



CAMPAIGN MODERATOR'S COMPANION

**A Companion to the
Victory by Any Means
Campaign Guide**

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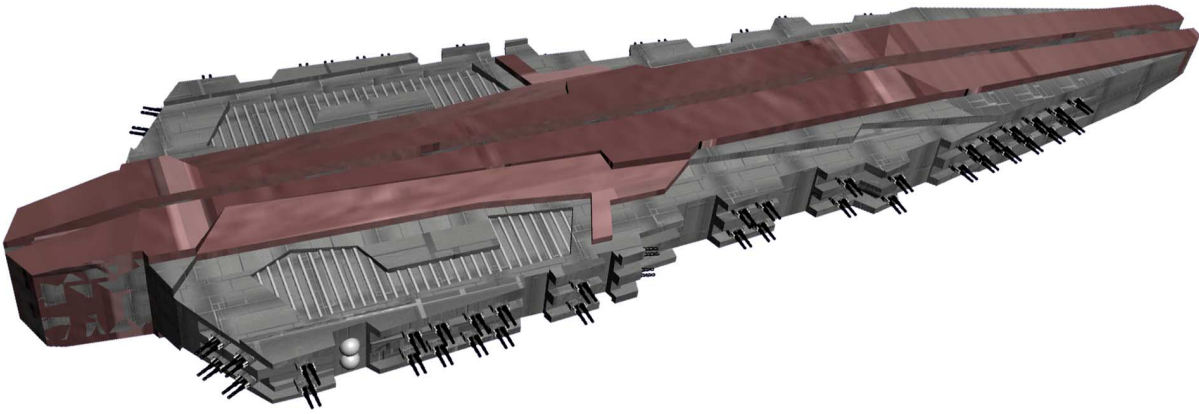
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1.0 Introduction

Welcome to the **Campaign Moderator's Companion**, a rules supplements for the *Victory by Any Means (VBAM) Campaign Guide*. This book provides additional and advanced rules for use with the Victory by Any Means (VBAM) Campaign System. These new rules allow CMs and players to extend their normal campaign experience without having to develop all of the rules on their own.

1.1 The Nature of these Rules

All of the rules found in the Companion are optional in nature; their use is neither required nor mandatory. Readers should think of this book as an extension of the Campaign Guide's 4.0 Optional Rules section. Feel free to use only those rules you desire and ignore the rest.

1.2 Referencing Rules from Different Supplements

Many rule entries in the Companion refer to rules introduced in other books, especially those found in the VBAM Campaign

Guide. References to rules external to the Companion itself are preceded by a two- to three-letter abbreviation indicating which book the rule appears in. Each VBAM Games supplement is assigned its own unique identifier for this purpose. Refer to the list below for a list of products and their related abbreviations.

Use of these abbreviations will be helpful when compiling the list of optional rules being used in your campaign.

CG	Victory by Any Means Campaign Guide
CC	Campaign Moderator's Companion
EMP	Empire Rising
WBK ..	The Wars of the Boltians and Kuissians
MG	The Menagerie

Example: When referring to the 3.2 Turn Orders Phase section of the VBAM Campaign Guide, a rules designer would reference the rule entry as "CG 3.2 Turn Orders Phase".

2.0 Advanced System Generation and Exploration Rules

This section includes advanced rules for star systems and exploration. The standard star system rules found in the Campaign Guide are expanded upon here, giving players three different options for adding varying degrees of complexity to the system generation process. Full rules are also included for managing an exploration campaign where players can expand their frontier by launching scouting forces into the unknown. What they'll find beyond the next star is anyone's guess!

Finally, this section also includes expanded rules for special resources, mentioned but not defined in the core Campaign Guide, ancient ruins, artifacts, and derelicts, as well as system terrain types that can add flavor to your campaign map.

2.1 Advanced System Generation Rules

The following rules expand upon section CG 2.3.2.4 System Generation and are intended to create more detailed planetary systems. The basic system generation rules found in the Campaign Guide are excellent in their simplicity and work very well in larger campaigns. In smaller campaigns, or in certain settings, more detailed system generation rules may be desired to draw players into the campaign and keep them interested.

The advanced system generation rules are broken down into three distinct systems: Captain, Commodore, and Admiral. Each system has its own detail level, progressing from the slight detail of the Captain level system up to the highest detail found in the Admiral level system. The Commodore level rules are a middle ground, striking a balance between detail and playability. To avoid confusion, the system generation rules found in the Campaign Guide are referred to as either the 'basic' or 'standard' system within these rules.

When the Commodore or Admiral level advanced system generation methods are used in a campaign, players will no longer be fighting over individual systems but instead individual *planets*. The battle to control a star system will take on extra complexity as opposing empires move to capture specific planets or other locations in a star system.

2.1.1 Common Advanced System Generation Elements

This section contains all of the common rules used by the three advanced system generation systems included in the Companion. All three systems share a degree of commonality in rules in order to make them more consistent and interchangeable. That way players who know the basic rules for advanced star systems can transition from one advanced system generation method to another and not have to completely relearn the basic rules.

Note that this section includes many changes to the basic VBAM campaign rules. As such, players should be sure to know what changes to the rules are necessitated by the use of expanded, detailed star systems. In general, all existing VBAM rules referring to entire systems or productive locations instead refer to individual planets. Examples of this include basing and supply.

2.1.1.1 Star System Changes

The Commodore or Admiral level system generation systems require changes to the way that systems are tracked in your

campaign. Both of these systems integrate fleshed-out star systems complete with multiple planets or other system objects/locations that can be exploited, whereas the Basic and Captain system generation systems treat the system as a single object.

- The Income Phase remains the same except that the total output of all planets in the system is used to determine the system's output.
- Morale is applied on a planet by planet basis instead of by system. Individual planets in a system may go into a rebellion while the others remain in good order.
- If at least one planet in a system is considered a supply point, then the entire system is considered a supply point. A planet is a supply point if it is a good order planet with Census and Productivity of 3, or if it is the location of an in-supply supply depot.
- When basing units, each planet bases units separately.
- Fixed defense installations are built or deployed at specific planets or system objects.
- Fleets blockade specific planets or zones instead of an entire system.
- Use the optional CG 4.14 The Convoy System rules as written, with any movement between planets simply counting as 1 system convoy.

Despite these changes, tracking of systems on the campaign galaxy map remains unchanged. As a result, the advanced star system rules can be integrated with any existing VBAM campaign map.

2.1.1.1 Productivity and Census

The advanced star system generation rules assume that all systems, barring home systems, are devoid of inhabitants at the beginning of the game. Some campaigns may

however call for empires to begin with multiple colonized systems. This is especially true for scenarios involving pre-existing empires.

Systems intended to begin play in a colonized state will receive a number of colonized planets in the system commensurate to the system's importance. Unimportant systems receive 1 colony, Minor systems receive 3 colonies, and Major systems receive 6 colonies. The owning player selects which planet or planets in the system are colonized. If the system's importance grants more colonies than there are habitable locations in the system, all extra, unplaced colonies are lost.

Each colonized planet or system object will have its Census, Productivity, and Morale statistics set equal to 2/3 of the object's Carrying Capacity (round down, minimum of 1).

2.1.1.2 System Objects

Star systems contain system objects, locations of interest within the system that empires can visit, explore, and exploit. System objects are typically planets, but the term also includes asteroid belts and moons.

Below is a list of the various system object types that are used within the body of these rules. After each system object type is a climate variance multiplier. See 2.1.4.1 Climate Ratings for more information on this multiplier's effects on the purchase of Productivity.

Terrestrial

Terrestrial planets are rocky worlds that have managed to develop and retain a viable atmosphere. Such planets typically remain geologically active and some even have been known to sustain life. Earth is considered a Terrestrial planet; however, not all Terrestrial planets are like Earth. The range of conditions that exist on Terrestrial worlds is extreme. Generally, Terrestrial worlds represent the best possible choice for colonization in the galaxy.

Climate Modifier: 1

Adaptable

Adaptable planets are worlds that are massive enough to support a stable atmosphere, but suffer from some other failing, such as geologic inactivity or extreme climatic disruptions. If not for these peculiarities, Adaptable worlds would be considered almost as habitable as Terrestrial worlds are. Venus and Mars are both examples of Adaptable planets.

Climate Modifier: 1.5

Barren

Barren planets have thin atmospheres but are incapable of supporting life natively. Radiation, orbital bombardment by space debris, and intense heat or cold makes establishing colonies on a Barren world very difficult. In some cases, colonizing a Barren planet may prove to be more difficult than colonizing a Hostile one.

Climate Modifier: 2

Hostile

Hostile planets are lifeless husks sailing through the darkness of space. Without an atmosphere to protect them, Hostile worlds have been subjected to continual bombardment from asteroids, meteors, and the like. These worlds are pockmarked and usually of little use to an empire and have a high cost to develop, though the lack of climatic variables means that the cost of colonizing Hostile worlds can sometimes be less than that of planets of other types with extremely hostile climates.

Climate Modifier: N/A (Flat 75% economic point surcharge)

Asteroid Belt

Asteroid belts are a special system object type. All asteroid belts have a Carrying Capacity of 0 and cannot be colonized. However, they can potentially contain easily extractable resources (RAW), though these resources require transport to another location for processing. Roll 1d6 for each asteroid belt: on '1' or '2', the belt contains no RAW; on '3',



'4', or '5', the belt contains 1 RAW; on a '6', the belt contains 1 RAW and a Special Resource. If Special Resources (ex: terrentium) are not in used in your campaign, adjust this result to 2 RAW.

Players may use a Transport Fleet or two convoy points to move the RAW from the belt to any colonized planet in the system for processing. If this is done, the asteroid belt's RAW value is added to that of the target planet. RAW from asteroid belts cannot be moved to another system.

For purposes of combat, the 2.4.1 Asteroid Fields terrain feature affects all encounters generated at asteroid belts. This allows units to seek shelter in the local asteroids.

Climate Modifier: N/A (Colonization Impossible)

Gas Giants

Gas giants are the largest types of planets in a solar system. Like other planet types, these gigantic planets have a rocky, metal inner core, but the majority of their mass comes from the thick atmosphere, principally hydrogen and helium, that surrounds the planets' core, swelling the size of the planet. After a certain depth, the pressure of a gas giant's atmosphere is sufficient to turn gas to liquid.

Unless otherwise noted gas giants have a Carrying Capacity of 0, and colonization of gas giants is impossible. They can still be a valuable resource however. Some source materials allow players to erect gas siphoning stations in orbit of gas giants to siphon off the planets' rich hydrogen/helium atmosphere and process it into fuel or some other stored energy form.

Climate Modifier: N/A (Colonization Impossible)

Moons

Moons are handled abstractly in all of the advanced system generation systems. The number of moons created during system generations is not an actual count of the moons at a location but rather an abstraction of the

value of the moons present. Gas giants possess a substantial number of moons, presenting the opportunity for the presence of RAW to be utilized as well as possible room for colonization.

Gas giant moons are considered to be Hostile planets for purposes of colonization.

Climate Modifier: N/A (Flat 75% economic point surcharge)

2.1.1.3 Zones

The Commodore and Admiral level systems break a system down into a series of overall zones, each of which may or may not contain system objects. These zones, from outermost to innermost, are as follows: outskirts, outer zone, middle zone, and inner zone.

The **outskirts** of a system is a special zone located beyond the strict confines of the star system. A system's outskirts begin beyond the orbit of the outermost planet in the system, roughly where its Oort cloud begins. No exploitable objects exist in a system's outskirts, but it is heavily used by craft moving in and out of a star system.

The **outer zone** contains a system's outer planets, typically gas giants. It is rare to find any rocky worlds in this region, and those that are encountered typically have little to no atmosphere and are considered Hostile environments.

The **middle zone** begins at the edge of a star's habitable zone and extends to the inner edge of the outer zone. There is still the chance for substantive planets to be found in this zone, but the chance is meager compared to the inner zone. As with the outer zone, gas giants generally dominate the middle zone of a star system.

The last zone, the **inner zone**, encompasses all planets from the local star out to the terminus of the habitable zone. It is in this zone that worlds conducive to life can generally be found.

2.1.1.4 Movement and Advanced Star Systems

In addition to movement between systems over jump lanes, the Commodore and Admiral system generation systems introduce the concept of *intra-system movement*. Intra-system movement is the movement between objects within a single system.

The following rules cover the implementation of intra-system movement and how it interacts with traditional strategic (map) movement:

- Units are allowed 2 intra-system movements per turn. For example, a fleet could move from planet A to planet B and then to planet C or planet A to planet B and back to planet A.
- Units moving over jump lanes are allowed 1 intra-system movement before or after their jump lane movement, but not both. So a ship can move from planet A to planet B and then jump to another system; or jump to another system and then move from planet C to planet D.
- Units jumping into a system are allowed to enter the system at any planet they choose unless they are jumping into an unexplored system, or a system owned by a non-allied power. Only a successful Espionage: System mission will allow an empire's units to jump into a non-allied system at any planet or zone of their choosing. Units not entering at a specific planet enter at the outskirts of the system. It takes 1 intra-system movement to move from the outskirts to any planet.

Another change comes in the way that a player tracks his or her fleet locations. When recording the location of a unit or fleet under the Commodore and Admiral systems, be sure to also include the name of the unit's system object location. For example, a fleet currently in orbit of the planet Earth in the Sol system would record its current location as "Sol (Earth)" or some similar notation. This notation style is

also be used when giving movement orders for the fleet.

2.1.1.4.1 Jump Gates and EDT Stations

In backgrounds that use fixed installations to allow fleets to perform strategic movement, examples of which are jump gates in The Escalation Wars universe and EDT stations in the Boltian/Kuissian Universe, these fixed installations must be built at a specific system object location.

2.1.1.4.2 Wormholes and Wormhole Movement

When using the 3.2 Wormhole-Based Movement rules, each wormhole in a system is considered its own system object. All wormholes are located in the system's outskirts.

2.1.1.5 Climate Ratings

Non-Hostile planet types are assigned climate ratings that summarize their overall climatic properties. The climate rating is displayed as three numbers separated by slashes. In order, they are *temperature*, *atmosphere*, and *hydrosphere*.

Temperature: Temperature is the median temperature of the planet. It is assumed that most planets in the campaign have the same variations in planetary climate observed on Earth. The lower the temperature value, the cooler the planet. The higher the temperature value, the hotter the planet.

Atmosphere: Atmosphere is not a measure of the density of the planet's atmosphere. Rather, the value represents a quantification of all aspects of the planet's atmosphere. A Terran nitrogen/oxygen atmosphere type is considered a 5 on the scale. Different atmospheric mixes and conditions are observable at different atmosphere values.

Hydrosphere: Hydrosphere is a representation of the amount of liquid water available on the planet. Higher hydrosphere values show that there are large quantities of water available, while lower hydrosphere values mean that water is less abundant.

2.1.15.1 Assigning Climate Rating Values to Alien Species

Each alien species is assigned its own set of preferred climate rating values. These, too, are represented in slashed notation. These climate values should match those of their native homeworld. In cases where a species' homeworld has been wracked by some form of ecological disaster this might not be the case, but generally speaking they should be the same.

These preferred climate values will not change during the course of the campaign. It can be assumed that a sufficiently advanced species could genetically engineer itself to the point that it would prefer an alien set of climate values over those of its original homeworld, but such changes are beyond the scope of a VBAM campaign.

2.1.15.2 Climate Rating's Effects on Productivity Purchases

Additional resources will be required to utilize planets with less than optimal conditions for your species. Pressurized habitat domes, air reclamation units, and environmental suits are only some of the additional equipment and facilities needed to live in a non-standard climate. The cost of this equipment makes expanding infrastructure on marginal or uninhabitable planets untenable.

Economic penalties are applied to the purchase of Productivity at locations that do not exactly match your species' preferred climate rating (see 2.1.15.1 Assigning Climate Rating Values to Alien Species). Before we can determine the economic penalty to purchase Productivity at a system, we must first calculate your species' climate variance with respect to the planet. To do this, take the absolute value

of the difference between your preferred climate rating and the planet's current climate rating in each statistic (temperature, atmosphere, hydrosphere). For those adverse to mathematical terms, subtract one number from the other and if the number is positive do nothing; if it is negative, reverse the sign and make the number positive. Add the three results together. This is your initial climate variance.

With your initial climate variance calculated, it is now time to factor in the overall habitability of the planet in question. Each planet is assigned a climate modifier that represents the overall suitability of the planet for colonization. Terrestrial planets have a modifier of 1, Adaptable planets have a modifier of 1.5, and Barren planets have a modifier of 2. Hostile planets are not assigned climate ratings and are handled differently, as described later. Now, to calculate this planet's final *climate variance* statistic for your empire, multiply your initial climate variance value times the planet's climate modifier. Round all fractional results up.

This climate variance is a measure of how habitable the planet is for your species and will have a direct influence on the cost of Productivity at that location. The cost of Productivity purchases at the planet will be increased by 5% per point of climate variance. To figure the modified cost of the Productivity increase, multiply the normal cost of the Productivity increase by the total percentage increase and round all fractions up to the nearest whole number.

Example: A species has a favored climate rating of 4/3/5 and its empire is looking into the possibility of colonize a Barren planet with a native climate rating of 6/3/1. The initial climate variance for this planet is $2 + 0 + 4 = 6$. We then multiply this total by the climate modifier for a Barren planet, which is 2, providing us with a final climate variance of 12. 12 times 5% is 60%, which means that Productivity costs at this world would be 60% higher than normal. Productivity 1 would cost 16 economic points (vs. 10), Productivity 2

would cost 32 economic points (vs. 20), and so on.

Because Hostile planets do not have climates, due in large part to their lack of any real atmosphere, the economic penalty for Productivity increases on these worlds is calculated differently. Instead of paying an economic penalty based on climate, Hostile planets instead pay a flat +75% economic point surcharge (round up) to all Productivity purchases purchased at their location.

As a result of this flat surcharge, Hostile planets can sometimes be easier and more cost-efficient to exploit than other Terrestrial, Adaptable, or Barren planets with severe climate variances. This represents that some extreme environmental conditions can actually make inhabitation even more problematic than living on a desolate Hostile world.

Example: A Hostile colony world would have all of its Productivity increase costs increased by 75%. Productivity 1 would cost 18 economic points, Productivity 2 would cost 35 economic points, Productivity 3 would cost 53 economic points, and so on.

2.1.15.3 Weapons of Mass Destruction and Climate Ratings

A planet that is subjected to orbital bombardment from Weapons of Mass Destruction can have its climate ratings severely altered as a result of the bombardment. For each weapon of mass destruction used against a planet, roll d10 for each of the planet's three climate rating statistics. On a roll of '6' or lower there is no effect, while a roll of '7' or '8' will lower the statistic by 1 (minimum 1) and a '9' or '10' will increase the statistic by 1 (maximum of 10).

Repeated or prolonged orbital bombardment will tend to play havoc with a planet's climate, potentially destroying the planet's entire ecosystem and rendering it completely uninhabitable for the owning player.

2.1.1.6 Scenario Resolution

If either the Commodore or Admiral level system generation systems are in use, then this set of scenario resolution orders replace those found in the Campaign Guide. The reason for this modification to the system is the introduction of orbital zones and multiple defense points within each star system. As normal, more than one encounter per system is possible each campaign turn.

If more than one scenario has been generated in a single system or jump lane, resolve them in order by scenario type. Within each type of scenario, resolution order will be decided by either the player that controls the system object or zone that is being attacked or, if the zone is contested or uncontrolled, or the scenario is being generated in a jump lane, the player with the highest Anti-Ship total (including flight Anti-Ship factors).

Scenario Resolution Order

- 1) Interception scenarios
- 2) Breakout scenarios
- 3) Deep Space scenarios
- 4) Defensive scenarios
- 5) Pursuit scenarios

2.1.1.6.1 Interception Scenario

(Replaces CG 3.6.3.2 Interception Scenarios)

This scenario has one or more fleets trying to block the approach of other fleets to a fixed defensive point. When an enemy fleet enters a system as part of its movement orders, the defending player may choose to move his or her fleets to the unit's entry zone to intercept.

Only fleets from the same orbital zone in a system can participate in the same Interception scenario. Fleets in separate zones must generate Interception scenarios separate from fleets in other zones in the system. This means that two task forces in the outer zone could intercept an incoming enemy force, but task forces in the middle and inner zones would have to generate their own Interception scenarios against the enemy force. They are

not allowed to participate in the scenario generated by the fleets in the outer zone.

All fleets may only rely on fleet based Intel sources. The Interception fleet(s) must split their units into two pools, which may contain elements of one or more different fleets. The Intercepted fleet(s) chooses (select in order of highest anti-ship rating) which pool they will engage. Both sides (Interceptors and Intercepted) gain a +2 to their surprise roll, but neither ignores below normal readiness states (see CG 3.6.3.8 Surprise). Scenario length is unadjusted (see CG 3.6.3.9 Scenario Length). If all units in the engaged Interception fleet(s) pool are destroyed or crippled, then all surviving Intercepted units have broken through to the fixed defensive point.

The Intercepted fleet(s) can now demand a Defensive scenario.

2.1.1.6.2 Breakout Scenario

(Replaces 3.6.3.3 Breakout scenarios)

This scenario has a fleet or fleets under a Blockade trying to breakout and is generated if a fleet in a blockaded zone attempts to move zones or exit the system. All forces may only rely on fleet based Intel sources. The Blockading fleet(s) must split their units into two pools, which may contain elements of one or more different fleets. The Blockaded fleet(s) chooses (select in order of highest Anti-Ship rating) which pool they will engage.

The Blockaded forces gain a +2 to the surprise roll (CG 3.6.3.8 Surprise) and ignore any below normal readiness state results. Scenario length has a -2 modifier (see CG 3.6.3.9 Scenario Length). If all blockading units (in the pool engaged) are destroyed or crippled, all units attempting the break out are considered to have run the blockade and can choose to immediately leave the system, although their destination does not have to be specified until the 3.2 Turn Orders of the next campaign turn). Units that do not choose to leave or fail to run the blockade, return to their fixed defensive point at the end of the scenario.

Units that have successfully completed a Breakout scenario cannot be the target of an

Interception scenario due to the scenario resolution order. They may however be pursued if the enemy generates a Pursuit scenario.

2.1.1.6.3 Deep Space Scenario

(Replaces 3.6.3.4 Deep Space scenarios)

This is the most basic form of scenario that may be generated. In a Deep Space scenario, both players must decide whether to stand and fight, or else withdraw. In the case of the defender, they may withdraw to a planet in the system and generate a defensive scenario or to another zone and open the possibility for a Pursuit scenario to be generated against them.

Typically, a Deep Space scenario will be generated in instances where an attacking fleet is attempting to reach a fixed defense points (e.g., a planet or colony) and its path is blocked by an enemy fleet. If the defenders demand a Deep Space scenario the attackers must accept the scenario before a Defensive scenario can be generated. If the attackers decline the Deep Space scenario, they will not be able to demand a Defensive scenario on that turn.

Only units within a single orbital zone can participate in the same Deep Space scenario. If a fleet in the middle zone demands a Deep Space scenario, only those units in the middle zone can participate in the scenario. Fleets in any other zone would be unable to participate in the scenario unless they have already generated an Interception scenario against the attacking fleet.

Each fleet has only mobile units and lacks any fixed point of defense. Both sides may only use Intel from fleet based sources and neither side receives a bonus to their surprise roll and there are no adjustments to scenario length (see CG 3.6.3.8 Surprise and CG 3.6.3.9 Scenario Length).

2.1.1.6.4 Defensive Scenario

(Replaces 3.6.3.5 Defensive scenarios)

This scenario has one or more fleets protecting a single fixed defense point, usually a colonized planet in the system.

Fleets located in the fixed defense point, located in its zone, or that attempted an Interception scenario against the incoming enemy force may all participate in a Defensive scenario. Units in other zones that did not attempt an Interception scenario against the attacking fleet that is now attempting to assault the planet cannot participate in the Defensive scenario.

The Defensive force's task force can include any bases, satellites or mines located at the fixed defense point at no Command Cost (see CG 3.6.3.7 Task Force Creation). Interception fleets that were used to attempt the interception of the attacking fleet are moved to this defense point's location at the end of their Interception scenario and may participate in the Defensive scenario. Additionally, any other units in the planet's zone may also move to the planet to assist in the defense of the planet.

