. The ability to quickly replace combat losses is a major advantage for power that adopt wolf pack tactics. Consider that an empire whose home system has an industrial capacity of 30 could produce 10 ships of a 3 BC escort class every turn. The same system building 2 BC escorts would complete 15 per turn.

The problem with wolf pack and swarm tactics is that it's harder for an empire to achieve the same level of firepower concentration that an opponent that concentrates on larger starship classes can. An empire that adopts a wolf pack doctrine must be prepared to commit wave after wave of escorts at a superior enemy force and be willing to accept the enormous losses that the strategy requires. Each successive wave of ships thrown at the enemy will whittle down its defenses inch by inch until it finally breaks. As long as the wolves can replace their losses faster than their opponents they can make the strategy work. However, if an empire's industrial sector is incapable of keeping up with its combat losses -- or, more worryingly, if its opponent can

replace the losses of its own more expensive units at a similar rate -- these swarm tactics won't have any chance of long term success.

X.1.2 Cruisers

Cruisers are warships that are more powerful than an escort but still weaker than a true capital ship. Historically, ships of this type were used as long-range commerce raiders because of their superior speed and cruising ranges. Their moderate costs and build times relative to their firepower and defenses make cruisers an attractive option, and most navies employ cruisers as their primary starship units.

Light Cruiser (CL)

Light cruisers are the smallest members of the cruiser family. Warships built on light cruiser hulls are capable of engaging and destroying escorts with relative ease, but they are at a clear disadvantage when confronted by larger cruisers or capital ships. Empires traditionally employ light cruisers as system defense pickets or support units. It is very common for a player to use light cruisers as command ships for system patrol fleets, with a single light cruiser serving as a squadron leader for a number of subordinate escorts.

Heavy Cruiser (CA)

Heavy cruisers are starships that strike a balance between the economy of smaller units and the capabilities of larger vessels. Players should find that heavy cruisers offer considerable versatility when designing new classes. Most interstellar navies utilize heavy cruisers as their primary workhorse warships, building them in at least moderate numbers to provide command ships to lead smaller light cruiser or escort squadrons while also serving as heavy escorts for the empire's larger, more powerful capital ships.

Battlecruiser (BC)

The battlecruiser is the largest class of cruiser an empire can build.

are more powerful than heavy cruisers thanks to the enhanced defenses and firepower that their higher mass allows them to purchase during unit design. Battlecruisers have historically lacked the thick defensive armors that are incorporated aboard other capital ship classes because they trade this armor for faster engines and greater strategic speed. This creates a warship that has the firepower of a battleship but

only the survivability of a heavy cruiser. A player should not be compelled to follow historical precedents when designing new battlecruiser units for his empire, however. Generalist battlecruisers are just as valid as those that specialize or overspecialize in specific areas of play.

Battlecruisers are sometimes referred to as "pocket battleships" because the largest battlecruiser classes are often almost as powerful as a small battleship.

X.1.3 Capital Ships

The largest and most powerful fighting ships in the galaxy are called capital ships. These massive warships are capable of both dealing and receiving tremendous amounts of damage, and their capabilities far surpass those of a simple cruiser. Capital ships traditionally serve in command roles, leading task forces and squadrons into battle.

Type	Abbr	Build Cost	Command Cost
Gunboat	GB	1	1/2
Corvette	CT	2	1/2
Frigate	FF	3	1/2
Destroyer	DD	4	1/2
Light Cruiser	CL	5-9	1
Heavy Cruiser	CA	10-14	2
Battlecruiser	BC	15-19	3
Battleship	BB	20-24	4
Dreadnought	DN	25-29	5
Superdreadnought	SD	30-34	6
Titan	TN	35+	7+

Battleship (BB)

Battleships are the mainstay of an empire's line of battle. These large warships are typically equipped with heavy, reinforced armor plating for defense and a multitude of weapons batteries that give it an edge in ship-to-ship combat.

While battleships are more expensive than battlecruisers, they are also cheaper than dreadnoughts. This relative economy makes it more likely that an interstellar empire will focus the majority

of its capital ship construction on battleship classes in preference to larger, costlier ship classes.

The name for this class comes from the phrase “line-of-battle ship,” a term applied to the large wooden warships fielded during the Age of Sail. In modern parlance, the Battleship has come to represent the most heavily armed and armored warships in an empire’s navy. Battleships are also sometimes referred to as battlewagons.

Dreadnought (DN)

Dreadnoughts, also sometimes called super-battleships, are a class of vessels that decisively outclass their battleship predecessors. Where the battleship is a revolutionary advancement over the battlecruiser, the dreadnought is only an evolutionary refinement of the battleship. Starships of this type are typically equipped with the heaviest armor and armament available, and have enough internal volume to integrate many additional systems that could not be included on a battleship due to lack of space.