The Defensive forces may only use half of their fleet Intel sources (use normal fraction rounding), but may use Defensive Intel assigned to the planet, if available. Attacking fleets gain a +2 to their surprise rolls roll (CG 3.6.3.8 Surprise) and ignore any below normal readiness state results. Scenario length roll has a +2 modifier (see CG 3.6.3.9 Scenario Length).

2.1.1.6.5 Pursuit Scenario

(Replace Pursuit Scenario 3.6.3.6)

This scenario has a fleet or fleets leaving a system or deep space encounter area being pursued by another fleet. It is usually generated if a fleet manages to survive a battle and is making a run for the outer system to escape while being pursued by enemy forces. For example, an attacking fleet loses a Defensive scenario and wishes to withdraw from the system. The defender can choose to pursue the remaining enemy forces and a Pursuit scenario will be generated as a result.

Both sides may only use Intel from fleet based sources. The Pursued forces must use any crippled units in their fleet(s) to fill non-flagship squadrons (although squadron command ships do not have to be crippled), unless these units are exempted by use of Intel points or towing units (which may not be used in any squadron while towing units). Exempted units and their towers are considered to be already disengaged and not part of the Pursued fleet(s) for any purposes.

The Pursuing fleet(s) is under special restrictions in that they may only field half the number of squadrons (rounded up) that their task force flagship would otherwise be entitled to (see CG 3.6.3.7 Task Force Creation). This is due to the hastiness with which these task forces are thrown into pursuit. The Pursuing fleet(s) has a +2 to their surprise rolls (CG 3.6.3.8 Surprise) and ignores any below normal readiness states. Scenario length roll has a -4 modifier (see CG 3.6.3.9 Scenario Length). Once the Pursuit scenario is over the Pursued forces are disengaged and cannot be forced to participate in any further scenarios this campaign turn.

2.1.1.7 Terraforming

With the introduction of climate ratings in the advanced system generation rules, there is now the potential for manipulating specific planetary factors via the use of terraforming. Terraforming can be used to adjust the climate rating statistics (temperature, atmosphere, hydrosphere) of a planet up to a combined maximum of ± 5 from their original values.

Complete rules for terraforming are located in 7.15 Terraforming.

2.1.1.8 Special Traits Tables

The following special traits tables (see Exhibit A) are used for all three advanced system generation systems. It is recommended that players print and keep a copy of these tables handy for use when generating systems. When indicated during the process, roll on the

Advanced System Generation Special Traits Tables

Planetary Special Traits Table (Roll 2d6)

Result	Special Traits
1 or less	No Specials
2	<i>Census</i> : Fair Government (Morale +1) <i>No Census</i> : Rich in Rare Metals (RAW +1)
3-5	Rich in Rare Metals (RAW +1)
6	<i>Census</i> : Expanded Industry (Productivity +1) <i>No Census</i> : Fair Climate (Capacity +1)
7	Rich in Precious Minerals (RAW +2)
8	<i>Census</i> : Mature Industry (Productivity +2) <i>No Census</i> : Ideal Climate (Capacity +2)
9	<i>Census</i> : Expanded Population (Census +1, Morale +1) <i>No Census</i> : Fair Climate (Capacity +1)
10	<i>Census</i> : Fair Biosphere (Census +1, Capacity +2) <i>No Census</i> : Special Encounter (Roll on Special Encounter Table)
11	Special Resources (Special Resources +1, or RAW +3)
12	<i>Census</i> : Gaia World (Census +1, Morale +1, Productivity +1, Capacity +1, Climate Rating equal to owner's homeworld) <i>No Census</i> : Special Encounter (Roll on Special Event Table)
13 or more	Roll Twice

Modifiers:

Hostile -2
Barren -1
Terrestrial +1

Special Encounter Table (Roll 2d6)

Result	Effect
2	Pirate Cache (+4d10 economic points)
3	Pirate Cache (+2d10 economic points)
4-5	Ancient Ruins (See 2.6 Ancient Ruins for effects)
6-7	System Terrain (Roll on System Terrain Table)
8-9	Ancient Derelict (See 2.7 Ancient Derelicts for effects)
10	Small Splinter Colony (Census +2, Morale +1, Productivity +1)
11	Large Splinter Colony (Census +3, Morale +2, Productivity +2)
12	Mysterious Encounter (CM Only) or Roll Twice

Advanced System Generation Special Traits Tables (cont.)

System Terrain Table (Roll 1d10)

Result	Effect
1-4	Dust Cloud
5-7	Nebula
8-9	Dark Matter Nebula
10	Maser Nebula

Lunar Special Traits Table (Roll 2d6)

Result	Special Traits
2	Moon causes severe tidal forces (Capacity -1)
3-4	Inaccessible moon (No Effect)
5-6	Accessible moon (Capacity +1)
7	Accessible moon with resources (Capacity +1, RAW +1)
8	Favorable moon but resource poor (Capacity +2)
9	Favorable moon with resources (Capacity +2, RAW +1)
10	Favorable moon with rich resources (Capacity +2, RAW +2)
11	Favorable moon with special resources (Capacity +2, Special Resources, or RAW +3 if Special Resources aren't used)
12	Near Ideal (Capacity +3, RAW +2)

Planetary Special Traits Table and Lunar Special Traits Table.

Accompanying the Planetary Special Traits Table are two tertiary tables. The Special Encounter Table is rolled on whenever a 'Special Encounter' result is generated on the Planetary Special Traits Table, and contains a list of special events or points of interest that may exist at the location. Similarly, a 'System Terrain' result on this chart will force a roll on the System Terrain Table. Unlike other special traits, the result from the System Terrain Table is applied to the system objects entire zone.

2.1.1.9 Optional System Generation Rules

The following are a series of optional rules for use with the advanced system generation systems.

2.1.1.9.1 Intra-System Colonization

Colonization of other planets within a star system does not require the usual overhead represented by a Colony Fleet. Small, constant supply trains can just as effectively provide the cargo and personnel capabilities of a larger Colony Fleet.

A player can colonize another planet in the same system by instead paying a 15 economic point surcharge per colonizing Census and allocating 15 points worth of construction capacity from the originating planet. Such colonization missions can be extended over multiple turns if the colonizing planet does not possess sufficient construction capacity to complete the action in a single campaign turn.

Once the colonization mission is completed, the Census will be transferred to the newly constructed in-system colony.

2.1.1.9.2 Gas Siphoning Stations

Typically gas giants are of no real use in a campaign, especially if they do not have any moons to act as a source of planetary statistics. If desired, you can allow for the construction of gas siphoning stations in orbit of gas giants, using these stations to strip off the planet's atmosphere and refine it into starship fuel or transferable energy.

Roll 2d6 for each gas giant; the result is assigned to the gas giant and becomes its Carrying Capacity, but applies only to the number of siphoning stations that can be built in orbit of the planet. Colonization of gas giants remains impossible (unless you are a gas giant alien; see 2.1.5 Gas Giant Aliens).

Gas siphoning stations have a construction cost of 10 economic points and maintenance cost of 1/3. Once in place, each siphoning station will generate 1 economic point of income each turn. This income is added to the owning power's total domestic product.

For purposes of space combat, siphoning stations have a Defense Value of 5 and all other statistics at 0.

2.1.1.9.3 Asteroid Mining Bases

In addition to transporting RAW to other planets in the same system, asteroid mining bases can be used to process other RAW deposits on-site for extra profit. Roll d6 for each asteroid belt; the result is assigned as the asteroid belt's Carrying Capacity, but applies

only to the number of asteroid mining bases that can be built at the asteroid belt. Colonization of asteroid belt system locations remains impossible.

Asteroid mining bases are built at asteroid belt locations using the CG 3.7.4 Base Construction rules for remote base construction. They have a construction cost of 10 economic points and maintenance cost of 1/3. Once in place, each asteroid mining base will generate extra income equal to the asteroid belt's RAW value. In essence, asteroid mining bases act as cheap Productivity built on-site at the asteroid belt.

For purposes of space combat, asteroid mining bases have a Defense Value of 5 and all other statistics at 0.

2.1.2 Captain Level System Generation

Captain Level System Generation uses one detailed planet to represent each star system on the map. This provides extra detail to a campaign with little additional overhead.

1) Roll on Planet Type Chart

Roll on the Planet Type Chart to determine the planet's type, number of moons, and system importance.

2) Determine Planet Attributes

Roll 2d6 on the appropriate planet table to determine its base statistics.

3) Assign Climate Rating

Terrestrial, Adaptable, and Barren planet types are assigned climate ratings. Roll d10 for each climate rating value.

4) Roll on Planetary Special Traits Table

Terrestrial, Adaptable, Barren, and Hostile planets roll on the Planetary Special Traits Table and apply the result(s) to the planet.

Captain Level System Generation Charts

Planet Type Chart (Roll d10)

Result	Planet Type	Moons	System Importance
1	Terrestrial	1d2	Major
2	Terrestrial	1d2-1	Major
3	Adaptable	1d2	Minor
4	Adaptable	1d2-1	Minor
5	Barren	1d2	Minor
6	Barren	1d2-1	Minor
7	Hostile	1d2-1	Unimportant
8	Hostile	0	Unimportant
9	Gas Giant	1d3	Unimportant
10	Gas Giant	1d4+1	Unimportant

Terrestrial Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2-6	Low	1	4
7-9	Moderate	2	6
10-11	High	2	8
12	Very High	3	10

Adaptable Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2	None	0	0
3-6	Very Low	1	2
7-9	Low	1	4
10-12	Moderate	2	6

Barren Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2-3	None	0	0
4-6	Very Low	1	2
7-10	Low	1	4
11-12	Moderate	2	6

Hostile Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2-4	None	0	0
5-7	Very Low	1	2
8-11	Low	1	4
12	Moderate	2	6

Note: Planets have a minimum RAW and Capacity of 1. If either of the two values is equal to or less than 0 at the end of the generation process, increase the value to 1.

5) Roll on Lunar Special Traits Table

Planets with moons roll once on Lunar Special Traits Table for each moon and apply the result(s) to the planet.

6) Roll for Number of Jump Lanes on Jump Lanes Table

Use the standard rules as outlined in CG 2.3.2.4 System Generation.

7) Roll for Position of Jump Lanes on Jump Lane Position Table

Use the standard rules as outlined in CG 2.3.2.4 System Generation.

2.1.2.1 Home System Generation

In the interests of game balance, all player home systems are generated as a Terrestrial planet with the following statistics: Census 10, Morale 9, RAW 6, Productivity 10, Capacity 12. Do not roll on any special trait tables for this system.

2.1.3 Commodore Level System Generation

Commodore Level System Generation allows players to track detailed system statistics, giving players the advantage of more fully fleshed out systems without the extra bookkeeping or minutiae found in the Admiral system.

The Commodore system breaks each system down into zones, with system objects apportioned between them according to the system's importance.

1) Roll for Number of System Objects and Importance

Roll on the Commodore System Importance Table to determine how many system objects (planets, asteroid belts, etc.) are in the system, as well as the system's importance. System objects will fall into one of three broad zones: inner, middle, and outer. The table notation lists the objects in each zone separated by a slash, so 2/2/1 indicates 2 inner zone, 2 middle zone, and 1 outer zone objects.

Commodore Level System Generation Charts

Commodore System Importance Table (Roll 2d6)

Result	# Objects	Colony Size	System Importance
2	1/0/0	Minor Outpost	Unimportant
3	1/1/0	Minor Outpost	Unimportant
4	1/1/1	Outpost	Unimportant
5	2/1/1	Outpost	Unimportant
6	2/2/1	Minor Colony	Minor
7-8	2/2/2	Minor Colony	Minor
9	3/2/2	Colony	Minor
10	3/3/2	Colony	Major
11	3/3/3	Major Colony	Major
12	4/3/3	Major Colony	Major

Inner Zone Object Table (Roll d10)

Result	Object	Moons
1	Terrestrial	1d2
2	Terrestrial	1d2-1
3	Adaptable	1d2
4	Adaptable	1d2-1
5	Barren	1d2
6	Barren	1d2-1
7	Hostile	0
8	Hostile	1d2-1
9	Gas Giant	1d4-1
10	Asteroid Belt	N/A

Middle Zone Object Table (Roll d10)

Result	Object	Moons
1	Adaptable	1d2-1
2	Barren	1d3-1
3	Hostile	1d2-1
4	Gas Giant	1d3-1
5	Gas Giant	1d3
6	Gas Giant	1d3+1
7	Gas Giant	1d4
8	Gas Giant	1d4+1
9	Asteroid Belt	N/A
10	Asteroid Belt	N/A

Outer Zone Object Table (Roll d10)

Result	Object	Moons
1	Barren	1d3-1
2	Barren	1d2-1
3	Hostile	1d3-1
4	Hostile	1d2-1
5	Gas Giant	1d2
6	Gas Giant	1d3
7	Gas Giant	1d3+1
8	Gas Giant	1d4
9	Gas Giant	1d4+1
10	Asteroid Belt	N/A

Commodore Level System Generation Charts (cont.)

Note: Planets have a minimum RAW and Capacity of 1. If either of the two values is equal to or less than 0 at the end of the generation process, increase the value to 1.

Terrestrial Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2-6	Low	1	4
7-9	Moderate	2	4
10-11	High	3	6
12	Very High	4	6

Adaptable Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2	None	0	0
3-6	Very Low	1	2
7-9	Low	1	4
10-12	Moderate	2	4

Barren Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2-3	None	0	0
4-6	Very Low	1	2
7-10	Low	1	4
11-12	Moderate	2	4

Hostile Planet Table (Roll 2d6)

Result	Value	RAW	Capacity
2-4	None	0	0
5-7	Very Low	1	2
8-11	Low	1	4
12	Moderate	2	4

2) Determine System Object Types

For each system object, roll 1d10 on the zone-appropriate table below to determine its exact type and the number of moons (if any) the system object has.

3) Determine Attributes of Each Object

Roll 2d6 on the table appropriate to each object type to determine its base statistics. Then roll on the special traits table to determine any specials present on the planet itself. Finally, roll on the moon table and apply any modifiers listed.

Note: *Homeworlds and other planets in the home system have special rules detailed below.*

3a) Assign Climate Rating

Terrestrial, Adaptable, and Barren planet types are assigned climate ratings. Roll d10 for each climate rating value.

3b) Roll on Planetary Special Traits Table

Terrestrial, Adaptable, Barren, and Hostile planets roll on the Planetary Special Traits Table and apply the result(s) to the planet.

3c) Roll on Lunar Special Traits Table

Planets with moons roll once on Lunar Special Traits Table for each moon and apply the result(s) to the planet.

4) Roll for Number of Jump Lanes on Jump Lanes Table

Use the standard rules as outlined in CG 2.3.2.4 System Generation.

5) Roll for Position of Jump Lanes on Jump Lane Position Table

Use the standard rules as outlined in CG 2.3.2.4 System Generation.

2.1.3.1 Home Systems

Home systems have special rules regarding their creation. They automatically roll a '12' on the Commodore System Importance Table (4/3/3 object result) and have special

limitations applied so as to provide a balanced starting position for all players.

The home system must contain at least one of each of the following system object types: Terrestrial, Adaptable, and Barren. The Terrestrial is located in the inner zone, the Adaptable in the middle zone, and the Barren is located randomly in the system. For the Barren, roll 1d3 and assign the zone as follows based on the die result: 1: inner zone; 2: middle zone; 3: outer zone.

The Terrestrial planet is the homeworld itself and has special attributes: Census 6, Morale 5, RAW 6, Productivity 5, Capacity 8. Do not roll for special traits but roll once on the moon table.

The Adaptable planet is of Moderate value with the following additional attributes: Census 3, Morale 2, RAW 2, Productivity 2, Capacity 4. Roll for special attributes as normal and roll once on the moon table.

The Barren planet is of Low value with the following additional attributes: Census 2, Morale 2, RAW 1, Productivity 1, Capacity 4. Roll for special attributes as normal and roll once on the moon table.

Roll all other objects in the system randomly.

2.1.4 Admiral System Generation

The Admiral Level System Generation system generator provides the highest level of system detail for your VBAM campaign. This system is another step in detail beyond the Commodore system and allows for greater flexibility of values.

1) Roll for System Type

The first action that must be taken when generating the new star system is to determine the star system's type. A star system can be a single star system, a binary star system, or a ternary star system. A single star system contains a single star (ex: Sol). Binary star systems contain two stars, both stars orbiting each other around a central gravitational point

Admiral Level System Generation Charts

System Type Table (Roll d10)

Result	System Type
1-7	Single Star System; system contains 1 star
8-9	Binary Star System; system contains 2 stars
10	Ternary Star System; system contains 1d4+2 stars

Star Type Table (Roll d10)

Result	Type	Name	Inner	Middle	Outer	Size Modifier
1	O	Extremely Hot Blue	1-4	—	5-10	-4
2	B	Blue	1-4	—	5-10	-2
3	A	Blue	1-3	4	5-10	0
4	F	White	1-3	4-5	6-10	0
5	G	Yellow	1-2	3-5	6-10	0
6	K	Orange	1-2	3-4	5-10	-1
7-10	M	Red	1-2	3-4	5-10	-2

Star Size Table (Roll d10)

Result	Luminosity	Type	Zone Modifier
1 or less	Ia, Ib	Supergiant	-3
2	II	Bright Giant	-2
3	III	Giant	-2
4	IV	Sub Giant	-1
5 or more	V	Main Sequence (Dwarf)	0

Modifiers:

Add the star's size modifier

Note: Planets have a minimum RAW and Capacity of 1. If either of the two values is equal to or less than 0 at the end of the generation process, increase the value to 1.

Admiral Level System Generation Charts (cont.)

Inner Zone Object Table (Roll d10)

Result	Object
1	Asteroid Belt
2-3	Gas Giant
4-5	Hostile
6	Barren
7-8	Adaptable
9-10	Terrestrial

Middle Zone Object Table (Roll d10)

Result	Object
1	Asteroid Belt
2-4	Gas Giant
5-6	Hostile
7-8	Barren
9	Adaptable
10	Terrestrial

Outer Zone Object Table (Roll d10)

Result	Object
1-2	Asteroid Belt
3-7	Gas Giant
8-9	Hostile
10	Barren

System Object Size Table (Roll d10)

Result	Size	Capacity
1-2	Tiny	1
3-4	Small	2
5-7	Medium	4
8-9	Large	6
10	Huge	8

Mineral Richness Table (Roll d10)

Result	RAW
4 or less	1 RAW
5-7	2 RAW
8-10	3 RAW

Moon Number Table (d10)

Result	# of Moons
4 or less	None
5-7	1
8-9	2
10-11	3
12	4
13	5
14+	6

Modifiers:

-2 Inner Zone	-3 Tiny
+2 Outer Zone	-2 Small
	+2 Large
	+3 Huge

System Object Value Table

Object Type	Value
Terrestrial	+4
Adaptable	+3
Barren	+2
Hostile	+1
Gas Giant	+1
Asteroid Belt	+1

System Importance Table

Point Value	System Importance
0-9	Unimportant System
10-19	Minor System
20+	Major System

in space. (ex: *Sirius, Procyon*). Finally, ternary star systems contain multiple stars. In this case, the term is used to refer to those star systems that contain three or more stars (ex: *Castor*).



CM's Note: CMs should feel free to substitute their own special star system types for ternary star system results. Encounters with such astronomical phenomena as neutron stars, black holes, and brown dwarfs can be substituted to provide extra "flavor" to your gaming experience.

Additionally, you might find that allowing more than three stars to be generated by a ternary result is too much. In this case, forego rolling for ternary results and simply assume a three-star (trinary) star system result.

2) Roll for Star Type

Next, roll on the Star Type Table for each star in the system. The type of the star generated will determine the size of the star and the range of the system's three planetary zones: inner, middle, and outer.

Statistics generated for the first star in each system represent those of the system's primary component. The primary component is the primary star in the star system and the one around which the planetary system (if any) orbits. The zone data for the primary component of the star system is used when determining the system make up. Information on the other stars in the system is still recorded, as they will affect the placement of planets later in the process.

3) Roll for Star Size

After the star's type is determined, roll on the Star Size Table to determine the size of the star. The star's size modifier (see Star Type Table) is added as a modifier to this roll. This modifier shows that certain types of stars have a predilection towards certain sizes.

4) Roll for the Number of System Objects

Each system contains a limited number of system objects. A system object is any planet

or asteroid belt in the system. Roll d10 and assign the result as the number of objects in the system. Our own star system is considered to have the maximum of 10 system objects.



CM's Note: If you wish to have more system objects you can increase this value as you see fit. A maximum of 10 system objects was selected for playability reasons only, but remember that it is your job to keep track of all of the system data, and having multiple star systems with more than 10 system objects may become unwieldy.

5) Generate System Objects

5a) Roll for the Zone Location of Each System Object

Once the number of system objects is determined, a d10 is rolled for each object. Subtract the zone modifiers from all stars in the system. For example, a binary system containing a super giant and sub giant would have a total zone modifier of $-3 + -1 = -4$.

Compare the modified result to the zone breakdown on the Star Type Table. Each star type assigns a range of d10 values spread between the inner, middle, and outer zones. Whichever zone contains the modified roll value is the zone in which the new system object is located. This is the system object's zone location.

If the modified die roll is equal to or less than zero, the system object has already been swallowed by the star and no longer exists or, in the case of younger stars, has not yet formed. In either case the system object is removed from the system.

The zone location of the system object tells the generating player in which region of the system the object is located and is directly related to the object's type.

Example: A Type GIV Yellow Star has the following ranges: 1-2: inner zone, 3-5: middle zone, and 6-10: outer zone. The total zone

modifier is -1 . The system contains three system objects.

The first object rolls a '3'. After the -1 zone modifier, this becomes a '2'. This places the object in the inner zone.

The second object rolls a '9'. After the -1 zone modifier, this becomes a '8'. This places the object in the outer zone.

The third (and final) object rolls a '1'. After the -1 zone modifier, this becomes a '0'. Because this is less than or equal to 0, the system object is removed from play.

5b) Roll for the System Object Type

Once the location of the system objects is determined, roll on the applicable zone chart to determine the system object's type.

5c) Roll for System Object Size

Roll on the System Object Size Table for each planet to determine its size and Capacity. Do not roll for asteroid belts or gas giants, as they are handled as described in 2.1.1.2 System Objects.

If you are using any rules that require gas giants to have a Capacity statistic, forego their normal 2d6 Capacity roll and instead roll on the table below. However they receive twice the listed Capacity based on size (ex: a medium gas giant would have a Capacity of 8, not 4).

Note: Homeworlds have special rules detailed later in this section.

5d) Roll for Mineral Richness

One of the most important aspects of any planet is its ability to be efficiently exploited. Roll on the Mineral Richness Table to determine the planet's RAW value.

5e) Roll for Number of Moons

Each non-asteroid belt system object must roll on the Moon Number Table to check for the presence of moons. The number of moons rolled is not the total number of moons the planet has. Only the largest, most important moons are within the scope of these rules. Examples within our own solar system are Earth's sole moon, Luna; Jupiter's moons of Io,

Europa, Ganymede, and Callisto; Saturn's moon of Titan; Neptune's moon of Triton; and Pluto's moon of Charon. All other moons in our own solar system are too small to be of note.

5f) Assign Climate Rating

Terrestrial, Adaptable, and Barren planet types are assigned climate ratings. Roll d10 for each climate rating value.

5g) Roll on Planetary Special Traits Table

Terrestrial, Adaptable, Barren, and Hostile planets roll on the Planetary Special Traits Table and apply the result(s) to the planet.

5h) Roll on Lunar Special Traits Table

Planets with moons roll once on Lunar Special Traits Table for each moon and apply the result(s) to the planet.

6) Determine System Importance

Under the normal rules, the importance of any given star system is determined during the first step of system generation. Under these rules this is impossible, as there are simply too many variables that are involved in the system generation process. Instead, the system importance is calculated after system generation is complete and takes into account the contents of the system.

A value is assigned to each type of object in the star system. The System Object Value Table contains the point value of each type of system object. Add up the total points and use the System Importance Table to determine the system importance.

7) Roll for Number of Jump Lanes on Jump Lanes Table

Use the standard rules as outlined in CG 2.3.2.4 System Generation.

8) Roll for Position of Jump Lanes on Jump Lane Position Table

Use the standard rules as outlined in CG 2.3.2.4 System Generation.

The new high-detail star system is now generated!

2.1.4.1 Home Systems

Home systems have special rules regarding their creation. They automatically begin with 10 system objects and have special limitations applied so as to provide a balanced starting position for all players.

The home system must contain at least one of each of the following system object types: Terrestrial, Adaptable, and Barren. The Terrestrial is located in the inner zone, the Adaptable in the middle zone, and the Barren is located randomly in the system. For the Barren, roll 1d3 and assign the zone as follows based on the die result: 1: inner zone; 2: middle zone; 3: outer zone.

The Terrestrial planet is the homeworld itself and has special attributes: Census 6, Morale 5, RAW 6, Productivity 5, Capacity 8. Do not roll for special traits but roll once on the moon table.

The Adaptable planet is of moderate value with the following additional attributes: Census 3, Morale 2, RAW 2, Productivity 2, Capacity 4. Roll for special attributes as normal and roll once on the moon table.

The Barren planet is of low value with the following additional attributes: Census 2, Morale 2, RAW 1, Productivity 1, Capacity 4. Roll for special attributes as normal and roll once on the moon table.

Roll all other objects in the system randomly.

2.1.5 Gas Giant Aliens

Some universes include aliens that originated and live in gas giant environments. These gas giant dwellers are often characterized as being slow to act, though inquisitive, and usually react violently to attempts to exploit their planets without consent.

CMs using the advanced system generation rules might find it interesting to include gas giant aliens in their campaigns. They make especially good story-related

triggers, since most players won't be expecting to find an inhabited gas giant.

Due to their different play style and emphasis on alternative resources, it is not generally advisable to allow a player to control a gas giant alien. The most compelling reason is because players have a bad tendency to form "pre-game alliances," and allowing one or more players to start the game as a gas giant alien opens the door for possible abuse by these types of gamers. With one player as a standard race and one as a gas giant alien, they could optimize their inter-colonization in attempt to maximize their economic/military performance rather than play a fun (or fair) campaign.

2.1.5.1 Gas Giant Planet Statistics

None of the 2.1 Advanced System Generation Rules assign planetary statistics to gas giants, as it is assumed that most player empires will be of the non-gas giant native persuasion. For purposes of gas giant alien inhabitation, gas giants are assigned Carrying Capacity, RAW, and climate ratings. These values apply almost exclusively to gas giant aliens.

2.1.5.1.1 Gas Giant Carrying Capacity

Gas giant aliens consider all gas giant planets to have Carry Capacities and climate ratings, even if other races do not. During system generation roll 2d6 for each gas giant and assign the result as the planet's Capacity. This Capacity is analogous to the numbers assigned in either 2.1.1.9.2 Gas Siphoning Stations or 3.7.1.2 Gas Giant Siphoning.

The Capacity assigned to a gas giant is treated like any other source of Capacity when it comes to gas giant alien inhabitation. The total number of gas giant alien Census that can inhabit a single gas giant is equal to the planet's listed Capacity.

2.1.5.1.2 Gas Giant RAW

Gas giants have a RAW equal to that of the moons at its location. Gas giants without moons are considered to be RAW 1.

2.1.5.1.3 Gas Giant Climate Ratings

Apply climate ratings to gas giants in the same way that they are applied to non-Hostile planets. Climate ratings affect gas giant aliens in the same way as normal powers, with greater climate variances leading to higher Productivity costs.

Unlike their terrestrial cousins, gas giant aliens consider all gas giants to be fairly conducive to their form of life. There is no differentiation between "types" of gas giants for purposes of climate or climate variance, not like there is between Terrestrial, Adaptable, and Barren rocky planets. All gas giants have a climate modifier of 1 for purposes of purchasing Productivity increases.

2.1.5.2 Colonization

Gas giant aliens are allowed to colonize gas giants exclusively. They may not colonize any other type of planet, including the moons of their own gas giants. They are allowed however to exploit asteroid belts.

2.1.5.3 Lunar Inhabitation

While both a gas giant and its moons are considered to be the same system object for purposes of movement and Defensive scenarios, the two planetary aspects can be colonized separately by different powers. This could be a common arrangement for an alliance including a gas giant alien, the normal empire allowing the gas giant alien to colonize gas giants in its space while its own Census exploits the orbiting moons.

2.1.5.4 Siphoning Stations

Gas siphoning stations occupy a gas giant planet's Capacity, reducing the amount of safely habitable real estate at a gas giant. Each siphoning station in orbit of a gas giant will reduce the planet's Capacity by 1 for purposes of gas giant inhabitation.

A dangerous situation arises when siphoning stations begin encroaching on the inhabited portions of a gas giant. The attempt

to "invade" and siphon off this colonized region of the planet will be met with intense resistance from the local gas giant population.

Whenever the number of siphoning stations and Census at a gas giant is greater than the world's Capacity, there is a chance that one side or the other will take material losses. First, add the number of Census and siphoning stations at the location and subtract the planet's Capacity. Now roll this many d6s to check for the effects of the Capacity conflict. If the d6 result is '1', then all of the gas giant aliens living in that point of Capacity have been sucked up into the orbital heavy machinery and have been killed. Remove 1 Census from the planet. If the result is a '6', then the planet's inhabitants have managed to sabotage one of the orbiting siphoning stations, destroying it. Any other result will have no effect.

It is because of the above repercussions that gas giant aliens really don't appreciate aliens building siphoning stations in orbit of their planets. For each Census killed by orbiting siphoning stations, the gas giant alien receives a cumulative +25% bonus to breaking treaties or declaring hostilities/war against the empire that owns the offending station(s).

2.1.5.5 Orbital Bombardment

Gas giant aliens are all but immune to the effects of orbital bombardment. Enemies can still perform orbital bombardment against gas giant colony worlds, but all missions have their bombardment point costs tripled.

Additionally, weapons of mass destruction have little effect on gas giants. The target numbers for weapon of mass destruction assaults are halved, rounding fractional amounts down. For example, normally a planet with Census 7 would have its Census reduced if a '7' or less was made on the WMD's d10 roll against that statistic. For gas giants, the target number would instead be a '3'. Due to the gas giant's size, WMDs are incapable of reducing the gas giant's Capacity statistic.

2.1.5.6 Planetary Invasions

Only gas giant aliens can invade other gas giant planets. Non-gas giant aliens cannot invade gas giants under any circumstances. This forces non-gas giant empires to either rely on ineffective orbital bombardment to do the enemy in, or else simply admit that a perpetual blockade is going to be necessary to bottle them up for eternity.

On the flip side of the coin, gas giant aliens cannot invade non-gas giant planets. Their physiology likewise prevents ground-based confrontations from ever taking place.

2.2 Exploration Campaigns

Some of the most exciting campaign experiences involve campaigns where a vast unknown frontier awaits the players just beyond the next star. Exploration campaigns provide players with an ever-changing campaign map that keeps players on their toes and introduces additional avenues of territorial expansion. Adding an exploration element to your campaign also makes it easier for additional empires to be introduced as the campaign progresses, providing allies and nemeses to challenge the mettle of the existing player empires.

2.2.1 Setting Up the Map

Upon starting a new exploration campaign, the CM or players will need to setup the map before play can begin.

2.2.1.1 Introduction to the Map Hex System

Similar to the CG 2.3.2 Random Galaxy Generator, an exploration campaign uses a “ring” system to generate and manage the campaign map. At the center of this ring system is the galaxy hub where all active players will begin the campaign.

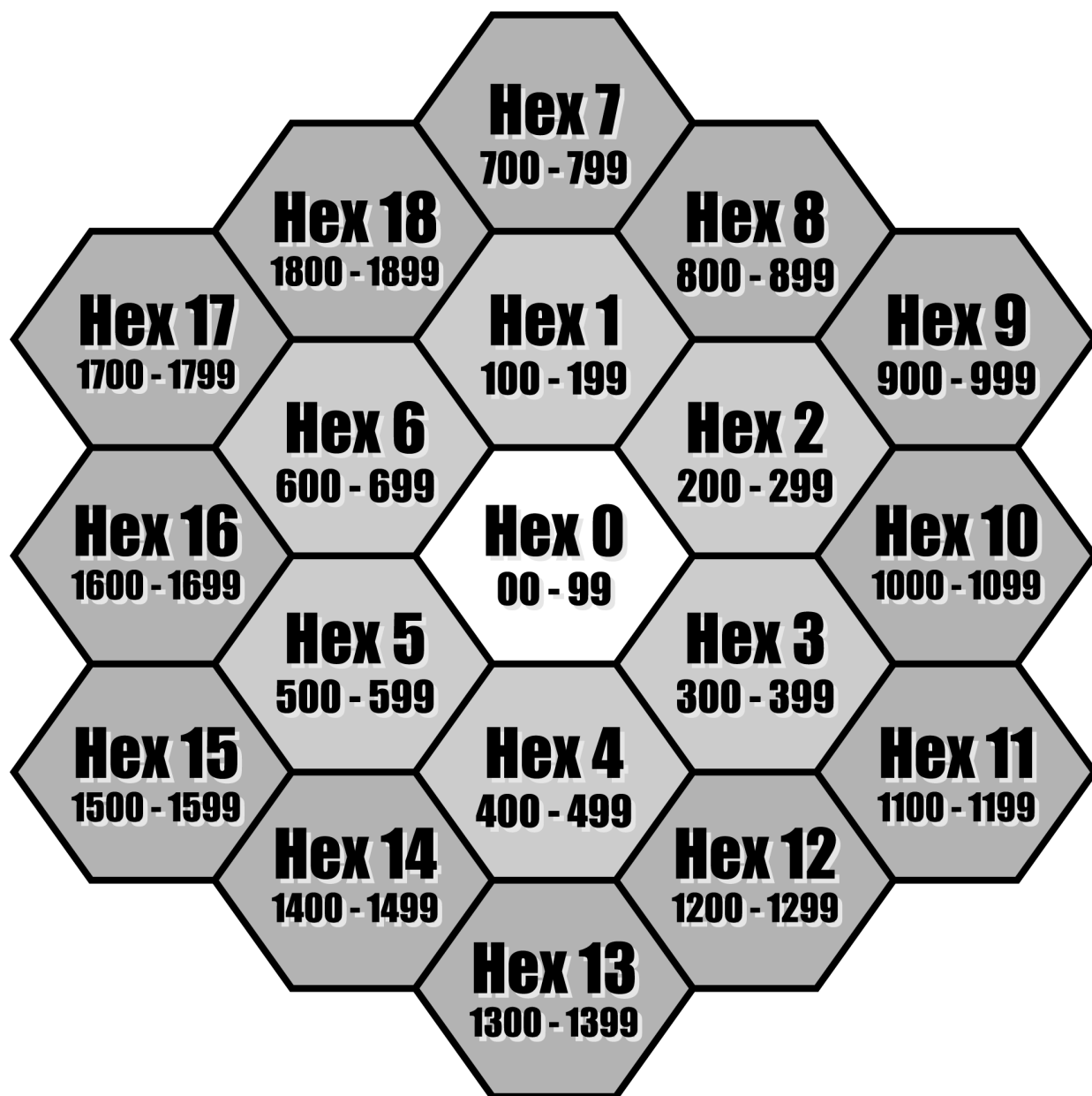
The exploration galaxy map is broken down into a series of *map hexes*, administrative units used to organize and number systems on the map. Each map hex contains a maximum of 100 star systems, numbered 0 – 99. Each of the map hexes is also numbered, starting with 0 for the central galaxy hub map hex and incrementing by 1 in a clockwise manner. The map hex number is appended to the beginning of each system number in that hex to create the system’s final system number. For example, a system with number 56 in map hex 0 would be given the unique identifier of 056, or simply 56. Meanwhile, a system with number 91 in map hex 3 would be recorded as 391. These system numbers are used to uniquely identify each system in the campaign and are used for determining system linkage (see 2.2.3 Generating New Systems).

All player empires will start play within the center map hex (0). This central hex is surrounded by a theoretically infinite number of extra hex ‘rings’. Each of the map hexes that surround the central hex are numbered in order going clockwise around the map (see diagram).

2.2.1.2 Number of Map Rings

All exploration campaigns will include at least one map hex (the galaxy hub). A decision must be made as to how many map hex rings will be allowed in the campaign. The illustration on the facing page shows an exploration map layout that includes two map hex rules (rings 1-6 and 7-18, respectively). Because each map hex can possibly contain as many as 100 systems, the number of map hex rings in your campaign will directly influence the size of your campaign map. If you play only with the galaxy hub, you will be limited to a maximum of 100 star systems. If you add a single map hex ring beyond that, the maximum number of systems increases to 700. Add a second ring and you increase this count to a whopping 1900 systems!

You may have noticed that the preceding paragraphs have referred to the 100 systems per hex as a ‘possible maximum’. The reason for this choice of wording is because it



is quite possible for some systems to never be encountered during the course of exploration. Usually this is the result of few unexplored jump lanes being discovered in the system's region, or if the unexplored lanes that are discovered end up connecting to other, previously explored star systems.

It is completely legitimate to not set an upward limit on the number of map rings in your exploration campaign. Players' exploration efforts and their results will largely define how far out into the abyss their empires expand. From a CM's standpoint however, it might be prudent to put a hard limit on the size of the

galaxy map so as to save your own sanity. Ask yourself, "Do I want to generate turn orders for empires that control hundreds of star systems each?" The more star systems that are possible in your campaign, the greater the chance that one or more empires will grow to megalithic proportions.

As a rule of thumb, a campaign should include roughly 25 systems per active player empire in order to give each of them ample expansion room. The galaxy hub itself could comfortably handle up to four player empires with little problem. If a campaign has more players than this, a map ring should be added

to give the players more room to grow and develop. Adding a second map ring (and another 1200 systems) would likely only be done in cases where your campaign includes more than 14 players.

2.2.1.3 Cluster Size

A *cluster size* is a device used to determine the range of system number values that any one system can connect to. By using a cluster size, systems on the campaign map will tend to connect to systems with system numbers close to their own. This will lead to segmentation of your map, creating discrete sections of the map that might be excellent defense bastions for player's empires while improving the readability and usability of your galaxy maps.

There are three different default cluster sizes to choose from. Each provides a different amount of galaxy segmentation. Each cluster size provides a method for determining the system number of newly explored star systems. The larger the cluster size, the greater the range of system numbers any one system can possibly connect to. The medium cluster size is recommended for most games.

Small Cluster Size: Roll d100, subtract 50 from the result, and divide by 5. Round all fractions normally. Galaxy maps that use small cluster sizes will find most systems being connected in an interlocking web of neighboring systems. Very few disconnected star chains will exist, and in general all player empires will be closer together. (± 10 system number range of linked system values)

Medium Cluster Size: Roll d100, subtract 50 from the result, and divide by 2. Round all fractions normally. The medium cluster size is the normal cluster size. It provides a modest range of values, allowing for new jump lanes to lead to systems a moderate distance away. It is suited for all sizes of campaigns and is recommended for play. (± 25 system number range of linked system values)

Large Cluster Size: Roll d100 and subtract 50 from the result. This largest cluster size gives the largest range of possible system values, but has the potential to make the map particularly intertwined towards the later stages of the game. The advantage is that there will be few if any separate pockets of stars to limit player movement on the galaxy map. (± 50 system number range of linked system values)

2.2.1.4 Player Starting Locations

When generating a new campaign map, the CM is responsible for generating each player's starting location. This includes assigning system numbers to home systems, rolling for the number of unexplored jump lanes in each system, and (optionally) setting up the empires' starting territorial holdings.

2.2.1.4.1 Assign Homeworld System Numbers

The first step in creating the map is to assign system numbers to each player's homeworld system. Three options are given below for assigning system numbers to homeworld systems.

Option 1: Assign Homeworlds Across Range

The first option for assigning homeworld system numbers is to equally space player homeworlds within the initial galaxy hub. To do this, divide 100 by the number of players in your campaign (round naturally). The result is what is called a *system spread*. Now, assign the first homeworld a system number equal to half the system spread (round naturally). For each additional homeworld, add the system spread value to the previous homeworld's system number to calculate its system number.

Example: A CM is assigning homeworld system numbers for his new campaign, which will include seven player empires. 100 (number of systems) divided by 7 (number of players) equals 14.3, which rounds to 14.

The system spread is now equal to 14. The first homeworld is assigned a system number of 7 (half the system spread). The remaining homeworlds are assigned numbers as follows: 21, 35, 49, 63, 77, and 91.

In exploration campaigns with more than 10 players and one or more map hex rings, an additional option is available where players beyond the first 10 will begin play in one of the surrounding map hexes in the first hex ring instead of in the galaxy hub map hex. Set the system spread to 10 and place the first 10 player homeworlds as normal. For each additional homeworld, start in map hex '1' and work clockwise around the ring placing one homeworld in each map hex with a system number of 5 within that map hex. The final system number will of course have the map hex number appended to it, converting them to 105, 205, 305, and so on. If you have more than 16 players in your campaign, work around the first map ring a second time, placing remaining player homeworlds in system 115, 215, 315, and so on until all player homeworlds are assigned a system number.

Once a system number is assigned, the homeworlds can be placed on the campaign map. The placing of these systems should be done in such a way that their positions line up with their locations on the galaxy map hex layout.

Option 2: Randomly Assign System Numbers

If you prefer to have homeworld starting locations be purely random, roll d100 for each homeworld and assign the result as the system's number. No two homeworlds can share the same system number so re-roll any duplicate results.

The primary disadvantage of random system number assignments is that it can confer an unfair advantage to a player. With an isolated starting position, a player can benefit from undisputed exploration and expansion in their region of the map. Conversely, those players that start the campaign in very close proximity to one another will have less room to expand

and might suffer from early conflicts that will stunt their future growth and may make them less competitive.

Option 3: CM's Choice

A CM may choose to assign homeworlds as he or she sees fit. This option can be quite a bit faster and will allow a CM to position empires in either historically accurate locations or otherwise tailor the map to be more conducive for play.

Once the homeworlds have been placed on the map and assigned system numbers, apply the default homeworld system statistics.

2.2.1.4.2 Roll for Unexplored Jump Lanes

Roll on the Unexplored Jump Lane Number Table (see 2.2.3 Generating New Systems) to determine the number of unexplored jump lanes each homeworld possesses. Each homeworld will start with at least 1 and as many as 6 unexplored jump lanes. Players can then begin exploring these jump lanes once the campaign begins.

2.2.1.4.3 Generate Player System Rings (Optional)

In most cases it is recommended that each player begin play with several nearby systems already explored and colonized. This provides the empire with some initial assets beyond its homeworld and will shave several game years of early exploration and development off of the campaign. For play-by-email campaigns this can be especially valuable, but even local players are likely to appreciate this jump-start.

Using the homeworld as a kind of "ring hub," perform pre-campaign exploration for each of its unexplored jump lanes. These systems are generated using the standard rules (see 2.2.3 Generating New Systems). Once this next ring of systems is generated, a CM can elect to continue generating as many additional rings of pre-explored systems as desired. It is

not recommended to generate new systems for unexplored jump lanes more than two jumps from the player's homeworld.

When generating player system rings, some players may be shorted in that their homeworld or other resulting systems have far fewer unexplored jump lanes to exploit. If this is the case, it is advisable that even additional unexplored jump lanes be explored in the empire's outermost ring to allow it an adequate starting territory size, specifically one comparable in size to those held by other players.

Once all pre-game exploration and system generation is complete it is time to begin putting colonies into the systems. The placement of colonies into these systems is an extremely delicate situation. CMs should analyze three factors: number of colonies, total system output, and future colony potential. Each of these factors should be balanced to make sure that no one player starts with an unfair advantage.

Number of Colonies: A large number of colonies can be both a boon and a curse, depending on the quality of the colonies. In general, the more colonies an empire has the more spread out its military will be. This can cause problems when it comes to defending the empire's territories, especially in the early game.

Total System Output: The starting total system output of each empire should be kept roughly the same so that no one player has a distinct economic advantage. Small variances of up to +/-10% are to be expected, but parity must be maintained between the empires.

Future Colony Potential: Perhaps the most important factor for a CM to look at, the future potential of a colony is the efficiency at which a system can produce greater wealth for the owning empire. For example a system with RAW 4 that is producing 4 economic points of output with 1 Productivity may look roughly equal to a RAW 2, Productivity 2 system that

also produces 4 economic points. However with the RAW 4 system would be able to double its output to 8 economic points just by purchasing one more Productivity level! The RAW 2 system would require an investment of 70 economic points to do the same, compared to the 20 economic points paid by the RAW 4 system.



CM's Note: A CM's interaction in this process is very important. It is highly likely that the CM will have to adjust starting system values in order to achieve balance between the players. This may mean increasing/decreasing system statistics, adding/removing colonies, etc. in order to make sure that all of the players are on a roughly equal footing.

2.2.1.5 Setting Up Starting Assets

Initial player setup follows the basic rules outlined in the CG 2.5 Setting Up the Game. In summary, each empire will be given a number of points (typically equal to 4 times equal to its total domestic product) to spend on starting assets. Any leftover points are placed in the player's point pool. Your scenario may also determine what other starting units each empire will receive at the start of the campaign. For example, it is common for empires to be given one or more of each type of civilian fleet to begin the campaign with.

2.2.2 Scouting and Exploration

In order to expand their empire's sphere of influence, players will need to form scouting forces and dispatch them on missions of exploration. These scouting forces will be used to explore out into the uncharted territories, opening up new worlds for colonization and exploitation.

2.2.2.1 Forming Scouting Forces

Exploration is performed by scout fleets that go out into the unknown and search for the telltale signs of ancient stars and alien worlds.

The actual exploration mechanics vary from setting to setting. Within some settings exploration will actually be fairly straightforward, a captain needing only to point her ship's bow towards the nearest dot of light on the horizon to find brave, new worlds to explore. In others, inter-dimensional travel makes exploration an uncertainty and something not to be undertaken lightly.

In their simplest form, a scouting force is simply one or more ships within a single fleet assigned to explore on any given turn. Scouting forces do not necessarily have to include Scout or Explorer vessels, though their inclusion in scouting forces increases the odds of success (and survival) dramatically.

2.2.2.2 Assigning Scouting Forces

Scouting forces are assigned to exploration during the Turn Orders Phase as part of a player's regular turn orders. Exploration orders authorize a scouting force to go out into the unknown and begin looking for and charting new star systems. These orders are extremely general, and the system targeted for exploration is selected at the discretion of the scouting force's captain. What this means is that a power will not know where their scouts will end up as a result of their exploration efforts. If an exploration attempt succeeds, the scouting force will explore a random unexplored jump lane connected to the system.

2.2.2.3 Exploration Attempts

Exploration attempts are made in systems that contain one or more unexplored jump lanes. Unexplored jump lanes are typically represented on the map either as jump lanes that emanate from a system but lead nowhere, suggesting that their destinations remain unknown. Any scouting force that begins the campaign turn in one of these systems can be given orders to perform an exploration attempt.

Scouting forces assigned to perform exploration missions will roll on the Exploration Attempt Table during the Movement Phase, after all other fleet and unit movements are

completed. The scouting force receives a bonus to the attempt equal to the full scout function rating of the best scout in the force, and an additional bonus of +1 per 2 scout functions produced by other scouts in the force (rounding fractions up). Scout function or exploration bonuses provided by elite officers are added to their command ship before calculating these bonuses.

Exploration Attempt Table (Roll 2d6)

Result	Effect
2-4	Scouting Force in Peril
5-11	No Result
12 or more	New System Found

Modifiers:

+1 per scout function (best Scout/Explorer in scouting force)

+1 per 2 scout functions (remaining Scouts/Explorers in scouting force)

A natural result of '2' ("snake eyes") on the Exploration Result Table will always result in a Scouting Force in Peril despite any scout function modifiers.

Example: A scouting force containing a Scout (3) cruiser, a Scout (2) light cruiser and three Explorer (1) corvettes would receive a +3 bonus from the best scout in the fleet (cruiser) and a +3 bonus from the remaining scouts in the scouting force for a total bonus of +6.

The fleet rolls on the Exploration Attempt Table with a result of '5'. The scouting force's +6 modifier is added to this result, giving a total modified result of '11'. The force has failed its exploration roll and has found nothing. The force would have needed a result of '6' or better on the dice to find a new system. Luckily the fleet has enough scout functions to prevent it from



being put in peril, since the lowest modified result the fleet can make is an '8'.