The two key factors that prevent an empire from expending its full starship construction budget on dreadnought production are that these fighting ships are very expensive to purchase and take a considerable length of time to build. Despite these disadvantages, dreadnoughts remain a sound investment for a large interstellar empire. As the pinnacle of the capital ship lineage, units of this type will have the highest survivability of any Starships in the game, and their concentrated firepower may be sufficient to turn the tide of battle.

Superdreadnought (SD)

Titan (TN)

The absolute largest and most powerful capital ships in existence are called titans. These supermassive starships are extremely expensive and take an extraordinarily long time to build, but their cost is easily justified by their impressive combat capabilities. Titans almost always serve as fleet flagships, and it is extremely rare to see more than one titan in a single task force outside of decisive engagements.

Only the most heavily industrialized systems are capable of accommodating titan construction. This

restricts the construction of these vessels to and empire's Major Colonies and Core Worlds.

X.1.4 Carriers

Carriers are starships that allocate a significant amount of their total mass towards hangar and launch facilities. A starship is considered to be a dedicated carrier if 25% or more of its total mass units are devoted to basing equipment.

Type	Abbr	Build Cost	Command Cost
Escort Carrier	CVE	1-4	1/2
Light Carrier	CVL	5-9	1
Heavy Carrier	CVA	10-14	2
Fleet Carrier	CVB	15-19	3
Super Carrier	CVD	20+	4+

Escort Carrier (CVE)

Escort carriers are light warships (usually destroyers) that devote a large quantity of their onboard mass to flight operations. Escort carriers rarely field more than a few flights per ship, but their low command costs allow more of them to be included in any given squadron.

Carriers of this type are often used to provide light fighter support to squadrons that would otherwise not have access to friendly Flight support.

Light Carrier (CVL)

Light carriers are built on a light cruiser hull. These carriers can base and deploy a larger number of flights than an escort carrier can, but their basing capacities are inferior to those of larger, better-equipped carrier vessels.

Heavy Carrier (CVA)

A heavy carrier is a vessel of heavy cruiser size that dedicates much of its internal volume to Basing equipment. These heavy combat vessels are capable of transporting and deploying large numbers of fighters, shuttles, gunboats, and other small craft into combat.

Fleet Carrier (CVB)

Fleet carriers are dedicated carriers that are the size of a battlecruiser. Each one of these immense carriers is capable of delivering a massive strikegroup into combat. However, with this

strength comes at a cost: the loss of a single fleet carrier can have a devastating effect on an empire's ability to recover its flights after a battle!

Super Carrier (CVD)

The largest carriers, called supercarriers, are capital ships that possess Hangar ratings greater than any previous carrier type. A fully-loaded supercarrier can transport and deploy a dizzying number of flights into combat, and their strong defenses allow them to survive weapons salvos that would incinerate smaller carriers.

Troops transports are starships that are used to move ground forces from one system to another using a combination of Cargo and Assault capacities. These ships aren't built for combat and won't survive long if drawn into a battle. Rather, troops transports are intended to serve in a secondary role that emphasizes moving the largest number of troops at the lowest overall cost.

Assault ships are central to planetary ground campaigns. Empires rely on their Assault ships to establish beachheads in enemy systems.

Assault shuttles (AST) are flights with the Assault special ability that are used to support friendly ground forces during planetary invasions. Carriers can be equipped with assault shuttles

Jackson-class light armored carrier

BC 9 MC 4 BT 2 TL 0 Starship

DV 4 AS 1 PD 3 CR 4 CC 1

FTL 1, Decoy 1, Carrier 5

Jefferson-class heavy armored cruiser

BC 13 MC 4 BT 3 TL 0 Starship

DV 6 AS 7 PD 3 CR 6 CC 2

FTL 1, Armor 1

Jefferson-B-class heavy cruiser

BC 13 MC 4 BT 3 TL 0 Starship

DV 9 AS 7 PD 3 CR 6 CC 2

FTL 1, Decoy 1

Offensive

+25% Attack Strength

-25% Point Defense

Defensive

+25% Point Defense

-25% Attack Strength

Maximum Firepower

+50% Attack Strength

-50% Point Defense

Sneak Attack

Requirement: Stealth

Stealth units receive bonus to their Attack Strength equal to their Stealth values

Tactical Cloak

Requirement: Stealth

Stealth units receive bonus to their Point Defense equal to their Stealth values

Targeting Sensors

+1 AS per Scout value in task force

Offensive Fire

Requirement: None

Task force receives a +25% bonus to its Point Defense

Defensive Fire

Requirement: None

Task force receives a +25% bonus to its Point Defense

Suppressive Fire

-1 to enemy AS roll

Flanking Maneuver

+1 AS per Fast value in task force

Emergency Repairs

Requirement: None

Task force can perform emergency repairs on damaged units

Maximum command actions = flagship CR

Attack (AS Activate)

Defend (PD Activate)