Exploration attempts can be disrupted by attacks on their system of origin. Upon entering the system, the enemy force will be presented with the option of accepting an Interception scenario with each of the scouting forces attempting to explore from the invaded system. Follow all of the normal rules for Interception scenarios outline in CG 3.6.3.2 Interception. Only the members of the scouting force may participate in the scenario; the Intercepted force's other local defenders are specifically disallowed from joining battle in defense of their Intercepted scouting force! If the scouting force survives the scenario they will proceed with their exploration attempt. The scouting force will not be eligible to participate in any other scenarios generated in the invaded system on the current campaign turn, though they may still be forced into a combat situation in any system they successfully explore.

2.2.2.3.1 Result of the Exploration Attempt

Rolling on the Exploration Attempt Table can end with one of three results. The most common result will be 'No Result', indicating that the scouting force was unable to find a navigable path along the unexplored jump lane. A second result, and the most preferably of the three, is the discovery of the star system located at the other end of an unexplored jump lane. Finally, the third (and worst) result is that the scouting force has found itself "in peril" and are going to have to fight to survive if they hope to make it home.

No Result: The exploration attempt failed and the scouting force was unable complete the mapping of the route. The scouting force will return to its system of origin and can attempt to explore again on the following turn.

New System Found: When a new system is found, randomly determine which unexplored jump lane is to be explored. This can be done by assigning each link a number or numbers corresponding to the sides of a

die. The die is then rolled and the jump lane assigned the resulting number is selected as the newly explored jump lane.

Once the link to the new system is determined, you can then move on to 2.2.3 Generating New Systems.

Scouting Force in Peril: With the 'Scouting Force in Peril' result, the scouting force has found itself in danger of becoming hopelessly lost. Roll 2d6 for each scouting force in peril, adding +1 per 2 scout functions in the force. If the modified result is '6' or less, the scouting force is lost. When this occurs, all units in the scouting force are automatically destroyed. Otherwise the scouting force will return to its originating system and can attempt to explore again on the following turn.

2.2.3 Generating New Systems

Once a scouting force has explored a previously unexplored jump lane it becomes necessary to evaluate the result of their successful exploration attempt. This section includes the steps that must be completed to finalize the exploration of the lane and the generation of any new systems resulting from the attempt.

1) Determine System Number

The first task when generating a new system is to determine the destination system's system number. To find this number, make a cluster size roll (see 2.2.1.3 Cluster Size) and add the result to the system number of the system from which the scouting force arrived.

Example 1: A scouting force in system 87 makes a successful exploration attempt roll. To find the system number, the player makes a cluster size roll. Their campaign uses the medium cluster size, so he rolls d100 (result: 69), subtracts 50, and then divides by 2, for a final result of 10. This value is then added to the originating system's number. The new system has a system number of 97.

If a system with this system number already exists on the map, then the newly explored jump lane connects to that previously explored system. Remove one unexplored jump lane from the target system (if applicable) and connect the jump lane. If no unexplored jump lane exists at the target system, the jump lane will still connect to this system, but the roll on the Jump Lane Class Table is rolled at a -3 penalty.

Example 2: Proceeding from the previous example, system 97 has already been explored by another power. The system has a total of four jump lanes and two of them are unexplored. The newly explored jump lane out of system 87 will connect to system 97, and one of the two unexplored jump lanes in that system will be removed from play.

Finally, if your campaign includes multiple map hex rings, any system number result which is outside the current hex's range of values (0-99) will connect to a system in a nearby map hex ring.

If the new system's number is equal to or greater than 0, subtract 100, otherwise add 100. Then, add the map hex's identifying number to the front of the result. This will give you the new system's final system number.

Example 3: Scouting from system 97, we discover system 112. 112 is outside the map hex's range of possible values (0-99) so it is located in another map hex. We choose to place this in map hex 2. Since 112 is greater than or equal to 0, we subtract 100 from it, giving us a result of 12. This system is system number 12 in map hex 2, and has a unique identifier of 212.

Example 4: Scouting from system 5, we discover system -18. -18 is outside the map hex's range of possible values (0-99) so it is located in another map hex. We choose to place this in map hex 6. Since -18 is positive, we add 100 to it, giving us a result of 82.

Exploration System Generation Tables

System Importance Table (Roll 2d6)

Result	Colony Size	System Importance
2-3	Minor Outpost	Unimportant System
4-5	Outpost	Unimportant System
6-8	Minor Colony	Minor System
9-10	Colony	Minor System
11-12	Major Colony	Major System

(Note: Minor systems are more common than unimportant systems, because truly unimportant systems are not even on the map)

Jump Lane Class Table (Roll 1d6)

Result	Jump Lane Class
1 or less	Restricted Lane
2	Unimportant Lane <i>(if used, otherwise Restricted Lane)</i>
3-5	Minor Lane
6+	Major Lane

Modifiers:

- Homeworld +2
- Major +1
- Unimportant -1
- No unexplored jump lanes in system -3

Unexplored Jump Lane Number Table (Roll 2d6)

Result	Number of Unexplored Lanes
2-3	0
4-5	1
6-7	2
8-9	3
10-11	4
12	5
13+	6

Modifiers:

- Homeworld +2

Exploration System Generation Tables (cont.)

Exploration Special Traits Table (Roll 2d6)

Result	Special Traits
1 or less	No Specials
2	<i>Census</i> : Fair Government (Morale +1) <i>No Census</i> : Rich in Rare Metals (RAW +1)
3-5	Rich in Rare Metals (RAW +1)
6	<i>Census</i> : Expanded Industry (Productivity +1) <i>No Census</i> : Fair Climate (Capacity +1)
7	Rich in Precious Minerals (RAW +2)
8	<i>Census</i> : Mature Industry (Productivity +2) <i>No Census</i> : Ideal Climate (Capacity +2)
9	<i>Census</i> : Expanded Population (Census +1, Morale +1) <i>No Census</i> : Fair Climate (Capacity +1)
10	<i>Census</i> : Fair Biosphere (Census +1, Capacity +2) <i>No Census</i> : Special Encounter (Roll on Special Encounter Table)
11	Special Resources (Special Resources +1, or RAW +3)
12	<i>Census</i> : Gaia World (Census +1, Morale +1, Productivity +1, Capacity +1, Climate Rating equal to discoverer's homeworld) <i>No Census</i> : Special Encounter (Roll on Special Event Table)
13 or more	Roll Twice

Modifiers:

Minor Outpost -2
 Outpost -1
 Colony +1
 Major Colony +2

Unimportant roll once, Minor roll twice, Major roll thrice

This system is system number 82 in map hex 6, and has a unique identifier of 682.

The decision as to which surrounding map hex a new system should be positioned in will be dictated by the map location of the origin system. Usually the nearest map hex will be the preferred location for any new out-of-hex system generation result. However, their

placement is also dependent on the location of systems with similar numbers in the target map hex. If these other similarly numbered systems are on the other side of the map hex, then it will be a better solution to instead place the new system in another nearby map hex.

Ultimately the decision on new system placement within the map hex system should

Exploration System Generation Tables (cont.)**Exploration Special Encounter Table (Roll 2d6)**

Result	Effect
2	Pirate Cache (+4d10 economic points)
3	Pirate Cache (+2d10 economic points)
4-5	Ancient Ruins (See 2.6 Ancient Ruins for effects)
6-7	System Terrain (Roll on System Terrain Table)
8-9	Ancient Derelict (See 2.7 Ancient Derelicts for effects)
10	Small Splinter Colony (Census +2, Morale +1, Productivity +1)
11	Large Splinter Colony (Census +3, Morale +2, Productivity +2)
12	Mysterious Encounter (CM Only) or Roll Twice

Exploration System Terrain Table (Roll 1d10)

Result	Effect
1-2	Asteroid Field
3	Dense Asteroid Field
4-6	Nebula
7	Dark Matter Nebula
8	Maser Nebula
9-10	Dust Cloud

be left up to the CM. CMs (or players) should use their best judgment when placing systems.



CM's Note: It will become evident that the map can become a nightmarish web of star systems after awhile. Because of this you may not wish to allow a particular jump lane to connect to the indicated, already generated system. In these instances first look to see if doing the opposite arithmetic operation (addition instead of subtraction, subtraction instead of addition) will create a better system result. Otherwise just re-roll until a suitable destination system number is generated.

2) Roll for Importance on System Importance Table

As with the normal VBAM system generation rules (CG 2.3.2.4), roll on the System Importance Table to find out what level of importance the newly discovered star system has. Unlike the core rules, however, this importance is more a reflection of economic worth, not its strategic importance.

Note: If you are using one of the 2.1 Advanced System Generation Systems, refer to those rules to determine system importance.

3) Roll for Jump Lane Class

Unlike the standard rules, the jump lane class is not based on system importance. The original system assumes that systems of a higher importance are connected by faster jump lanes. In an exploration campaign this does not hold true. Use the following Jump Lane Class Table to determine the class of any newly explored jump lane.

4) Roll for Number of Unexplored Jump Lanes

For each new star system, roll on the Unexplored Jump Lane Number Table to find the number of unexplored jump lanes in the system. These lanes are in addition to the lane that the scouting force used to reach the system. The existence of these unexplored lanes is known, but not their destinations.

5) Roll for Additional Special Traits on the Special Traits Table

The Special Traits Table used in these exploration rolls differs from that found in the VBAM Campaign Guide. This table is designed to provide results consistent with the discovery of uninhabited star systems.

In order to maintain rules consistency between the two Special Traits Tables, many effects on the Exploration Special Traits Table include entries for both inhabited and uninhabited systems. This allows the table to be applied uniformly when using the exploration rules in your campaign.

2.2.4 Exploration and NPE Activation

As existing player and NPE empires explore new star systems, there is a chance that they will encounter other previously unknown alien civilizations. The development of these civilizations can vary widely and are as likely to welcome curious explorers with stone tools as with they are starships.

A NPE activation roll is made for each newly explored star system. After determining the new system's System Importance, roll a

percentile die to check for NPE activation. The base NPE activation chance is 5%, modified as follows: +5% Minor Colony; +10% Colony; and +15% Major Colony. If the activation roll is less than or equal to the modified activation chance, then a new alien civilization has been discovered.

If the campaign is using the 2.1 Advanced Star Systems Rules, only a single NPE Activation roll is made for each new system.



CM's Note: CMs are encouraged to increase or decrease the NPE activation chance as they see fit in their campaigns. Increasing the NPE activation chance will make encountering new aliens more common and make exploration more of a gamble. The more NPEs that are activated in the campaign, the more potentials for interaction for your players. However, it also means more bookkeeping for the CM, and too high a chance of NPE activation will make players "stay home" instead of exploring nearby systems for fear of activating a hostile NPE.

2.3 Star System Surveys

Some campaign settings may require extended surveys to be conducted before the newly explored star system is fully mapped. It takes time for science crews to complete detailed analyses of the system bodies in the system. Sensor readings must be taken, geologic samples acquired, and planetology reports files before the exploring empire will know what it is they have really found.

2.3.1 System Survey

Upon entering a new star system, a scouting force performs a system survey in order to gather basic data on the disposition of

the star system. The system survey provides the following information:

- The size and type of all stars in the system (high-detail only).
- The number of system objects in the system, as well as their size and type.
- The number of moons orbiting each planet.
- The number and position of all jump lanes connecting to the system.

No other data about the system objects will be available without performing planetary surveys. In effect, this means that the surveying player will only know the system object type and very little about its other relevant statistics. In the case of the Admiral system generation system, the survey reveals the size and type of the system object, but does not betray any information relating to the object's RAW.

Although detailed data on the system objects will not be available until after the completion of a system survey, if any technological civilizations (IND-2 and above) have colonies or their homeworld in the system, their presence will be readily identifiable even by this cursory scan and their position(s) revealed.

2.3.2 Planetary Surveys

For each system object, it takes one scout function (generated by either a Scout or Explorer vessel) to perform a detailed planetary survey. The planetary survey involves visiting the planet, mapping its surface, and studying the local environment. In the case of planets, detailed information on the planet's moons will also be captured during the survey of the planet itself.

When a planetary survey is completed, finish generating stats for the system object and any associated moons. This full information will then be available to the surveying player.

2.4 Terrain Features

One of the elements that CMs can add to their campaigns to make the universe a livelier place is *terrain features*, or simply *terrain*. Terrain includes things such as asteroids, dust clouds, and nebulae. These landmarks fill their entire system and it is impossible to avoid their effects while traveling through the affected area.

2.4.1 Asteroid Fields

Many star systems, including our own, contain asteroid fields. The presence of asteroids in a system provides several benefits.

2.4.1.1 Asteroid Combat

If a scenario is generated in a system containing one or more asteroid fields, or if the battle is specifically taking place at an asteroid field system object, squadrons have the option of entering the asteroid field in search of protection from the enemy fleet. During the Assignments Phase of the combat round, a player declares whether or not one or more of his squadrons is hiding within the asteroids.

All units within an asteroid field have their combat factors halved (rounding up) as a result of the high concentration of asteroids preventing a clear firing solution. However, these asteroids effectively reduce the enemy's ability to hit them. It takes 50% more damage points (round up) to inflict a single point of damage against units hiding in asteroids. For example, a destroyer with a Defense Value of 5 would require 8 points of damage to cripple instead of 5. If the scenario is taking place in 2.4.1.3 Dense Asteroid Fields, this bonus is increased so that it takes 2 raw damage points to score 1 point of damage against the target hiding in the asteroids.

Any squadrons hiding within an asteroid field are put into a level 1 formation bonus (level 2 for dense asteroid fields). These squadrons cannot benefit from any other formation

bonuses, nor can their formation bonus be lowered. Directed damage against targets hiding in asteroids is unaffected by the damage penalty mentioned in the preceding paragraph. Hunting down individual ships in an asteroid field is easier than pursuing a full fleet action in that environment.

All of the bonuses and penalties associated with asteroid combat remain even if all opposing squadrons are “hiding in the asteroids” during the battle. The asteroids simply remain too much of an obstacle to be overcome.

2.4.1.2 Asteroid Fields

Normal asteroid fields are fairly common and often develop during the course of stellar evolution. Within a campaign, any system that contains one or more asteroid fields is considered to have the asteroid fields terrain effect applied to it. Asteroid fields can be generated either as a result of a roll on a special traits table or as a system object created during advanced star system generation.

In addition to their combat effects, asteroid fields also have an effect on CG 4.22 Stealth and Concealed Movement. Pirates often operate out of hidden bases carved out of asteroids, retreating to these safe havens after each run. Units purposefully attempting to conceal their presence in a system gain a –10% bonus to detection attempts. Note the wording; this benefit only applies to those fleets that are intentionally attempting to avoid detection.

2.4.1.3 Dense Asteroid Fields

Some systems are home to abnormally high numbers of asteroids. These vast asteroid fields dwarf our own familiar asteroid belt and is more akin to the types of asteroid fields depicted in popular science fiction.

These asteroid fields are extremely rich in valuable minerals and other resources, making them a particular boon to the systems in which they are located. Any system that is

noted as having dense asteroid fields receives a +1 RAW bonus.

As with 2.4.1.2 Asteroid Fields, dense asteroid fields also have an effect on CG 4.22 Stealth and Concealed Movement. Units purposefully attempting to conceal their presence in a system gain a –25% bonus to detection attempts. Note the wording; this benefit only applies to those fleets that are intentionally attempting to avoid detection.

2.4.2 Nebulas

Nebulas are vast interstellar clouds of dust and gas that give life to new seedlings that will one day be the elder stars of a later stellar generation. Although rare, nebulas can sometimes be found in close proximity to inhabited star systems, their wispy essence infringing on the star’s territorial domain.

Nebulas provide little in the way of tangible benefits, but they are extremely beautiful. Any colony in a system containing a nebula doubles the result of all positive Morale bonuses due to the sheer beauty of the surrounding nebula.

Navigation through nebula systems can be extremely difficult. Careful travel routes are needed to ensure safe travel. The CG 4.22 Stealth/Concealed Movement rules always apply to travel in nebula systems, and all ships have a –40% bonus to their chance of detection when moving through nebula systems.

Luckily, most types of nebulas do not impede lines of supply. To the contrary, many empires place important orbital supply depots within the heart of the surrounding nebula to help conceal it from discovery.

2.4.2.1 Nebula Combat

For systems containing nebulas, there is a chance that any Interception, Deep Space or Pursuit scenarios, but never a Blockade or Defensive scenario (unless at a non-planet system object), will take place within the nebula. The base chance for a nebula combat scenario to be generated is 25%, but the system may be noted as being with an especially thick nebula

formation. In these cases the CM should record the base chance of nebula combat as part of the system's special notes, such as by recording "Nebula (75%)" in the system's information.

Combat in a nebula can be frantic and confused. All combat values are halved, energy-shielding devices do not function, all parties receive a -4 modifier to their surprise rolls, and all squadrons are considered to be in a formation bonus 1 level higher than normal.

2.4.2.2 Dark Matter Nebulas

A dark matter nebula is a special type of nebula that is only rarely encountered in the galaxy. These mysterious formations make detection nearly impossible and combat incredibly frenetic. All fleet movements through a system containing a dark matter nebula have a -60% modifier to detection instead of the normal -40% (see CG 4.22 Stealth and Concealed Movement). The difficulty involved in navigating dark matter nebulas also means that supply lines cannot be traced through the system containing the dark matter nebula unless a supply depot is built in the system.

The nebula's negative effects on long-range sensors make it extremely difficult for intelligence operations to be performed in a system containing a dark matter nebula. Because of this it takes 1 Intel point to launch a mission of any kind through this system. Any mission which moves through the system must also pay twice the normal range penalty (2 Intel instead of 1 Intel). The Intel point used to allow the mission to pass through the system does not count towards the mission's chance of success.

In combat, a -6 surprise modifier is applied to all surprise rolls rather than the standard -4. All other rules for 2.4.2.1 Nebula Combat apply to combat dark matter nebulas.

2.4.2.3 Maser Nebulas

Maser nebulas are particularly vicious and deadly maelstroms and as a general rule not an environment to be actively sought out. The energized nature of the nebula makes

travel extremely tenuous. Civilian craft cannot hope to navigate maser nebulas and as such avoid systems containing maser nebulas. Supply lines cannot be traced through a maser nebula system. Supply depots can be built within the system itself to provide supply to units within the system, but their supply range is effectively zero.

All the standard rules for nebula combat apply to maser nebulas.

2.4.3 Dust Clouds

Young stars are often surrounded in dense clouds of particulate matter. The protoplanetary disks of these stars have not yet fully accreted, and the dust clouds fill the entire star system. Although often beautiful to behold, they pose a special danger to starships. Vessels must be careful to travel only along previously charted paths when passing through the system, lest they suffer damage or destruction by impacting a large concentration of debris.

Any Interception, Deep Space or Pursuit scenarios – but never a Blockade or Defensive scenario (unless at a non-planet system object) – generated in a system containing a dust cloud will take place within the dust cloud. While within the dust cloud, all normal formation bonus levels are reduced to 0. Only formation bonuses provided by friendly scouts apply in dust cloud combat situations.

2.5 Special Resources

Many backgrounds make use of a special or rare substance that is of great strategic or economic value. Collectively, these substances are referred to as Special Resources. The way that a VBAM campaign handles Special Resources will differ from campaign to campaign, but in general Special Resource deposits in a star system will provide

an advantage to the players that control them. Some possible advantages are listed below.

Trade Advantage

The Special Resource conveys a commerce benefit to the player owning the system. Once colonized, the system will produce an amount of bonus income equal to the system's output (RAW times Utilized Productivity) for purposes of trade only. This trade bonus is added to any and all trade routes that pass through the system and is in addition to the system's normal output. In other words, the existence of significant Special Resource deposits in a system can significantly increase its income potential should enough friendly trade routes connect to the system! Unlike some other advantages, a trade advantage cannot be transferred to another system.

Example: A system with a RAW of 3 is determined to contain Terrentium Deposits during system generation. The system is colonized and a single Productivity built by the new owner. The system will generate its normal 3 economic points (RAW 3 x Productivity 1), but will also generate a +3 economic point trade bonus, which is added to all trade routes connecting to the system.

Military Advantage

The Special Resource can be used to enhance the defensive or offensive capabilities of the unit. If a Special Resource is to confer a military advantage to the owner, select which unit statistic will receive a bonus and the amount of that bonus. The amount of benefit from the Special Resource can either be fixed (ex: +1 DV) or relative (ex: +20% AS, rounding up), and can affect either space or ground units.

Each turn, the system may apply this Special Resource bonus to a number of new construction units in the system equal to the system's Utilized Productivity. This military bonus applies only to units purchased in the system containing the Special Resources unless the empire uses Transport Fleets to

transfer access to the Resource to other neighboring systems (see 2.5.2 Transferring Special Resources).



CM's Note: Creating a Special Resource that provides a military advantage can be unbalancing in the long-term. Special care should be taken to ensure that the advantage conferred by this Special Resource will not be abused.

Scientific Advantage

The Special Resource exhibits several fascinating characteristics that can be applied to continuing research projects throughout the empire. Once colonized, the system will provide 1 free point of tech investment each turn per Census. This is in addition to any other tech bonuses provided by the system. Scientific advantages cannot be transferred to other systems under any circumstances. Their naturally occurring nature forbids it.

Morale Advantage

The Special Resource has a calming or mollifying effect on a population. Once colonized, the system will receive a -1 bonus to all Morale check rolls made in the system. Any system to which the Morale Advantage is transferred will also receive this advantage. There is no limitation on the number of systems that can benefit from this Morale bonus. However, should a system's access to this Special Resource be cut off during the Morale and System Loyalty Phase (either voluntarily or involuntarily), the system's Morale will immediately drop by 1.

FTL Drive Advantage

The Special Resource is an integral component in the production or maintenance of FTL drives. Once colonized, the system will generate enough of the Special Resource to drop the cost of FTL-equipped units by 1 economic point on a number of ships equal to the system's Utilized Productivity. If the unit's

cost is already only 1 economic point, then the Special Resource has no effect.

This economic bonus applies only to units purchased in the system containing the Special Resources unless the empire uses Transport Fleets to transfer access to the Resource to other neighboring systems (see 2.5.2 Transferring Special Resources).



CM's Note: If including a Special Resource with a FTL drive advantage in your campaign, it is advisable that you increase the base cost of FTL-equipped units accordingly. This change will help to balance the effects of the Special Resource while also making it more valuable.

2.5.1 Effects of Multiple Special Resources Results

If during system generation a system receives one or more Special Resources results on the Special Traits Table, the CM must first determine which specific Special Resources exist in the system (if more than one type of Special Resources is being used in the campaign). The resource types in the system can be selected at random (recommended) or at the discretion of the CM (if related to an overarching campaign plot).

The effects of multiple Special Resource results of the same type in a system are cumulative. In the cases of those advantages which give economic or combat abilities, only the number of ships that can be built with this advantage is increased.

2.5.2 Transferring Special Resources

A player can transfer the effects of Special Resources in one or more systems by using a chain of Transport Fleets to link the source and destination system in the same way that remote base construction is already conducted (see CG 3.7.4 Base Construction). One Transport Fleet must be present in every

system between the source and destination system and not be given any other orders during the period it is assisting in the transfer of Special Resources. If these conditions are met, then each chain of Transport Fleets will allow the player to transfer up to 10 points worth of the resource's bonus from the source system to the destination system. The points transferred are NOT in addition to those generated by the system. The transfer of these points to another system will deny their use in the source system as well as any other system attempting to transfer the Special Resource bonus.

Note that some of these advantages state that they cannot be moved. If your campaign calls for a special resource that conveys multiple advantages and some of them are not mobile, the resource may still be transferred, but the non-transferable resource effects will remain active in the source system only while the other transferable effects will be moved to the destination system.

2.5.3 Special Resources and Raiding

The presence of an exploited Special Resource deposit in a system gives raiders an incentive to move their operations into a system. The value of Special Resources on the black market is high, high enough to warrant pirates launching ever-riskier raids in hopes of hitting the mother load.

For every system that contains one or more Special Resources, increase the Raiding chance in the system by 5% times the system's Utilized Productivity.

2.6 Ancient Ruins

The stars were not empty before the emergence of the current batch of sentient, interstellar species. Across thousands of worlds sprawl the withering remnants of fallen civilizations and long extinct species. Glittering cities, bathed in darkness and abandoned for

millennia. Hidden grottos, silent except for the slow but steady pulse of dormant equipment. These mysterious remnants of ancient empires can be of great archaeological and technical interest to an empire. The secrets of the alien technology hidden on these worlds can provide an immediate benefit to the first empire to find and excavate such alien ruins.

The first player to encounter a system with Ancient Ruins present on its surface receives a tech investment bonus equal to 2 times the system's Carrying Capacity statistic. If significant ruins are present (e.g., more than one Ancient Ruins special trait result was rolled for the system), the amount of bonus tech investment is doubled for each additional level of the Ancient Ruins special trait in the system. After the system is first surveyed, all relics of any import have already been scavenged and future players will not receive any tech investment bonus for locating the system.

Example 1: A Minor Colony system (Capacity: 6) is determined to have Alien Ruins. The first player to enter the system will receive a bonus to his or her tech investment equal to 2 times 6, or 12 points.

Example 2: A Minor Colony system (Capacity: 6) has Alien Ruins applied twice when generating the system's special traits. The first player to enter the system will receive a bonus to his or her tech investment equal to 2 times 6 times 2, or 24 points of additional tech investment.

Once colonized, a planet with Ancient Ruins provides a persistent technological bonus to the owning player. On the twelfth turn of each campaign year, during the Tech Phase and before tech advancement checks are made, each colonized system containing ancient ruins will generate an amount of additional tech investment equal to the system's Morale statistic. Morale is used instead of Census because Morale demonstrates the number of happy, productive workers in the system. Systems with significant Ancient Ruins (e.g., the

Ancient Ruins special trait applied more than once to the system) receive this benefit once for each level of Ancient Ruins present in the system.

Example 1: A colonized system containing Ancient Ruins has a Morale value of 4. During the Tech Phase of the twelfth turn of each campaign year, this system will produce 4 points of bonus tech investment for the controlling empire.

Example 2: A colonized system contains 'triple' Ancient Ruins (e.g., the Ancient Ruins trait was applied three times during system generation) and has a Morale value of 4. During the Tech Phase of the twelfth turn of each campaign year, this system will produce 12 points of bonus tech investment for the controlling empire.

2.6.1 Alien Artifacts

When investigating Ancient Ruins, survey teams may come across esoteric alien artifacts. The chance of discovering alien artifacts in a system containing Ancient Ruins is equal to 10% per level of Ancient Ruins in the system.

If an alien artifact is found on a ruin-filled world, the CM should randomly determine what type of alien artifact was discovered on the planet. The types of artifacts that can be found in a campaign should be specific to the campaign setting.

2.6.1.1 Transporting Artifacts

Artifacts must be physically transported between locations. Their value is too high to entrust them to an empire's background civilian infrastructure, though friendly Transport Fleets are still allowed to carry artifacts. Colony Fleets and Trade Fleets cannot transport artifacts.

Artifacts are embarked/disembarked during the CG 3.6.5.6 Landings and Deployment step of the turn sequence. Any military vessel (or Transport Fleet) may transport artifacts unless otherwise stipulated

in their description. If an artifact is noted as having a size rating, then a vessel with available Supply equal to or greater than this rating will be required in order to move the artifact.

If the unit that is transporting one or more artifacts is destroyed, then the artifacts it is carrying are also destroyed. A CM may provide an option for the artifacts to be recovered if they are of significance to the campaign's plot, but otherwise the artifacts are simply lost.



CM's Note: Requiring military vessels to transport artifacts prevents these relics from being magically "teleported" between systems in a player's empire and circumvents possible abuse by players who wish to deny an invading enemy access to an artifact located in a soon to be contested system.

2.6.1.2 Installing/Using Artifacts

Artifacts that require "installing" to function can be assigned to a specific unit as part of the player's turn orders. On the turn after installation instructions are given, the artifact will be installed and ready for use, conferring its abilities to the target unit.

2.7 Ancient Derelicts

During exploration, players may come across ancient starships drifting in space. These dead ships have either been abandoned by their crews, or else serve as a floating graveyard for those who died in service of an ancient empire.

The discovery of an ancient derelict can be a major boon for an empire. Ancient ships tend to be far superior to any vessels that the discovering empire could build themselves. For instance, an ancient frigate

could have the same firepower as one of the power's own heavy cruisers!

Roll on the Ancient Derelict Result Table to determine the type of derelict that has been found in the system. Combat statistics for the classes are listed on the table. For those units with basing capacity, roll on the Ancient Derelict Flight Result Table for each point of basing capacity to determine what abandoned flight units are present onboard the derelict.

Once the ancient derelict's type is determined, a player may decide what to do with the ship. The first option is to simply scuttle the ship. Unless using the 2.7.1 Effects of Ancient Derelict Encounters, the only real reason to voluntarily destroy the derelict would be in situations where the empire to discover the derelict is in no position to recover the starship and they wish to deny its capture by a rival power.

Another option is to scavenge the ship's systems in order to transfer them back home for study. Scavenging a derelict will effectively cripple the ship (or destroy it, if already crippled),



but will return an instant reward in the form of an amount of tech investment points equal to an average of the unit's DV, AS, and AF values (round up).

The third option is to use a ship with Towing functions to tow the derelict back to a friendly planet theoretically capable of manufacturing a ship of its type (typically an empire-controlled shipyard) where upon it can be refitted for that empire's use (see 7.4 Operating Alien Units).



CM's Note: When creating your own source materials or settings, it might be appropriate to create your own list of possible ancient

derelict encounters that are specific to your universe's background.

2.7.1 Effects of Ancient Derelict Encounters (Optional Rule)

This optional rule is included for those players who may wish to add additional uncertainty to the discovery of an alien derelict. Under this rule, players must make an additional roll after determining what type of ancient derelict their scouts discovered. This roll, made on the Ancient Derelict Encounter Chart, determines if anything exceptional was discovered or occurred while your survey parties were investigating the wrecked starship.

Ancient Derelict Result Table (Roll 2d6)

Result	Effect	Cost	Maint	DV	AS	AF	CR	CC	Basing	Special Notes
2	Explorer Ship	18	2/1	12	3	6	8	5	4	Explorer (3), Supply (3)
3	Scout	12	3/2	6	4	5	6	2	2	Scout (3)
4	Corvette	2	1/8	2	3	4	3	1	0	Fast Ship
5-6	Frigate	3	1/6	4	5	4	4	1	0	
7-8	Destroyer	5	2/6	5	6	4	5	2	0	
9-10	Light Cruiser	6	2/4	8	7	5	7	2	2	
11	Heavy Cruiser	8	2/3	10	10	6	9	3	3	
12	Battleship	14	3/2	15	18	8	15	4	6	

Ancient Derelict Flight Result Table (Roll 2d6)

Result	Effect	Cost	Maint	DV	AS	AF	Special Notes
2	Electronics Shuttle	1/1	1/6	3	0*	1	Reconnaissance Unit
3	Breaching Pod	1/2	1/8	5	0*	0*	Direct Assault (2)
4	Assault Shuttle	1/3	1/12	3	1	2	Assault
5	Standard Shuttle	1/5	1/20	3	0*	0*	Supply (1/10)
6-8	No Unit Present						
9	Light Fighter	1/4	1/16	2	1	3	
10	Medium Fighter	1/3	1/12	3	2	2	
11	Heavy Fighter	1/2	1/8	4	4	2	
12	Super-Heavy Fighter	1/1	1/6	8	6	1	

Ancient Derelict Encounter Table (Roll 2d6)

Result	Effect
2	<i>Suicide Charge Activated.</i> Before abandoning their ship, the original owners set a suicide charge that would detonate as soon as looters boarded the ship. The derelict is destroyed and the contacting player's fleet takes ship damage equal to 10 times the derelict's DV.
3	<i>Scuttling Charge Activated.</i> A ship's security system detected the presence of intruders and activated the ship's scuttling charge, destroying the derelict.
4	<i>Damaged System Explodes.</i> A damaged ship system inexplicably explodes during the team's visit, likely due to your survey team's actions. The derelict is crippled or, if already crippled, destroyed as a result of the explosion. Attempts to take control of the ship fail on this turn, but additional attempts may be made on the next turn.
5	<i>Anti-Personnel Systems Activated.</i> The survey party is killed by the ship's anti-personnel defense systems. Attempts to take control of the ship fail on this turn, but additional attempts may be made on the next turn.
6-8	<i>Derelict Secured.</i> The derelict is secured and is now ready for towing.
9-10	<i>Engines Reactivated.</i> Access to the ship's computer is mostly unsuccessful, but the survey team is able to restart the ship's propulsion systems. The ship can now move independently without requiring towing.
11	<i>Partial Computer Access Granted.</i> The ship's computer misidentifies the survey party as having partial security authorization and grants them limited computer access privileges. Access to the derelict's databanks provides the team with some technical data and free tech investment points equal to the ship's average DV, AS, and AF values. Additionally, the ship's engines are now functional and it can move without requiring towing.
12	<i>Full Computer Access Granted.</i> The ship's computer misidentifies the survey party as having full security authorization and grants them full computer access privileges. Access to the derelict's databanks gives it access to technical data and free tech investment points equal to TWICE the ship's average DV, AS, and AF values. Additionally, the ship's engines are now functional and it can move without requiring towing.

3.0 Alternate Movement & Supply Systems

The core VBAM Campaign Guide outlined the basic movement rules for a VBAM campaign, as well as an optional set of alterations to those rules (see CG 4.2 Optional Jump Lane Movement). This section of the Campaign Moderator's Companion includes additional, advanced movement and supply rules for use in your campaign.

3.1 Unimportant Jump Lane

This new lane type was introducing in the Empire Rising source book and exists as a step between the restricted lane and the minor lane, possessing qualities of both lane types.

Ships may move through one (1) unimportant lane per turn, just like a minor lane. However, supply cannot be traced as reliably over unimportant lanes. CG 3.6.1.1 Basic Supply Routes can only trace supply one (1) jump over an unimportant lane.

3.2 Wormhole-Based Movement

Some universes use fixed travel points, commonly referred to as *wormholes*, to facilitate travel to and from different regions of the galaxy. More often than not these travel points are a natural phenomena that connect the stars of a galaxy together. In other cases they are artificial constructs built by some grand and ancient power beyond comprehension. Whatever the



setting, these rules will allow you to run campaigns where wormholes are the key to interstellar travel.

Wormholes are tracked like jump lanes, and in fact follow most of the same rules, expect for the additional of several special properties and conditions detailed in this section.

3.2.1 Generating Wormholes

The reasons for the formation of wormholes vary by setting and individual source materials. For the purposes of the VBAM Companion it is assumed that the formation of naturally occurring wormholes is most prevalent in areas with strong gravitic effects. This is why the wormholes are found near stars and not in starless confluxes in the void of space. As stars die so do the wormholes that once connected to them. The larger the star, the greater gravitic effect it has on surrounding space, and the greater the number of wormholes the system will attract during the system's formation.

3.2.1.1 Number of Wormholes

Upon generating or exploring a new system, roll on the chart below to determine the number of wormholes in the system.

Result	# of Wormholes
2 or less	1
3-4	2
5-6	3
7-9	4
10-11	5
12	6
13	7
14 or more	8

Admiral System Generation Modifiers:*

- 2 Star: Dwarf
- 1 Star: Sub-Dwarf
- +1 Star: Giant, Bright Giant
- +2 Star: Super-Giant

Note: In the case of binary or ternary systems, the modifiers from star sizes are cumulative between multiple stars. This can lead to some very interesting systems with numerous wormholes.

3.2.1.2 Wormhole Transit Rating

Not all wormholes are created equal. Each wormhole is assigned a transit rating which determines the number of squadrons that can safely pass through the wormhole at one time. The transit rating is determined by several

factors, including the stability, aperture size, and time-to-transit of the wormhole.

For every new wormhole discovered, roll 2d6 and consult the Wormhole Transit Rating Table. A letter identifies each rating, with 'A' being the strongest wormhole type and 'F' being the weakest. Each rating is analogous to a type of jump lane found within the core VBAM movement rules and is treated as such for purposes of strategic fleet movement.

3.2.1.2.1 Detection Rating (Optional Rule)

For a more interesting campaign using the wormhole rules, consider using the Detection Rating percentages (Det %) on the Wormhole Transit Table for determining the chance each turn of a force detecting the wormhole. Take the Detection Rating times the number of scout functions the empire has in the system to determine the percentage detection chance. Each turn, the CM would calculate the detection chance for each wormhole and roll against the value to see if the empire's fleet has detected the wormhole or not.

Example: An empire moves three of its larger Scout Cruisers into the Procyon system via the Sirius wormhole. Each of these Scout Cruisers generates two scout functions, giving the power six scout functions available in the system for use in detecting other possible wormholes leading out of the Procyon system. With this many scout functions, the chance of detecting

Wormhole Transit Rating Table (Roll 2d6)

Result	Rating	Squadron Limit	Det %	Lane Equivalent
2	F	1	1	Restricted Lane
3-4	E	2	2	Restricted Lane
5-6	D	4	5	Minor Lane
7-9	C	6	10	Minor Lane
10-11	B	8	15	Major Lane
12	A	10	20	Major Lane

Rating "A" wormholes is automatic (120%), while the chance each turn of detecting a Rating "F" wormhole is still only 6%.

3.2.2 Wormhole Defenses

A wormhole is a significant defensive linchpin and is handled differently than your standard jump lane for purposes of defending against assaults from neighboring star systems. Empires will cultivate both mobile and fixed defenses at their more important wormhole travel nodes in order to prevent the enemy from getting a foothold in the system.

In order to defend a wormhole, players must deploy their fleets and defenses at specific wormhole nodes. Having fleets and bases in the system is not enough to prevent an enemy from entering the system. A fleet defending a specific wormhole entrance/exit in a system would note in its location field both the system that it is in and the wormhole that it is defending. Fleets may be relocated to other wormholes or moved between systems during part of the player's turn orders and movement between the locations is instantaneous – it does not count against the fleet's normal movement allowance. However, only those units that have been defending a wormhole since the beginning of the campaign turn may participate in 3.2.3 Wormhole Assault scenarios.

A common strategy for defending the mouth of a wormhole is to build large numbers of fixed defenses at the location. Mines and satellites can be moved into position via freighter or towing unit, but true bases must be built using the remote base construction guidelines dictated in CG 3.7.4 Base Construction. Unlike in traditional scenarios, there is no limitation on the number of fixed defenses that can take part in a Wormhole Assault scenario.

If no units are present to defend a wormhole, then enemy units transiting through a wormhole do not have to participate in a Wormhole Assault. They instead enter the system without confrontation and may generate other, standard scenarios against other

defenders in the system. Similarly, assaulting fleets that encounter no resistance at the mouth of a wormhole proceed to generate further encounter scenarios as normal, too. Once a system's defenses are breached, the mobile defenders assigned to protect other wormholes may join any other forces in the system in attempting to combat the invading fleet.

3.2.3 Wormhole Assaults

The process of traveling through a wormhole is extremely disorienting. This is true both for starship crews and their equipment. Transiting ships are extremely vulnerable in the moments directly after emerging from the wormhole's event horizon. As the vessel's electronics and personnel struggle to gain a feel for their new surroundings, an enemy can take full advantage of their disorientation.

3.2.3.1 Wormhole Assault Scenario

A Wormhole Assault is a special type of Defensive scenario generated when a hostile fleet meets a defending force at the other end of a wormhole. Wormhole Assault scenarios take place before any other standard encounter scenarios are generated in the system. Unlike in a standard scenario, the assaulting player's task force arrives slowly over the course of the scenario. The defending power may only use those military units available at the mouth of the wormhole to defend against the assaulting fleet (see 3.2.2 Wormhole Defenses). Unlike in traditional scenarios, there is no limitation on the number of fixed defenses that can take part in a Wormhole Assault scenario.

Each round, the assaulting player may send one or more squadrons through the wormhole and into combat. This is similar to moving ships from a task force's reserves into active combat. The number of squadrons that can safely be moved through the wormhole and into active combat during a single round is given on the Wormhole Transit Rating Table in the 'Squadron Limit' column. The more stable the wormhole type, the more squadrons an assaulting player can safely send through at a

single time (see 3.2.3.2 Effects of Exceeding Wormhole Transit Limits).

All assaulting units have their combat factors halved on the round they make transit into the system. Additionally, assaulting squadrons do not benefit from any natural formation bonuses on the round they transit through the wormhole, though formation bonuses conferred by friendly scouts are unaffected. Note that since all assaulting units have their combat factors halved on the round they make transit, all assaulting Scouts will have their number of available scout functions halved (rounding down).

Flight units cannot transit a wormhole in a deployed state unless specifically overridden by the individual unit's rules. Flight units are considered to be onboard their carriers during the wormhole transit and will not be deployed until the round after the ship arrives on the other side of the wormhole.

This scenario has no scenario length. The defender receives a -1 penalty to its surprise roll. Each round, more squadrons from the assaulting player's task force will arrive via the wormhole until no ships are left in the assaulting task force. The scenario ends once all of either the invaders or defenders are destroyed.

3.2.3.2 Effects of Exceeding Wormhole Transit Limits

If more squadrons cross over during a combat round than is normally allowed by the wormhole's transit rating, there is a chance that ships within those squadrons will be destroyed. Calculate the number of squadrons over the wormhole's transit rating and then add the result of a d6 roll. Multiply this total times the defense value (DV) of the largest unit traversing the wormhole on the current round. Apply the result as damage to the assaulting fleet prior to the Assignment Phase, before the ships arrive on the other side of the wormhole. Any flights or other units based from destroyed vessels are likewise destroyed.

3.2.4 Wormhole Movement Optional Rules

The following section includes optional rules that can be used with the Wormhole Movement rules. These optional rules modify the basic rules to fit specific situations that players or CMs may find desirable.

3.2.4.1 Wormhole Assault Fog of War

Under the standard rules, a Wormhole Assault scenario is only generated when an assaulting force encounters defenders at the other end of a wormhole. In some battles, players may decide to begin their wormhole assaults with massive simultaneous squadron transits that exceed the wormhole's safe transit rating. Normally, players are only put in the position to sacrifice their units by way of exceeding wormhole transit limits when there is an actual encounter scenario generated. However, they would likely be performing the same unsafe transit actions in any situation in which a strong enemy defense force was thought to lurk on the other side of a wormhole.

To simulate this, all fleets that have the possibility of moving into hostile should be assigned standing instructions for wormhole assault situations, including any order to perform simultaneous transits beyond a wormhole's rated limits. If preferable, a player can apply a single, uniform policy of engagement for wormhole assaults to his or her entire fleet. These orders can either be very specific, defining the exact numbers of squadrons that will make transit each round, or could be as simple as a list of directives such as "Don't exceed wormhole transit ratings under any circumstance." Such orders should be written in a form that leaves no room for interpretation or debate. If any conflict arises as to the intent of a player's wormhole assault policies, the CM should intervene and rule definitively on the subject. In CM-less games, a majority ruling by all players will likely be needed to clear up the situation. Note that involved parties and other allied powers should abstain might consider abstaining from the vote

and allowing other, neutral players make the final decision, if your campaign has enough players to make this practical.

By defining assault procedures, players are put in a position where they could possibly lose or damage their fleet units because of unwarranted mass transits into undefended systems. This produces a limited fog of war, as an empire's orders will decide how fleets move into systems and make wormhole assaults more unpredictable and exciting.

3.2.4.2 FTL Drives and Wormhole Movement

This optional rule limits wormhole movement to those units that are equipped with FTL drive systems (such as jump engines). Only those units with FTL drives or that are being towed or otherwise transported by a FTL-capable unit will be allowed to move between systems via wormhole travel.

All civilian fleets (Colony, Transport, and Trade Fleets) are considered to be FTL-capable for purposes of this rule. Any escorts assigned to civilian fleets will only be able to accompany them between systems if the escorting units are equipped with FTL drives. Players are however allowed to assign system-specific escorts to protect civilian fleets on each leg of their journey. This is especially important for Trade Fleets, which are always moving between systems.



CM's Note: CMs may wish to amend this rule to allow "jump carrier" units to convey non-FTL ships with them through a wormhole. Whether such movement is possible depends on your campaign's setting and background.

3.2.4.3 Wormhole Discovery and Tech Levels

In campaigns that are using some form of tech level system, wormhole detection can be changed from a purely random detection chance to a detection chance based on the

technological proficiency of the detecting empire.

To employ this rule, a special chart should be constructed that shows the detection percentages for each wormhole type ("A" through "F") at various tech levels or tech level ranges. The higher the tech level of a power, the higher the chance that the power will be able to detect less obvious wormhole types. A sample chart is included with this entry to visually demonstrate this rule's intent.



CM's Note: Application of this rule is currently tenuous and requires the use of a tech level system. If your campaign uses such a system, the CM or source material designer will be responsible for creating the necessary chart to determine wormhole detection chances at each tech level.

3.3 Sector-Based Movement

In some cases it might be preferable to use a grid or hex map as the basis for a campaign map rather than using a traditional jump map as demonstrated in the VBAM Campaign Guide. The following Sector-Based Movement rules are designed to address this need for CMs and players who, either out of necessity or basic interest, would prefer to play on a grid- or hex-based campaign map.

3.3.1 Sectors

For purposes of these rules, each grid square or hex on your campaign map is considered a *sector*. Each sector may contain at most one star system or none at all.

For all purposes, each sector is considered to have a minor jump lane connecting it to each adjacent sector. For grid-based campaign maps, each sector connects to eight adjacent sectors (sectors to the top,

bottom, left, right, and diagonal). Hex-based campaign map sectors connect to each of the six adjacent sectors.

3.3.2 Sector Types

There are three distinct types of sectors: Controlled, Contested, and Neutral. Each classification describes its current political status and affects how movement operates.

3.3.2.1 Controlled Sectors

Controlled sectors are sectors that are completely controlled by a single empire or group of allied empires. Controlled sectors are relatively secure and allow for faster movement through the galaxy.

A sector is considered Controlled if one of three conditions is met:

- 1) The power or one of its allies has one or more units in the sector
- 2) The power or one of its allies has a colony in the sector
- 3) The sector is within the supply range of the power or one of its allies and is NOT within the supply range of any other opposing, non-allied power.

If none of these conditions are met, then the sector is considered Neutral. Ownership of a sector by any of these three points can become nebulous in the case of allied states. The owner of the Controlled sector can be determined diplomatically, but in most cases the sector will fall under the dominion of the allied power with the nearest colony. In case of a tie (e.g., more than one system is the same, closest distance from the sector), the most populace colony (highest Census) takes precedence. If a tie still isn't broken, then the system with the highest system output wins.

All movement through Controlled sectors owned by your empire, an ally, or a mutual defense pact member is performed at twice its normal rate. In other words, all of the faux minor jump lanes that normally connect

sectors are treated like major jump lanes when connecting adjacent Controlled sectors.

3.3.2.2 Contested Sectors

Contested sectors are sectors in which two or more non-allied, non-mutual defense pact powers have assets (fleets, ground units, colonies, etc.) in the system. Contested sectors are often located on the borders of your empire. So long as a single foreign fleet or colony not belonging to you, your allies or a mutual defense partner is present in a sector, it will be considered a Contested sector.

Foreign empires that you have signed a Peace Treaty with may move their civilian fleets through your empire's territories without contesting control of any sectors they pass through. Foreign military assets at this treaty level will still result in sector contention.

All movement within Contested sectors is performed at the normal rate associated with minor jump lanes (e.g., one sector per turn). Faster movement through the sectors is not possible until the sector is no longer Contested but Controlled.

3.3.2.3 Neutral Sectors

Neutral sectors are sectors that are either uninhabited or not aligned with any of the major empires in the campaign. Neutral sectors have no special rules associated with them beyond the fact that all movement through Neutral sectors occurs at the normal rate (e.g., one sector per turn). Neutral sectors can be converted into Controlled sectors by stationing even a single unit within the sector, placing a colony in a sector, or increasing neighboring supply ranges so that they (but not the supply ranges of other opposing powers) include the Neutral sector. If any of these conditions are met, the Neutral sector becomes a Controlled sector.

3.3.3 Rules Modifications and Clarifications

The following section includes rules modifications and clarifications for use with the

Sector Based Movement rules. In general, remember that movement between each sector is still considered “one jump” for game purposes.

3.3.3.1 Generating New Sectors

When generating the map, or upon first exploring a sector, roll on the Sector Generation Chart to determine the number of star systems located within the sector. After determining whether the sector contains a system, proceed with the standard CG 2.3.2.4 System Generation rules to create the system's statistics. On a Terrain result, make an addition roll on the Sector Terrain Table and apply the resulting terrain to the sector.

Sector Generation Table (Roll 2d6)

Result	Effects
2-3	No System (Terrain)
4-5	No System
6-10	1 System
11-12	1 System (Terrain)

Sector Terrain Table (Roll 2d6)

Result	Effects
2-3	Dust Cloud
4-5	Dense Asteroids
6-7	Asteroids
8-10	Nebula
11	Dark Matter Nebula
12	Maser Nebula

3.3.3.2 Movement

Movement remains largely unchanged. The equivalent of a minor jump lane connects a sector to each adjacent sector. Therefore references to “one jump” or “one lane” in the core rules would translate into “one sector” under the Sector Based Movement rules. All movement within a sector is simultaneous and

does not count against a fleet's normal movement limitations. Movement between sectors is typically undertaken at a rate of one sector per turn, though the 3.3.2 Sector Type of the source and destination systems influences the actual rate of movement between sectors.

When entering a sector, a fleet will enter the system in the sector (if one exists) or else will wait in deep space for further orders.

Unless otherwise countermanded in your source materials, only those units with some form of FTL drive are allowed to move between sectors independently. All other units require escort by FTL-equipped units or some other means of transport in order to move between systems and sectors. For example, many settings make use of fixed jump gate or extra-dimensional stations to allow non-FTL vessels to move between systems/sectors.

3.3.3.3 Trade Fleets and Trade Routes

When using the Sector-Based Movement rules, the rules for trade routes remain unchanged, with the exception that the Trade Fleets will be connecting sectors, not systems. Empty sectors will still count as one ‘system’ in the Trade Fleet's route despite the fact that there is nothing of value in the sector.

3.3.3.4 Supply

Unless modified by your source materials, the length of a basic supply route is two sectors. All units within two sectors of a good order planet with a Census of 3 and Productivity of 3, or an in supply Supply Depot, are considered to be in supply.

3.3.3.4.1 Extended Supply Routes

Military supply ships can be used to extend supply routes beyond their normal ranges. Placing military supply ships in two adjacent sectors, one of which is in supply, allows an empire to trace an extended supply route from the one sector into the other.

3.3.4 Sector-Based Movement Optional Rules

3.3.4.1 Warp Lanes (Optional Rule)

Warp lanes are special travel lanes that allow for faster travel through one's empire. They are expensive to build, yet are easily destroyed or disrupted. Warp lanes function by creating a distinct curvature in the fabric of local space, "warping" it so that movement through the area is expedited. It costs 60 economic points and the dedicated efforts of at least one Scout or Explorer unit to construct a warp lane (e.g., the vessel can perform no other orders, not even movement, on the turn that it is creating the warp lane). Players cannot build more than one warp lane per sector.

Once the warp lane is built, all jump lanes connecting the sector to other adjacent sectors are considered major lanes instead of minor lanes. In other words, the system gains the advantage of Controlled status movement (major jump lane) no matter whether it is Controlled, Contested, or Neutral! Construction of warp lanes within Controlled sectors also provides benefit to an empire. When performing movement, units may move through one Controlled warp lane per turn in addition to their normal movement. This allows friendly units to move up to three sectors per campaign turn if at least one of the Controlled sectors that they pass through contains a warp lane.

Any fleet that begins its turn in a sector containing a warp lane has the option of spending the entirety of the campaign turn destroying the warp lane. The fleet cannot perform any movement on the turn that it is destroying the warp lane, though it may participate in combat. The destruction of the warp lanes occurs immediately after movement on the turn that the order is given.

3.4 Movement Points

Each unit capable of FTL travel is assigned a *movement point* value in addition to all of its other unit statistics. This movement point value determines the number of movements the unit may make in a single campaign turn. All ships previously described under the VBAM system would be considered to have a movement point value of 2 when using this optional rule. Logically, a unit with 4 movement points will be able to move twice as fast as a unit that only has 2 movement points.

Not all lanes are equally easy to traverse. Refer to the Movement Cost Table to determine how many movement points it takes to cross each lane type. When performing movement, units may only cross a number of lanes whose total movement cost is equal to or less than the units' movement point value. Units are allowed to move one jump lane per turn regardless of whether or not they have enough movement points to cross the lane.

When moving fleets whose units have varying movement point values, the fleet will move at the speed of the slowest unit in the fleet. For example, a fleet contains one Heavy Cruiser (4 movement points), one Light Carrier (5 movement points) and six Frigates (10 movement points). Since the Heavy Cruiser is the slowest unit in the fleet, the fleet only has 4 movement points available.

Movement Cost Table

Lane Type	Movement Cost
Restricted	6
Unimportant	4
Minor	2
Major	1

3.4.1 Movement Points and Battle Damage

The strategic speed of units can be reduced by damage. All crippled units have their movement point total halved (rounding up). Once repaired, the crippled unit's movement point total will return to its full value.

After a battle, a fleet will be forced to decide whether or not to throttle down its speed to keep pace with its battle-damaged survivors or else abandon them in favor of higher strategic movement speeds.

3.4.2 Movement Points and Fast Ships

The value of Fast Ships (e.g., those possessing the Fast Ship special unit ability) is increased under this optional rule. In general, Fast Ships will have a movement point value 50% greater than other comparable units (round up).

3.4.3 Movement Points and Civilian Fleets

All civilian units, including the Civilian Fleets operated by empires in the campaign, are unable to traverse restricted jump lanes no matter how many movement points they possess. These routes are simply too treacherous for non-military units to cross.

3.5 Hyperspace Travel

In some settings, such as the Escalation Wars universe, ships achieve faster-than-light (FTL) travel by entering hyperspace, following a chain of beacons down the length of the jump lane, and exiting hyperspace at their destination. Some ships have *jump engines* (commonly referred to as *jump drives*) which allow them to

create temporary doorways from real space into hyperspace and back again. These ships are considered *jump capable*. Most ships are not jump capable and can only enter and exit hyperspace using *jump gates*. These massive constructs sit in real space, opening doorways to hyperspace and supporting the beacons which mark the path and location of jump lanes. For a jump gate to support many or major jump lanes, it must have a high *beacon capacity*. The interweaved mesh of jump gates and jump lanes throughout the known universe is collectively referred to as the *jump gate network*.

Any jump capable vessel may move itself and any number of others vessels in its fleet through a jump lane to another star system without the need for a jump gate. Vessels that lack a jump engine cannot travel across jump lanes independently. Rather, they must rely on local jump gates to open portals into hyperspace so that they may move between star systems. A jump gate must exist in both the source and destination systems in order for a non-jump capable ship to travel across the jump lane. Non-jump capable military and commercial traffic rely on jump gates to facilitate movement from system to system.

You may use the jump gates of any other empire regardless of your current relations with that empire. The only way to block incoming jump gate traffic is to shut down the jump gate itself.

3.5.1 Jump Lane Types

All of the jump lane types described in CG 3.5.1 Ship and Flight Movement exist, but some special rules apply to how they are used in these source materials. In addition, two new types of jump lane – Unimportant and Disabled – also exist. For the sake of clarity, the modified rules for these jump lane types are included below.

Major Lanes: Ships may move through two (2) major jump lanes or one (1) major and one (1) minor lane in one turn, so long as all systems along the movement route,

including the origin and destination, are controlled by the player's empire or an allied power. Major lanes have a beacon capacity cost of 6.

Minor Lanes: Ships may move through one (1) minor lane per turn. Most lanes are of this type. Minor lanes have a beacon capacity cost of 3.

Unimportant Lanes: Ships may move through one (1) unimportant lane per turn, just like a minor lane. However, supply cannot be traced as reliably over unimportant lanes. CG 3.6.1.1 Basic Supply Routes can only trace one (1) jump over an unimportant lane, in effect halving the normal supply route range. Unimportant lanes have a beacon capacity cost of 2.

Restricted Lanes: Ships may move through one (1) restricted lane per turn so long as one ship in the fleet is equipped with a jump engine. This typically restricts the use of restricted lanes to military ships, as civilian ships tend to rely on the jump gate network for their movement. Restricted lanes have a beacon capacity cost of 1.

Disabled Lanes: Discussed in 3.5.2.3 Destroying or Deactivating Jump Gates, disabled lanes are lanes which connect to a system that no longer has the beacon capacity available to support them. Ships may move through one (1) disabled lane per turn so long as one ship in the fleet is equipped with a jump engine and at least one ship in the fleet has either the Scout or Explorer ability. It is possible for one ship to fulfill both of these criteria. Disabled lanes have a beacon capacity cost of 0 and each jump gate in a system can support a number of disabled lanes up to half their beacon capacity (rounding down). Disabled lanes are destroyed if no jump gates exist with available capacity to support them.

3.5.2 The Jump Gate Network

The intermeshed system of jump gates spread throughout known space and beyond is referred to collectively as the jump gate network. This network ensures that travel routes can be maintained by way of hyperspace beacons. Each end of one of these "beacon trails" is tethered to a jump gate, allowing the beacons' station keeping drives to maintain their relative positions in hyperspace.

Each jump gate is rated as to its ability to maintain effective hyperspace beacons. This is called the gate's *beacon capacity*. A temporary jump gate, like those laid down in newly explored star systems, has a maximum capacity of 1. A standard jump gate has a beacon capacity of 4. The cost in beacon capacity for each type of lane is shown below:

Lane Beacon Requirements Table

Lane Type	Beacon Capacity Requirement
Disabled	0
Restricted	1
Unimportant	2
Minor	3
Major	6

This beacon capacity requirement must be fully "paid" out of the beacon capacity of jump gates at BOTH ends of the jump lane. If one jump gate has a free capacity of 5 and the other a 2, then an unimportant lane is the highest quality lane that can be established between the two systems.

3.5.2.1 Building Jump Gates

Jump gates are considered bases for purposes of construction (see CG 3.7.4 Base Construction). A temporary jump gate is installed at no cost to the player in every newly explored system, creating a new restricted jump lane that will connect back to a jump gate in the originating star system. Once this restricted lane is established, the player can then dispatch

Transport Fleets and/or military supply vessels and their escorts to the system to begin construction of a full jump gate.

When dealing with CG 3.7.4 Base Construction and the construction of new jump gates, the supply units being used to perform the base construction ignore the standard rule that base construction cannot be performed over a restricted lane. The only limitation imposed on jump gate construction is that the Transport Fleets and/or military supply vessels in the remote system where gate construction is taking place be in supply. For more information on how this can be done, refer to CG 3.6.1.3 Military Supply Ships. This section provides information on how military supply ships can be used to extend supply routes over a restricted jump lane.

There are three types of jump gates that players can construct: large, standard, and small. Jump gate costs are listed at the end of this supplement in the source materials.

Once a permanent jump gate (either large, standard, or small) is established in a system, the temporary jump gate is shutdown and removed from play.

A system may contain as many jump gates as the player wishes. It is advisable to build redundancy into your jump gate infrastructure so that it can survive the destruction or deactivation of one or more of the system's jump gates.

3.5.2.2 Upgrading Jump Lanes

Having free beacon capacity is not a sufficient requirement to upgrade a jump lane. Upgrading a jump lane involves an investment of time, manpower, and resources to purchase and install additional hyperspace beacons along the beacon trail connecting the two systems. This is extremely precise work, and not something to be undertaken lightly.

In order to upgrade a jump lane, a player(s) must first have one scout vessel at each end of the jump lane (e.g., one in the source system and one in the destination system). These scouts must have been in the system since the beginning of the turn and



cannot be assigned any other orders on the turn the jump lane upgrade takes place. The two scouts do not have to belong to the same empire. Two powers can coordinate their scouts to assist in mutually upgrading a jump lane.

Players may not upgrade a jump lane whose source and destination systems are controlled by non-allied powers unless both powers agree to the lane upgrade. For the purposes of upgrading a lane, there is a separation between *control* of a system and *ownership* of a system. Ownership indicates that the power maintains control of the planet or planets that produce income in the system, but control refers to the player who enjoys space superiority in the system. Thus control and ownership are essentially the same, but control is held by the player who has a fleet occupying the system uncontested. For instance, a blockading or bombarding player would hold control of a system, but ownership would be retained by the power administering the planet(s) and its output. A controlling player

would have say over the flow of civilian or neutral traffic through a system and would have command over that system's jump gate(s). Thus, the controlling player could elect to upgrade any jump routes going to other allied or controlled systems under their control.

Once the scouts are in place and all other conditions are met, the player can then pay the economic cost listed in the table below to perform the necessary upgrades. If two separate empires are coordinating the upgrade of a jump lane, the cost of the jump lane upgrade is split between the two players in any manner they see fit, as per their agreement. One player's empire could conceivably pay the entire upgrade cost if the other power was not in a financial position to assist with the upgrade.

Lane Upgrade Cost Table

New Lane Type	Upgrade Cost
Restricted	n/a
Unimportant	15
Minor	30
Major	60

The turn after the investment is made, given that the prerequisite scouts were in place at the beginning of the previous turn, available beacon capacity exists at both ends of the jump lane, and the economic cost of the upgrade was paid in full, the lane will be upgraded. If any of these requirements are not met, or if one or both of the scouts are drawn into an encounter scenario, then the upgrade order is cancelled.

3.5.2.3 Destroying or Deactivating Jump Gates

The destruction or deactivation of a jump gate can have major implications on hyperspace travel. Whenever a jump gate is destroyed or deactivated, the remaining jump gates in the system must take over control of the beacon trails formerly controlled by the offline jump gate. This means that other jump lanes must be voluntarily downgraded (such as from Major to

Minor, Minor to Unimportant, or Unimportant to Restricted) so that the orphaned lanes can still be retained. Any economic investment involved in the original upgrade of these routes is lost.

If even after all other lanes have been downgraded there is not enough beacon capacity to support a lane, then that jump lane is temporarily disabled. Disabled lanes are considered to have a beacon capacity cost of 0 and each gate can maintain up to half their beacon capacity (rounding down) of disabled jump lanes. Disabled jump lanes can be traversed, but only by fleets containing one or more jump-capable units and one or more Scout or Explorer units. No lines of supply can be traced across a disabled jump lane. The lane will remain in a disabled state until a new jump gate is built that can take over the lane's normal beacon capacity or the jump gate maintaining the disabled jump lane is destroyed. In the event that a jump gate maintaining one or more disabled jump lanes is destroyed, then the disabled jump lanes are eliminated and will no longer be able to be used for the remainder of the campaign. As a rule, players may not voluntarily destroy a jump lane unless they have no other recourse. CM approval is required when a player wishes to voluntarily destroy a jump lane. In CM-less games, players CANNOT voluntarily destroy jump lanes! They must downgrade all other available jump lanes first before the destruction of a lane can be permitted.

In combat, jump gates can be included in any encounter that takes place at the jump gate's location. For example, a defending fleet could choose to demand a Defensive scenario at a local jump gate, or generate an Interception scenario at the jump gate if that is where an inbound fleet is entering the system due to lack of jump engines. The jump gate is not included in either side's fleet, but instead acts as a neutral squadron which can have damage applied to it by either of the sides involved in the battle. Jump gates have no combat factors (AS 0, AF 0) and have a DV equal to five times their beacon capacity. Jump gates can only be included in Interception, Defensive, or Pursuit scenarios,

but they do not necessarily have to be drawn into the battle. This will only occur under a special set of circumstances. In the case of an Interception or Pursuit scenario, a jump gate will be present in the scenario only if the defending player is intercepting the incoming force at the local jump gate; or pursuing an outgoing force that is using the local jump gate to retreat due to a lack of jump engines in their task force. For Defensive scenarios, the jump gate will only be included if the defending forces are rallying around the jump gate.

Other than destruction in combat, the only other way for a jump gate to go offline is for the owning player to order the gate deactivated. To do so, the player will place a note to this effect in their turn orders, along with any orders to change the disposition of the beacon trails heading into the system (in order to cover the loss of beacon capacity resulting in the gate's shutdown). Jump gates that are offline can still maintain up to half their beacon capacity (rounding down) of disabled jump lanes. This is in fact how many emerging spacefaring civilizations gain access to the interstellar jump gate network. By reactivating deactivated gates left behind by older species, the emerging civilization can instantly gain access to the disabled jump lanes, which they can then use to explore outward.

Deactivating or destroying jump gates will quickly lead to the destabilization or destruction of the entire jump gate network! For this reason, empires have traditionally viewed jump gates as sacrosanct, considered neutral property no matter who originally built them.

3.5.2.3.1 Political Ramifications of Destroying Jump Gates

The destruction of jump gates and destabilization of the jump gate network have some very real political ramifications. The fact that an empire has demonstrated a brazen disregard for the sanctity of the jump gate network will infuriate foreign governments and give them just the excuse they need to start

breaking treaties – and possibly even declare hostilities or war.

Each time a jump gate is destroyed, all empires receive a +50% bonus to breaking any and all treaties with the power that destroyed the gate. Additionally, all empires receive a +25% bonus to any declarations of hostility or war against said power. These diplomatic bonuses will decrease by 10% per turn until they reach 0%.

In addition to its diplomatic effects, the destruction of jump gates can become a divisive domestic issue as well. A special Morale check is required for all of an empire's systems whenever said empire destroys a jump gate. The check has a variable target number equal to the system's Census divided by 3 (round up). If the Morale check fails, then the system will receive a -1 penalty to its Morale statistic.

Example: The Chouka Theocracy destroys a jump gate in Mishtuki in order to slow down the Circasian advance. This action requires that the Chouka player roll a special Morale check for each of his or her systems.

Chouka has a Census of 10, resulting in a target number of 4 for this Morale check. A d6 is rolled, resulting in a '3'. The Chouka system has failed its check and the Morale of the system will be decreased by 1.

3.5.2.4 Disengaging from Scenarios Using Jump Gates

In any scenario that takes place near a jump gate (e.g., a jump gate is included in the scenario), players may elect to use the jump gate to retreat from a combat scenario (See 1.7 Retreating from Combat). Only one squadron (friendly or enemy) may use a jump gate to retreat during any one combat turn. Priority in jump gate retreats is given to the system's owner. If the system is unowned or contested, have each squadron attempting to retreat via the jump gate roll a d6. The squadron with the highest result will successfully retreat from combat. In the event of a tie, all squadrons

tioned for the highest die roll will successfully retreat from combat.

Once successfully disengaged, the squadron, as well as any other squadrons that also disengaged from the scenario, cannot be the target of a CG 3.6.3.6 Pursuit scenario, but remains a valid target for a Hyperspace Pursuit Scenario (see 3.5.6.3 Hyperspace Pursuit Scenarios).

3.5.3 Jump Engines

Jump engines represent a major strategic advantage in any interstellar conflict. Any unit equipped with a jump engine is capable of moving across a jump lane without the use of a jump gate.

Jump engines are extremely costly pieces of equipment that require the rare material known as terrentium to build and maintain. To represent this cost, some settings apply a uniform +1 economic point penalty to all units noted as having jump engines. This penalty is typically factored into the units' listed cost.

Some types of jump lanes (restricted and disabled) require that fleets attempting to traverse them contain at least one ship equipped with a jump engine.

3.5.3.1 Disengaging from Scenarios Using Jump Engines

Any squadron containing even a single jump-capable ship may elect to retreat from a combat scenario (See 1.7 Retreating from Combat). Once successfully disengaged, the squadron, as well as any other squadrons that also disengaged from the scenario, cannot be the target of a CG 3.6.3.6 Pursuit scenario, but remains a valid target for a Hyperspace Pursuit Scenario (see 3.5.6.3 Hyperspace Pursuit Scenarios).

3.5.3.2 Jump-Capable Flights

In many sci-fi milieus, craft as small as fighters and shuttles are capable of being equipped with jump engines. Jump-capable

flights follow all of the same movement rules as jump-capable ships, with the additional limitation that their effective supply range is halved (1 jump instead of 2, under the standard VBAM supply rules). It is more difficult for jump-capable flights to operate over long distances.

The economic penalty on jump-capable flights is calculated differently than that for jump-capable ships. Instead of increasing the construction cost of the flight, the inclusion of a jump engine instead halves the number of flights that can be purchased for each economic point spent. For example, an archetypal heavy fighter flight that normally costs 1/2 to build (1 economic point per 2 flights) would have its construction cost increased to 1/1 (1 economic point per flight) if it was equipped with a jump engine.

3.5.4 Hyperspace and Exploration

Exploration within hyperspace is dangerous and it is not uncommon for expeditions to get hopelessly lost and never return to base. The danger of hyperspace exploration has hindered rampant exploration and colonization in known space. Even the older races have only ever encountered several dozen unique systems over the course of centuries of periodic exploration and expansion.

3.5.4.1 Exploration in a Historical Campaign Scenario

If playing a historical campaign scenario, all jump routes are considered to be fully mapped and will only change if the players reorganize their jump networks. This can be done by building additional jump gates, upgrading existing routes, and/or redistributing existing gate beacon capacities.

3.5.4.2 Exploration in a Freeform Campaign Scenario

In a freeform campaign scenario, play begins with the star map completely unexplored.

All existing lanes should be treated like disabled lanes, except that they do not require a jump gate to maintain them. Players will explore outward from their homeworld by sending out fleets containing a ship with a jump engine and a ship with the Scout or Explorer ability. A single ship can cover both of these requirements. Upon entering each new system, a temporary jump gate will be placed in the system during the Construction Completion Phase. A restricted jump lane will then be instantly created at no cost to the scouting empire, linking the newly explored system to the scout fleet's system of origin. This restricted jump lane will only be created so long as there is available beacon capacity in the scout fleet's system of origin.

Example: A Circasian Kiralina Explorer leaves Circasia bound for Senshuka. Senshuka has not previously been explored. The Circasian scout ship arrives in Senshuka during the Movement Phase and a temporary jump gate is installed during the Construction Completion Phase of the same turn. Circasia has 3 free beacon capacity and the restricted jump lane only requires 1 beacon capacity, so a new restricted jump lane is created between Circasia and Senshuka.

As a power continues to explore, it will become necessary for it to begin building new jump gates in previously explored systems, expanding the jump gate network (see 3.5.2.1 Building Jump Gates). As new jump gates become available, the players will also find themselves upgrading their jump lanes (see 3.5.2.2 Upgrading Jump Lanes) so that their forces can move more easily through their territories, and possibly into neighboring territories as well. Building jump gates and upgrading jump lanes will be vital to an empire's expansion.

For more advanced exploration rules, please refer to 2.2 Exploration.

3.6 Simplified Jump Gate and Jump Lane Rules

The standard rules for building jump gates and upgrading jump lanes given in 3.4 Hyperspace Travel provide the full experience of building and maintaining a jump gate network. However, some players or groups might find the rules overly cumbersome and not conducive to their playing style. This simplified rule is included for these players.

If this optional rule is in effect, the construction of jump gates is abstracted into the cost of upgrading a jump lane. Upon entering a newly explored star system, the jump lane connecting to the new system becomes a restricted lane. This restricted lane can then be upgraded using the normal process (see 3.5.2.2 Upgrading Jump Lanes), but at the increased costs shown below:

Modified Lane Upgrade Cost Table

New Lane Type	Upgrade Cost
Restricted	n/a
Unimportant	25
Minor	50
Major	90

The increased costs shown in the Modified Lane Upgrade Cost Table represent both the cost of construction of jump gates to maintain the upgrade lanes and the upgrades themselves. Because jump gates are heavily abstracted under this rule, beacon capacity is no longer a concern.

For purposes of CSCR combat scenarios, all explored systems are considered to have one or more jump gates within the system's boundaries. These gates may be included in scenarios as normal (see 3.5.2.3 Destroying or Deactivating Jump Gates). If a

jump gate is destroyed in combat, reduce the quality of one lane connecting to the system by one level (major to minor, minor to unimportant, etc.). If the only lanes available to be downgraded as a result of the destroyed jump gate are restricted lanes, one of the lanes must be permanently and irrevocably destroyed.

3.7 Fuel Requirements

In some source materials a fleet's operational range will be limited by access to fuel sources as much as by supply requirements.

3.7.1 Fuel Sources

When using these rules, fuel can come from one of two sources: fuel processing centers or gas giant siphoning stations. Systems or planets that produce fuel are called fuel supply points and determine the operational range of fleets operating in their region.

3.7.1.1 Fuel Processing Center

Most planets are rich in materials that can be converted into starship fuel. Players can build fuel processing centers to harvest these resources and process them into useable fuel.

Fuel processing centers are built like supply depots; however, fuel processing centers cannot be moved after they are built. Unlike supply depots, fuel processing centers can be scrapped like bases to recoup some of the empire's initial investment.

Each of an empire's fuel processing centers is rated as to its efficiency when processing and producing starship fuel. This is called the center's Fuel Rating. Individual source materials will dictate the exact fuel rating of fuel processing centers in your campaign, but the default rating for a fuel processing center is 1.

Fuel processing centers can only be built on worlds that have an existing population (a Census greater than 0). If built at the location of a particularly rich vein of the rare ore used to create the fuel (a Special Resource result on system or planet generation), the fuel rating of all fuel processing centers is doubled.

3.7.1.2 Gas Giant Siphoning

Gas giants represent a plentiful supply of hydrogen and helium with which starship fuel can be produced. Special space stations can be built in orbit of gas giants in order to siphon off these elements and process them into usable fuel for your fleets. Because these siphoning stations are being built at a remote location the remote construction rules of CG 3.7.3 Base Construction apply. This means that siphoning station construction will require the use of transport fleets to move supplies and personnel to the gas giant in order for them to be built.

The exact characteristics of siphoning stations are determined by your source materials, but all such stations will be noted as to their Siphoning Rating or, in other words, how efficient they are in turning the hydrogen/helium atmosphere of the gas giant into fuel. Total the Siphoning Rating of all siphoning stations in a system and divide by 2, rounding any fractions to the nearest whole number. The result is the number of jumps away from the system the player's fleets can move. This is their operational range.

In the standard campaign environment it is assumed that there is a gas giant or some other form of viable fuel source in the system and a player will be allowed to build a maximum number of stations equal to twice the system's Capacity. If using the 2.1 Advanced System Generation Rules, players must specify which gas giant they are building each siphoning station at. The maximum number of stations that can be built at each gas giant is equal to the planet's Capacity. Roll 2d6 and assign the result to the gas giant as its Capacity. This Capacity is only used to determine the maximum number



of siphoning stations that can be built at the planet.



CM Note: The gas giant siphoning rules can be equally applied to any other remote fuel sources, such as nebulas, that might be used in your setting.

3.7.2 Operational Range

Operational Range is the number of jumps that a fleet can move away from a system fuel supply point. The total fuel rating of all fuel sources at the fuel supply point directly determines the operational range of units in the area. The operational sphere around an empire's systems will impact where it can deploy units, and will also increase the value of strategic fuel-producing systems.

3.7.2.1 Calculating Operational Range

All fuel production sources are rated as to their efficiency in processing fuel. Total the fuel rating of all fuel sources in the system and divide by 2, rounding any fractions to the nearest whole number. The result is the number of jumps away from the system the player's fleets

can move. This is the operational range conferred by the system's fuel sources.

The one special case of tracing operational ranges from fuel sources is that the operational range over a restricted jump lane is limited to one jump unless both systems contain a fuel depot.

3.7.2.2 Extending Operational Range

An empire's operational range can be extended through the use of its logistics network, namely military supply ships and specially built fuel depots.

Military transports can extend the operational range of fleets in the same way as described for traditional supply in CG 3.6.1.3 Military Supply Ships. Military supply ships that are being used to extend the operational range of a fleet cannot also be used to keep them in supply. Additional military supply ships are needed to fulfill this requirement.

Another option is to construct a *fuel depot*. Fuel depots are special planetary facilities that allow for the operational range of a player's fleets to be extended by one jump in all directions. So long as a system is within the maximum jumps from a fuel source a fuel depot

Sample Siphoning Station Templates

Unit Name	Design	Cost	Maint	DV	AS	AF	Basing	Special
Large Station	Base	20	1/2	12	0	4	2	Siphoning Rating (2)
Medium Station	Base	10	1/3	8	0	3	1	Siphoning Rating (1)
Small Station	Base	6	1/4	5	0	2	0	Siphoning Rating (1/2)
Tiny Station	Base	3	1/6	2	0	1	0	Siphoning Rating (1/4)

Sample Fuel Processing Centers Templates

Unit Name	Cost	Maint	Attack	Defense	D Factor	Attrition	Special
Large Fuel Center	32	1/1	0	3	0	6	Siphoning (2)
Medium Fuel Center	16	1/2	0	2	0	4	Siphoning (1)
Small Fuel Center	8	1/3	0	1	0	2	Siphoning (1/2)
Tiny Fuel Center	4	1/4	0	0	0	1	Siphoning (1/4)

Sample Fuel Depot Template

Unit Name	Cost	Maint	Attack	Defense	D Factor	Attrition	Special
Fuel Depot	25	1/1	0	2	0	10	Fuel Depot

can be built in the system. Should the fuel depot ever be cut off from the fuel source it will no longer act to extend the operational range of any of the player's fleets.

The net result is that extending the operational range of a fleet is a very logistically taxing affair and not something to undertaken lightly by an empire.

3.7.2.3 Effects of Being Outside of Operational Range

In times of battle it is possible for a fleet to find themselves cutoff from supply lines and unable to refuel. The destruction of a vital fuel depot or important siphoning station can totally disrupt an empire's fuel production network. Fleets that find themselves outside their empire's operational range are not instantly destroyed, but they will earn one out of supply level per turn that they are outside of their operational range. Track operational out of

supply levels separately from those earned for being outside the range of traditional supply lines. Despite being tracked separately, out of supply levels of this type affect units in the same way as standard out of supply levels do.

It is important to note that fleets that are both outside of operational range and also not in supply will accrue out of supply levels for both of these conditions! It will not take long for a fleet so affected to be rendered almost completely non-functional. It also means that enemy attacks on friendly supply and fuel sources can be extremely crippling.

Due to their rationing of available fuel, all fuel-dependent fleets can only move across a maximum of one jump lane per turn, regardless of lane quality, if they have earned an out of supply level for being outside of their operational range. This limitation is lifted once the fleet re-enters the operational range of one its empire's range fuel sources.

3.7.2.4 Converting Excess Fuel Rating into Income (Optional Rule)

A power may choose to convert excess fuel rating points into income if this optional rule is in use. The empire earns 1 economic point for each point of rating converted. This extra income generated by the power's fuel processing centers and/or gas giant siphoning stations is added to the system's output.

Fuel rating points are converted into extra income prior to 3.7.2.1 Calculating Operational Range. As a result, converting fuel rating points into income for your empire will decrease the operational range of the affected systems. If you have multiple systems covering the same operational sphere though, it may still be beneficial to convert some of these superfluous points into extra income for your empire.

Note: This rule adapts the 2.1.1.9.2 Gas Siphoning Stations optional rule available under the 2.1 Advanced System General Rules for use with the rules for fuel requirements.

3.8 Restricted Lane Escort

Under this rule, units that could not normally traverse a restricted jump lane (civilian fleets, especially) are allowed to cross the restricted jump lane so long as their fleet includes at least one Scout or Explorer vessel, and one vessel with a FTL drive. A single ship can fill both of these requirements. If these conditions are met, then the unit(s) can help ferry the civilian fleet across the otherwise impassable route.

If an empire wishes to establish a trade connection (using either the basic civilian Trade Fleet or convoy point rules), it may place one Scout or Explorer and one FTL-capable vessel at each end of the restricted lane to establish a safe link between the two connecting systems.

3.9 Extended Basing Capacity

Normally, non-FTL capable fighters and other flight units are not allowed to travel between systems independently of a carrier unit (with the exception of fighter replenishment within a single empire). If you prefer, this rule allows fighters to perform deep space intercepts or strikes against nearby systems without having to be based onboard a carrier or other unit.

Flight units (fighter, shuttle, breaching pod, etc.) are allowed to accompany a fleet at a command cost of 1 per flight wing (4 flights). They cannot move unaccompanied unless the flights possess a FTL drive system or can utilize some form of fixed FTL travel (jump gate, EDT station, etc.) to move between systems. If either of these conditions is met, then the flights are allowed to move independently without need of one or more escorting non-flight units.

Flights that are being based out of a squadron but exceed the squadron's available basing capacity, as well as flights that are using their own FTL drives or a FTL station to move between systems, suffer from fatigue when forced into combat. The longer than average flight durations these pilots endure, caused by the lack of personnel rotation, have effectively lowered their battle readiness. All affected flights have their AS and AF values reduced by one level. For example, a value of 3 would be reduced to 3*, a value of 3* to 2, a value of 2 to 2*, and so on. Neither value can be reduced below 0*. This slight penalty to combat abilities might not have much effect in some cases, but being unable to perform at their normal level is still a detriment to the empire that decides to overextend their fighter forces.

4.0 Advanced Space Combat and Orbital Bombardment Rules

This section of the Companion details additional or advanced space combat and orbital bombardment rules that you can use in your campaigns. Rules for retreating from combat and ramming are added, both of which have a fine tradition in space combat. An expanded set of dedicated squadron and flight missions are also presented, including a set of optional ranged combat missions to give the illusion of range when using the CSCR to resolve campaign battles.

4.1 Retreating from Combat

In a pitched battle, a task force commander will sometimes be presented with a combat situation he or she cannot hope to win. In these cases it can be prudent to retreat from combat.

4.1.1 Performing a Retreat

During the Assignments Phase, any ship with a jump engine or other form of FTL drive may elect to retreat from combat. The retreating ship is allowed participate in combat during the turn it is retreating, but all of its combat factors are halved during the retreat. Enemy ships can still attack the retreating unit during the turn it retreats. Additionally, retreating ships do not benefit from formation bonuses and are

considered to be in a level zero formation bonus during the retreating round.

If the retreating ship survives the turn's firing phases and is not crippled, it will successfully disengage from the battle during the End of Round phase. If the ship is crippled, there is a 50% chance that the retreat failed due to an engine malfunction. If the retreating ship's retreat attempt fails, the unit will suffer a 1.5.2.3 Catastrophic Drive Failure.

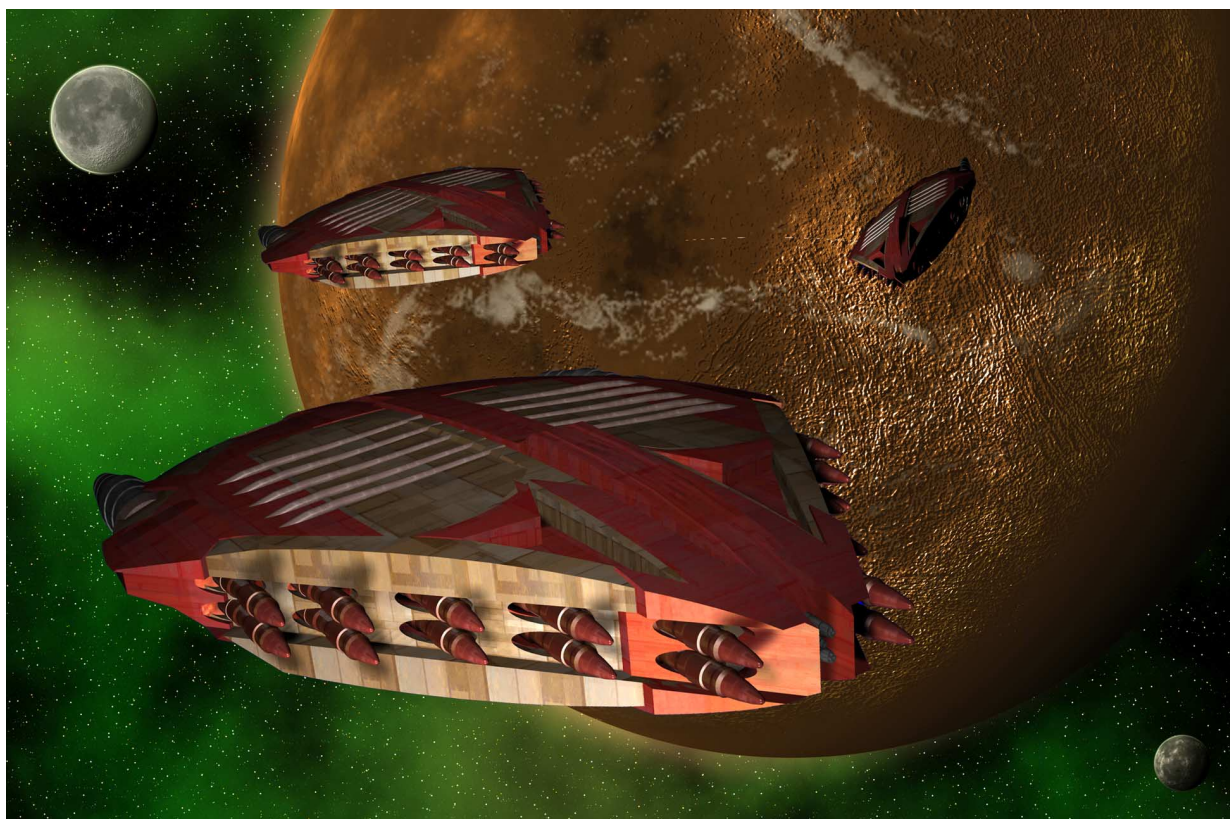
After successfully retreating from combat, the retreating ship will have no further participation in the combat scenario. It is however still a valid target for Hyperspace Pursuit scenarios later in the turn. To determine the location of the fleet, refer to 4.1.4 Location of Retreated Units at the End of the Turn.

Bases, DEFSATS, Mines, and other fixed platforms cannot retreat under any circumstances.

4.1.2 Multi-Unit Retreats

In some settings, such as the Escalation Wars universe, it is possible for multiple units to use a single ship's FTL drive to escape a scenario. One unit per squadron can use its FTL drive to disengage one or more units in its own squadron, including friendly flights. It is possible for a single ship to facilitate the retreat of an entire squadron in this way. All units participating in a multi-unit retreat incur all of the penalties associated with performing a retreat.

In some rare circumstances, a collection of ships that retreat from combat will find that they do not have any legal movement options. The most common reason for this would be a lack of one or both of a FTL capable and Explorer or Scout ship, with no nearby jump lanes traversable without one or more of these elements. When this happens, the fleet is considered destroyed, lost forever in the void of space.



4.1.3 Catastrophic Drive Failure (Optional Rule)

The failure of a jump engine or other FTL drive during activation can have catastrophic consequences for the escaping ship(s). If a crippled unit attempts to retreat from combat and rolls 25% or less on its retreat attempt, the retreating unit is destroyed.

In the case of catastrophic drive failure during 1.5.2.2 Multi-Unit Retreats, the ship whose FTL drive is being used to retreat is instantly destroyed. There is however a chance that some of the other retreating units did manage to escape before the drive was destroyed. There is also a chance that some of the retreating units were caught in the backwash caused by the jump point's collapse or the explosion of the malfunctioning ship and were themselves destroyed.

Roll d100 for each unit or flight wing (four flights) that took part in a multi-unit retreat in which the jump-capable ship facilitating the retreat was destroyed. On a roll of 76 or more, the retreating unit survived and has successfully

disengaged from combat. On a 50 or lower, the unit disengages from combat, but not without taking severe damage from the collapse/explosion. Non-crippled units receive enough damage to cripple them, and already crippled units are destroyed. As flights do not cripple, they are automatically destroyed on this result. Any other result (51 - 75) indicates that the unit was unable to retreat in time and remains in the scenario, in effect losing a turn of combat as a result of its abortive attempt to retreat from combat.

4.1.4 Location of Retreated Units at the End of the Turn

The location of retreated units at the end of the campaign turn is determined by the outcome of all the other battles (if any) fought at their location.

- If the retreating unit's forces control the system in which combat took place, then the retreating unit will rejoin them at the end of the turn.

- If the retreating unit's forces lost the battle for the system, then the retreating unit will be forced to flee the system. The retreating unit's owner must select one adjacent system to begin moving their unit towards. The retreating unit will then be placed in the jump lane connecting the source and destination systems and will arrive at the designated system during the Movement Phase of the next campaign turn (e.g., it will be in transit to the system as if it were given Movement Orders on the current turn).
- If the unit retreated from a deep space encounter in a jump lane, the retreating unit immediately returns to the system it began the turn in, arriving in the system at the end of the current campaign turn.

4.2 Ramming

In some desperate situations a player may find that their only hope for victory is by having their crews commit the ultimate sacrifice. Ramming is not a suitable tactic for winning a war, but it can sometimes be the last option available to desperate forces.

The decision to ram another unit is determined during the Assignments Phase of the combat sequence before squadron assignments are made. The actual ramming of the target then occurs at the end of the turn after Firing Phase Three. This means that all weapons fire for the turn will be resolved before the ramming unit impacts the target. The target of the ramming attack must be specified at the time of declaration and cannot be changed during the turn, even if that target is later destroyed. The only valid targets are those units in the enemy squadron that the ramming unit's own squadron will be attacking on that turn. All damage is treated as free Directed Damage.

The decision to ram an enemy unit is declared to all players at the end of the Assignments Phase and is not a secret. It is

obvious to those on the battlefield when one ship or flight is attempting to ram another.

4.2.1 Ships vs. Non-Flight Units

The base ramming strength of the unit is equal to three times its DV if non-crippled, or twice its DV if crippled, subtracting 1 per point of attrition damage (if applicable). Take this base ramming strength and multiply times d6, adding/subtracting your surprise modifier from the die roll (minimum of 0) and divide by 10, dropping all fractions. This is the amount of ramming scored to the target. Repeat this process for the unit the vessel rammed and score the damage against the ramming unit. As the numbers indicate, most ramming attempts are pure suicide.

Example: A heavy cruiser rams an enemy dreadnought. The heavy cruiser has a DV of 7 and is not crippled. The enemy dreadnought has a DV of 12 but is already crippled. The base ramming strength of the heavy cruiser is $7 \times 3 = 21$. The heavy cruiser rolls a 3 on the d6 and there is no surprise modifier. This gives a total damage to the enemy dreadnought of $(21 \times 3) / 10 = 6$ damage.

After the heavy cruiser has rolled damage for its ramming attempt, the dreadnought then rolls for its ramming "counter-attack" against said heavy cruiser. The base ramming strength of the dreadnought is $12 \times 2 = 24$. The dreadnought rolls a 5 on the d6 and there is no surprise modifier. This gives a total damage to the heavy cruiser of $(24 \times 5) / 10 = 12$ damage. The ramming heavy cruiser is crippled and also receives 5 points of attrition damage.

4.2.2 Flights vs. Flights

The base ramming strength of the flight when ramming other flights is equal to two times its DV. Take this base ramming strength and multiply times d3, adding/subtracting your surprise modifier from the die roll (minimum of

0) and divide by 5, dropping all fractions. This is the amount of ramming scored to the target. The ramming flight is instantly destroyed.

Example: A light fighter flight with a DV of 1 rams a medium fighter flight with a DV of 2. The light fighter flight has a base ramming strength of 2 and rolls 3 on the d3. There are no surprise modifiers. The damage to the medium fighter flight is then $(2 \times 3) / 5 = 6 / 5 = 1$ damage. This is insufficient to destroy the medium fighter flight, but the light fighters are destroyed nonetheless since they elected to ram.

4.2.3 Flights vs. Non-Flight Units

The base ramming strength of the flight when ramming non-flight units is equal to three times its DV. Take this base ramming strength and multiply times d6, adding/subtracting your surprise modifier from the die roll (minimum of 0) and divide by 10, dropping all fractions. This is the amount of ramming scored to the target. The ramming flight is instantly destroyed.

Example: A medium fighter flight with a DV of 2 rams a frigate with a DV of 3. The medium fighter flight has a base ramming strength of 6 and rolls 3 on the d3. There is a surprise modifier of +2, modifying the roll of 2 to 5. The damage to the frigate is then $(6 \times 5) / 10 = 30 / 10 = 3$ damage. The enemy frigate takes just enough damage to cripple it and the medium fighter flight is destroyed.

4.2.4 Civilian Fleets and Ramming (CM Only)

Civilian fleets are allowed to ram, given certain circumstances are met. First, Colony Fleets and Transport Fleets are disallowed from ramming if they are currently carrying Census or ground units. Under no circumstances will civilian fleets threaten the safety of large numbers of embarked individuals by attempting to ram. Otherwise, civilian fleets are allowed to

ram as if they were ships, so long as the player has CM permission to do so.

As a general rule, Pacifist powers or NPEs with AG 33 or less should not be allowed to use their civilian fleets to ram enemy units under any circumstances. If drawn into a hopeless combat situation, the fleets of such powers would always surrender to the enemy – even if they were fairly certain that they would be shown no mercy.

4.3 Advanced Dedicated Missions

4.3.1 Dedicated Squadron Missions

Once all Task Force units are in their final squadron assignments, players may choose to assign squadrons to dedicated missions. CG 3.6.3.11.1 Dedicated Missions included rules for dedicated Anti-Fighter squadrons. This section includes new dedicated squadron missions that can be used in your VBAM CSCR battles.

4.3.1.1 Anti-Ship Squadron (CSCR Skirmish Only)

A dedicated Anti-Ship squadron may use its AS factors from its ships or flights to assist another friendly squadron engage units in any one other enemy squadron, but not vice versa. These AS factors are added to the AS factors from other friendly units in the squadron being assisted by the dedicated Anti-Ship squadron. In essence, the dedicated Anti-Ship squadron is giving it AS factors to the other friendly squadron in order to maximize its potential effect against the targeted enemy squadron.

Dedicated Anti-Ship squadrons cannot conduct anti-fighter fire during any firing phases on the turn the mission is being performed. If a flagship squadron is assigned to be a dedicated Anti-Ship squadron, it loses its squadron-wide level 1 formation bonus. Only ships and fighters may be part of a dedicated Anti-Ship squadron. Squadrons that contain fixed defenses of any type may not be placed on a dedicated Anti-Ship mission.

4.3.1.2 Anti-Fighter Squadron

A dedicated Anti-Fighter squadron may use its AF factors from its ships or flights to engage flights in any one other enemy squadron, but not vice versa. These AF factors are added to the AF factors from other friendly units in the squadron being protected by the dedicated Anti-Fighter squadron.

Dedicated Anti-Fighter squadrons cannot conduct Anti-Ship fire during either Fire Phase One or Fire Phase Three. If a flagship squadron is assigned to be a dedicated Anti-Fighter squadron, it loses its squadron-wide level 1 formation bonus. Only ships and fighters may be part of a dedicated Anti-Fighter squadron. Squadrons that contain fixed defenses of any type may not be placed on a dedicated Anti-Fighter mission.

4.3.2 Dedicated Flight Missions

CG 3.6.3.11.1 Dedicated Missions included rules for two types of dedicated flight missions: Anti-Ship and Anti-Fighter. In addition to these standard dedicated missions, flights may also elect to make use of one of the following dedicated mission types.

4.3.2.1 Anti-Ship

Flights assigned to a dedicated Anti-Ship mission elect not to participate in Fire Phase Two in order to gain a +1 to their AS value during Fire Phase Three.

A flight that has an asterisked (*) value for their AS value cannot perform a dedicated Anti-Ship mission. A flight with an AS value of 0

(before Ballistic bonuses, if any) cannot increase its AS value above 1 with this rule.

4.3.2.2 Anti-Fighter

Flights assigned to a dedicated Anti-Fighter mission elect not to participate in Fire Phase Three in order to gain a +1 to their AF value during Fire Phase Two.

A flight that has an asterisked (*) value for their AF value cannot perform a dedicated Anti-Fighter mission. A flight with an AF value of 0 (before Ballistic bonuses, if any) cannot increase its AF value above 1 with this rule.

4.3.2.3 Turret Suppression

Flights assigned to a Turret Suppression mission in an enemy squadron are attempting to knock out or otherwise distract the squadrons' anti-fighter batteries so that other, more valuable flights can survive their combat runs. When scoring AF fire from non-flight units, all enemy flights performing Turret Suppression in the squadron must be destroyed before any other enemy flights in the enemy squadron can receive damage. Flights performing Turret Suppression may not fire at ships, but they can still perform anti-fighter fire.

4.3.2.4 Full Escort

Flights assigned to provide Full Escort may absorb damage originally meant for other units, including other flights, in their fleet. Each fighter can absorb one point of damage against non-flight units, or up to their full DV against AF fire. Full Escorts may still participate in firing phases, but provide only half their normal combat factors (rounded down).

4.3.3 Range-Based Dedicated Missions (Optional)

The CSCR heavily abstracts the importance of range to each unit's core combat statistics (DV, AS, AF). However, some players (not to mention source designers) would prefer to integrate the concept of combat engagement ranges into their CSCR combat scenarios.

Under this optional rule, players will have the option of performing either Long Range or Short Range fire as two additional forms of dedicated squadron missions. Each of these two special, range-based dedicated squadron missions convey their own advantages and disadvantages in combat.

A squadron may not perform more than one dedicated squadron mission simultaneously. For example, a squadron could not perform both Long Range Fire and Short Range Fire on the same combat turn. Similarly, the squadron also could not perform both Short Range Fire and Anti-Fighter missions on the same turn, either.

Bases and other fixed defenses and flights are incapable of making use of range-based dedicated squadron missions and are not affected. Fixed defenses are ineligible since they are designed for long range combat as a prerequisite for their mission profile. Similarly, flights always engage at a range that would be considered short range, so their fighter would be likewise unaffected by range-based missions.

4.3.3.1 Range-Based Mission Types

These range-based dedicated missions are available, in addition to the anti-fighter dedicated mission described in the VBAM Campaign Guide (see CG 3.6.3.11.1 Dedicated Missions).

4.3.3.1.1 Long Range Fire

All non-flight units in a squadron performing a Long Range Fire mission gain a +1 formation level bonus but also have their AS values halved. Any unit with the Long Range special trait ignores this last penalty, receiving its full AS value even when performing Long Range Fire.

4.3.3.1.2 Short Range Fire

All non-flight units in a squadron performing a Short Range Fire mission gain a +50% bonus to their AS values (rounding up). However, the close quarters fighting makes

formations almost impossible to assemble. All fire against units performing a Short Range Fire mission is scored as free directed damage! Any squadron that contains fixed defenses (bases, defsats, etc.) cannot perform Short Range Fire missions.

If using the CSCR Skirmish rules, any unit with the Short Range special trait receives an additional bonus. These units treat all non-flight units in the target squadron as if they had a formation bonus level 1 lower than they really do.

4.3.3.2 Modifications to CSCR Scenarios

The use of range-based dedicated missions has an impact on CSCR combat resolution. Unless otherwise modified by your source materials, the player with the highest readiness modifier after the Surprise Roll is allowed to choose the starting engagement range (Long Range, Short Range, or Normal). The first turn of the scenario will then be fought at that engagement range, with each squadron performing a mandatory range-based dedicated mission based on the selected engagement range. For example: Long Range engagement range would force all squadrons to adopt a Long Range Fire dedicated mission for the first turn of the battle. If an engagement range of Normal is selected, then neither Task Force is under any requirement to place its squadrons in a ranged-based dedicated mission.

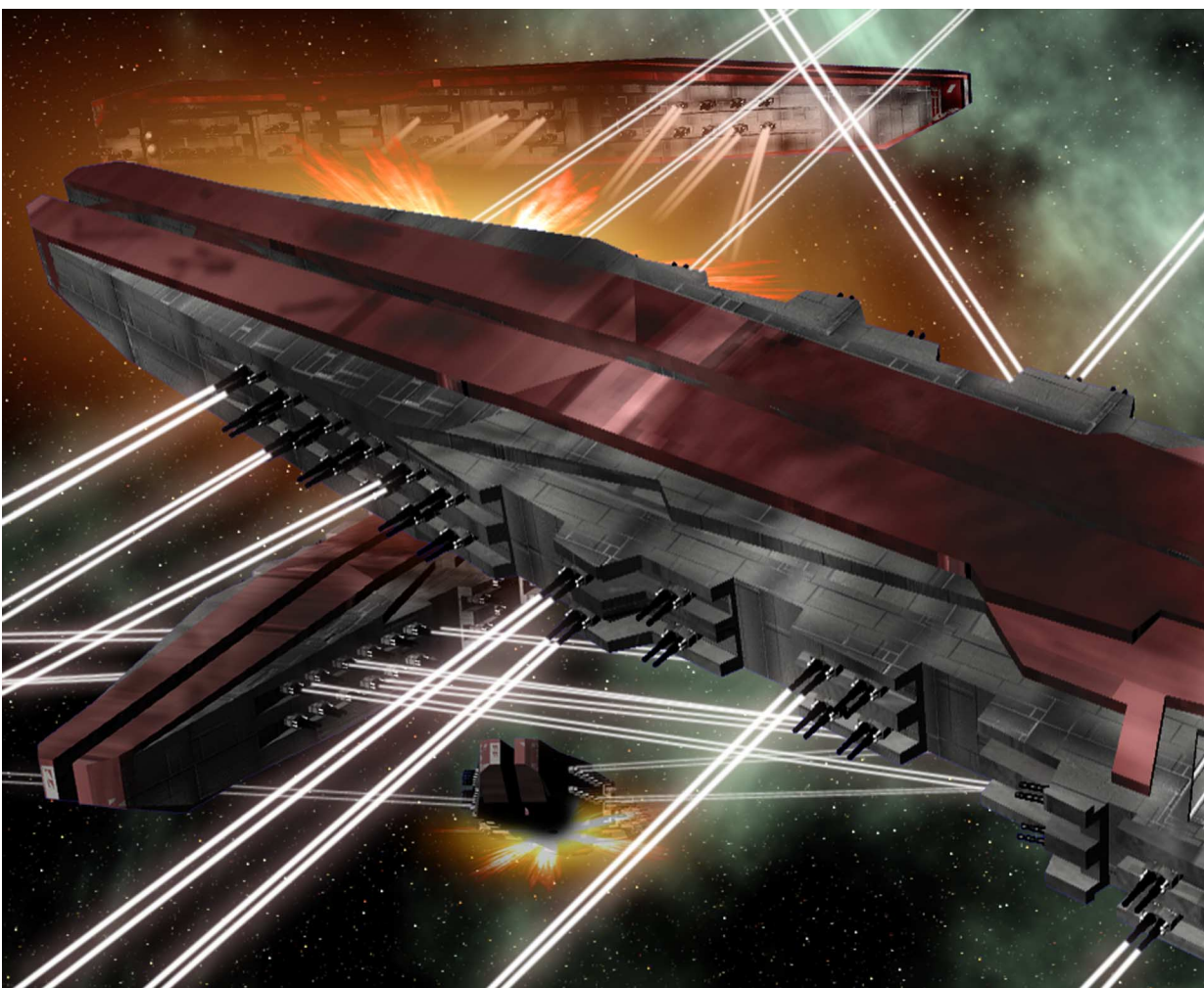
On subsequent combat turns, players may assign their squadrons to any dedicated mission of their choosing.

4.3.3.3 Range-Based Special Unit Abilities

If using the Range-Based Dedicated Missions optional rule, the two following range-based unit special abilities should be included as options in your campaign.

4.3.3.3.1 Long Range

Units with the Long Range special unit ability are optimized for long-range combat.



Such units are capable of standing off at a great distance while pummeling their approaching opponent. Long Range units do not have their AS values halved when performing 4.3.3.1.1 Long Range Fire.

4.3.3.3.2 Short Range

Units with the Short Range special unit ability are designed for close combat. Their brutal arsenals have a limited range, but when they enter optimal engagement range they are a force to be reckoned with. When performing 4.3.3.1.2 Short Range Fire, attacking units do not get the normal free directed damage result against Short Range units. Instead, they consider the Short Range units to be in a formation bonus level 1 lower than they really are.

If using the CSCR Skirmish rules, Short Range units also treat all non-flight units in the target squadron as if they had a formation bonus

level 1 lower than they really do when performing Short Range Fire missions.

4.4 Bombardment Point Alternatives

The method for calculating bombardment points found in the core campaign rules is not applicable to all science fiction settings. These alternative options are presented for use in such settings.

4.4.1 AS/AF Based Bombardment Point Values

There exist some settings for a single warship can rain death and destruction down upon a world, destroying it in short order. This alternative bombardment point system can be used to achieve that effect in your campaign.

Instead of using the standard bombardment point chart to determine the number of bombardment points produced by each unit in your fleet, all non-flight units produce a number of bombardment points equal to the total of their AS and AF values. The amount of bombardment points produced by flight units is then equal to their combined AS and AF values per each number of flights equal to the units' maintenance denominator.

4.4.2 Bombardment Values

Rather than relying on a chart or an existing combat statistic for determining the number of bombardment points a unit generates, source designers can instead apply a Bombardment Value to all units. A unit's Bombardment Value then becomes the amount of bombardment points each member of that class generates for purposes of Orbital Bombardment.

4.5 Immediate Orbital Bombardment

This optional rule is quite simple: instead of requiring a full turn for orbital bombardment missions to begin, all orbital bombardment takes place in a single turn with no delay. As soon as an enemy fleet moves into a system and captures a fixed defense point (usually after winning a Defensive scenario at the location) it can be ordered to conduct orbital bombardment

missions, with the missions' effects taking place during the Orbital Bombardment Phase of the same turn! Under this rule, orbital bombardment becomes a far deadlier threat during times of war and protecting key worlds from fast strikes becomes more difficult.



CM's Note: The use of this rule is heavily source dependant and should be balanced against the bombardment point potential of warships in your background. If coupled with starships that are capable of razing worlds single-handedly, Immediate Orbital Bombardment could lead to planets being utterly destroyed just because the defenders couldn't repulse the invading fleet. Your players will find that it isn't much fun to play in a campaign where losing a space battle directly results in the immediate destruction of their colony.

4.6 Advanced Orbital Bombardment Missions

4.6.1 Planetary Destruction Bombardment

This special orbital bombardment mission is an attempt to destroy an entire planet in the target solar system. In order to perform a Planetary Destruction bombardment mission, one or more ships in the player's fleet must possess the Planetkiller special ability; or the bombarding fleet must have a bombardment point total equal to or greater than 1,000.

The effects of this mission differ depending on the system generation system being used in the campaign. If using one the

detailed system generation systems outlined earlier in this book, then the targeted planet will be destroyed during the bombardment. All moons, Census, Productivity, ground units, etc. associated with the planet are also destroyed (obviously – since the planet they were on no longer exists!). After a Planetary Destruction mission is complete, the destroyed planet is converted into an asteroid field with a Carrying Capacity equal to half the planet's original Capacity statistic (rounding down, minimum Capacity of 1).

If using the standard system generation rules found in the Campaign Guide, Planetary Destruction will result in the destruction of all enemy assets at the fixed defense point in the system (e.g., Census, Productivity, ground units, etc.). The system's two remaining statistics, RAW and Carrying Capacity, are then reduced to one-third of their normal value, rounding down (minimum 1).

Example: A Planetkiller elects to perform a Planetary Destruction orbital bombardment mission in a system with the following statistics: Census 5, Morale 4, RAW 3, Productivity 3, Carrying Capacity 8. Four enemy Regulars and two orbital Shipyards are located in the system. It will take one full turn to complete this bombardment mission, at which point the Census, Morale, and Productivity of the system are reduced to 0; the RAW is reduced to 1; the Capacity is reduced to 2; and all units and installations (the Regulars and the Shipyards) are destroyed.

If using either the Commodore or Admiral level advanced system generation rules, the effects of a Planetary Destruction orbital bombardment mission are modified as follows. The Planetary Destruction will result in the complete annihilation of the target planet. The planet is destroyed and removed from play, replaced instead by an asteroid belt. The RAW value of this asteroid belt is equal to 1 if the destroyed planet had a RAW of 5 or greater; otherwise, set the belt's RAW value to 0. All

Census, Productivity, ground units, fixed defenses, planetary installations, and ships/flights based off of the target world are destroyed.

4.6.2 Terror Bombardment

This sadistic bombing campaign is not meant to do any real damage to the infrastructure of a planet but rather to cause panic and fear within the general populace. Terror bombardment is conducted in a cruel and unminding fashion, with an empire's forces striking purely at random targets of interest or opportunity.

For every 12 bombardment points used in Terror Bombardment, a special Morale roll is made. Roll d6. On a result of '1' or '2', the system's Morale temporarily reduced by 1 on the following campaign turn. On a result of '5' or '6', the Morale is *permanently increased* by 1, showing that the Census is determined to provide a united front against the enemy. Any other die result has no effect. For every 24 bombardment points, the system Morale is permanently reduced by 1. Terror Bombardment can also disrupt a planet's economy. For every 36 bombardment points, 1 Utilized Productivity will be lost for purposes of the next CG 3.1 Income Phase. Finally, there is a chance that the bombardment teams performing Terror Bombardment will become overzealous and actually succeed in destroying one or more large population centers. For every 48 bombardment points, 1 Census is removed from the planet. Roll d6 for each Census lost. On a roll of '1', '2', or '3', Morale decreases by 1. On a roll '6', the people have tightened their resolve to fight and Morale increases by 1.

5.0 Advanced Ground Combat Rules

Ground combat is an under appreciated element in a campaign. These advanced ground combat rules will add extra detail to the ground combat experience, making invasions of planets nearly as detailed as space battles.

5.1 Campaign Ground Combat Resolution (CGCR)

The Campaign Ground Combat Resolution (CGCR) system uses the foundation of the Campaign Space Combat Resolution (CSCR) found in the VBAM Campaign Guide to create a more in-depth ground combat system. Many of the concepts and rules are borrowed from the CSCR to make it familiar and simple to implement. Some additional rules exist to address specific conditions that occur when ground forces collide.

5.1.1 Ground Unit Elements

The smallest and most basic ground combat unit is called an *element*. These elements are analogous to ships in space combat. Each element is assigned a set of combat values, such as Ground Attack, Air Attack, Defense, Command Rating, etc. The list of all element attributes is given in section 5.1.1.1 Element Attributes.

A number of elements combine to form a *group*. Groups are analogous to squadrons in space combat. Each group will have a command element and a number of other elements with a total Command Cost less than or equal to the Command Rating of the command element. The composition of most groups (e.g., which elements combine to form a group) will be set in the source material. For example, a Kuissian Imperial Guard group is composed of 1 Command element, 2 Regular Infantry elements, 2 Mechanized Infantry Units, 1 Recon element, and 1 Ground Support element.

Groups replace the standard ground units found in the VBAM Campaign Guide. The costs for CGCR groups are equivalent to the costs of standard ground units of the same name. When a group is purchased, all the elements that comprise that group are built at the same time. Elements do not have an individual cost and cannot be omitted from groups. Element substitutions are likewise disallowed when purchasing groups.

It is possible to add additional elements above and beyond the standard elements when a group is first purchased. To do this, the group's command element must have enough Command Rating available to accommodate the additional element(s). Each element added to the group increases the group cost by 1. Adding elements to groups is not a very cost effective option but does allow for customization of groups for use against specific foes. An example of this is given in section 5.1.1.3 Adding Additional Elements to Group at Construction.

Finally, the largest CGCR unit is the *army*. An army is analogous to task forces in space combat. An army is composed of an army command element, a command group, and a maximum number of groups equal to the army command element's Command Rating.

5.1.1.1 Element Attributes

Each element is assigned values in the following areas: Defense Value, Ground Attack, Air Attack, Command Rating, Command Cost,

and Type. Some ground elements also have special abilities or rules associated with them. If they do, they will be mentioned in the element's special notes section.

Defense Value (DV): This value is the amount of damage the element can take before it is destroyed. While detailed fully later it is important to note that unlike ships in space combat, ground elements are destroyed once they have taken amount of damage equal to their DV. Elements do not cripple; they are simply destroyed.

Ground Attack (GA): This value is used when the element attacks ground-based targets, such as infantry and armor.

Air Attack (AA): This value is used when the element attacks air-based targets, such as VTOL craft and atmospheric fighters.

Command Rating (CR): This value is used to determine how many other elements this element may command. CR is also influences the success or failure of morale rolls.

Command Cost (CC): This number is the amount of CR points it takes to include this element in a group.

Type: This field notes whether the element is a ground element or an air element.

Special Notes: The special notes section lists whether the element is a ground element or an air element. It also lists any special abilities of the unit such as Artillery, Recon, or Marine.

5.1.1.2 Special GSCR Unit Abilities

The following GSCR unit abilities are used and used within these rules.

Artillery: Artillery units are treated much like Ballistic units in the CSCR. Artillery units do

not halve their GA or AA when their group is placed in a formation bonus.

Marine: Marine elements receive a +2 GA bonus when invading from transports.

Recon: Recon units can be used to lower the formation bonus of an enemy element by 1. Recon units used to lower an enemy formation bonus have their GA and AA values halved during the combat round.

5.1.1.3 Adding Additional Elements to Group at Construction

Each empire is given a set list of elements, which are listed in their associated source materials. These elements and their statistics are usually based on the relative strength of the overall ground unit that they represent.

If a group has not filled its Command Rating and the system has a Productivity of 1 or more, then a commander can add additional elements before the battle. Any excess Command Rating available to the group can be filled using additional elements so long as the group's combined element Command Cost does not exceed the command element's Command Rating.

It costs 1 economic point to add another element to a group. Additions maybe made either when the group is first purchased or at any point during the group's lifetime, so long as the previously noted limitations on Command Rating and system Productivity are met.

Groups with additional elements are noted with the extra elements in parentheses proceeded by a plus sign. Examples: Imperial Guard (+Mechanized Infantry) if the base Imperial Guard group has added a Mechanized Infantry element, or Imperial Guard (+Recon + Regular Infantry) if the Imperial Guard group has added both Recon and Regular Infantry elements.

Example, the Kuissian Imperial Guard group mentioned previously has a normal cost of

2 economic points and consists of 1 Command element, 2 Regular Infantry elements, 2 Mechanized Infantry elements, 1 Recon element, and 1 Ground Support element. This group composition for an Imperial Guard ground unit is defined in the campaign source materials.

The Kuissian player decides they need a little more firepower for an upcoming assault. The Command Rating of the Command element is 10. However, the total Command Cost of all the elements in the group is only 8. The Kuissians can elect to either add one element with a Command Cost of 2, making the total group cost 3, or add two elements each with the Command Cost of 1, making the total group cost 4.

5.1.1.4 Creating Elements for Source Material

Not every source may have ground elements ready for your use. They are however fairly simple to convert. The overall strength of the ground unit gives as an approximation of the types of elements they might contain and what abilities they might receive. These are broken in Permanent and Flexible elements.

5.1.1.4.1 Permanent Elements

These represent the ground unit's core elements. The permanent elements assigned to a group will not change from battle to battle.

Add the normal ground unit's Attack, Defense, and Attrition values together and multiply the sum by two. This is the number of permanent element points the ground unit's group will receive. Use these points to purchase elements from the Permanent Element Chart.

The first element that should be selected for a group is its command element. If the ground unit being converted into elemental form has the Marine special unit ability, then a Marine Command element should be assigned to the group. Otherwise, the group should be assigned a standard Command element.

With a command element selected, proceed to select additional elements to add to the group. The combined cost of all permanent elements assigned to the group cannot be higher than the ground unit's number of permanent element points, nor can the Command Cost of all permanent elements be greater than the command element's Command Rating.

Permanent Element Chart

Element	Cost	DV	GA	AA	CR	CC	Type	Special Notes
National Guard	1	2	2	0	2	1	Ground	
Light Infantry	2	4	2	1	3	1	Ground	
Light Marine	3	3	3	1	5	1	Ground	Marine
Light Armor	2	3	5	1	4	2	Ground	
Medium Infantry	4	5	4	2	5	2	Ground	
Medium Marine	5	5	5	2	4	3	Ground	Marine
Medium Armor	4	4	6	1	5	3	Ground	
Heavy Infantry	5	6	5	3	5	2	Ground	
Heavy Marine	6	6	6	3	4	3	Ground	Marine
Heavy Armor	6	8	8	0	5	5	Ground	
Command	1	4	0	0	10	10	Ground	
Marine Command	2	5	0	0	10	10	Ground	Marine

If the base ground unit has the Marine ability, then all elements in the group must also have the Marine ability.

Each time this ground unit is deployed, these permanent elements are also deployed. First determine how many points the ground unit has yielded. Only one command element may be selected per group.

Permanent Element Points
(Attack + Defense + Attrition) x 2 =
Permanent Element Points

5.1.14.2 Flexible Elements

Flexible elements are the air units and special artillery elements that a ground unit possesses. Unlike permanent elements, a group's flexible elements may be changed between battles. The decision to modify a group's flexible element configuration should be made in the player's turn orders and will take effect during CG 3.6.5.6 Landings and Deployment. This means that changes to the group's flexible elements on the current turn will not impact the group until the Invasions portion of the next campaign turn.

The number of flexible elements that a ground unit receives is based on its D Factor. For a ground unit with a D Factor of dX, where X is the number of sides indicated for the die, the ground unit group will receive X-1 (minimum

0) points to spend on flexible elements from the Flexible Elements Chart.

When combined with the Command Costs of permanent elements in the group, the Command Costs of flexible elements assigned to a group may not exceed the overall Command Rating of the command element.

5.1.15 Reinforcements

When forming armies, each player must add the maximum number of groups possible based on the Command Rating of the army command element. Units cannot be held back if open Command Rating is available. Groups beyond those placed in the army are considered reinforcements for later turns. These groups can (and must) be added to the army to replace groups that have been lost in combat. There is no cost to add reinforcement groups to the army and no limit to the number of reinforcement groups that can be added per turn.

Elements cannot be individually moved from the reinforcements pool to the army; only entire groups can be moved.

5.1.2 Formation Bonuses

Units will naturally work together to provide support and cover for other units in the army. This cooperation is represented by a formation bonus.

If there is more than one group in an army then the entire command group will

Flexible Element Chart

Element	Cost	DV	GA	AA	CR	CC	Type	Special Notes
Mobile Artillery	1	2	1	0	3	1	Ground	Artillery, Marine
Artillery	2	3	2	0	3	2	Ground	Artillery
Heavy Artillery	3	3	4	0	3	3	Ground	Artillery
Air Support (Ground)	3	4	3	1	3	2	Air	
Air Support (Air)	3	3	1	3	3	2	Air	
Air Support (Mixed)	2	3	2	2	3	3	Air	
Scouts	1	1	0	0	2	1	Ground	Recon (1)
Heavy Scouts	2	2	1	0	3	1	Ground	Recon (2)

automatically be placed into a level 1 formation bonus, and the army command element will receive a level 2 formation bonus. Additionally, the army is allowed to put a number of additional ground elements into a level 1 formation bonus equal to the Command Rating of the army command element. These elements do not have to be in the same group and no element can gain more than one level of bonus in this manner.

The effects of being in a formation bonus are listed below in 5.1.5.10 Directed Damage. Air elements by their nature cannot benefit from formation bonuses of any sort.

Recon units are used to reduce the formation bonus of enemy units. Rules for this are given in 5.1.5.10 Directed Damage.

5.1.3 Surprise

Due to the need to transport troops through space in ships and then use large numbers of landing craft to deploy them to a planet, it is nearly impossible to achieve surprise. Even planets without military space garrisons will normally have civilian satellites and traffic that will supplement its own ground based detection systems, warning the planet of an imminent attack. Therefore surprise is only available at the discretion of the CM. A surprised army will suffer a -2 penalty to all attack rolls for the first round of combat.

5.1.4 Combat Duration

Unlike space combat there is no roll for how long the combat will take. Combat will continue until one side has been destroyed, retreats, or surrenders. One important note is that each round of ground combat takes place during a single campaign turn. This means that most combats will span several turns and both sides will have the chance to rush reinforcements to the combat zone.

5.1.5 Combat Resolution

There are two scenarios for ground combat. The first is the invasion where the

attacker tries to establish their beachhead. The other is for all other ground combat after the beachhead has been established. Each of the two scenarios allows each side to employ different tactics to try and outmaneuver their opponent. Regardless of which scenario is currently being used the basic system for attacking and resolving damage is the same and the same basic rules apply although, the scenarios do provided modifiers.

5.1.5.1 Winning and Morale

The term "winning" is used to describe which side holds the upper hand on any given turn of the battle. Whichever side inflicts more total damage in the Ground Attack Phase (see below) is the winner of that round. Use the total after accounting for any directed damage. Winning has no inherent effect on combat but other effects, most notably attempts to establish a beachhead, depend on who won that round of combat.

Every army must contend with keeping their troops in a good fighting spirit and certain conditions will require them to make morale checks to see if they can keep their troops going. When a morale check is required roll 2d6 and compare to the Command Rating of the group command element. If the result is equal to or less than this value, the group has passed the morale check and will continue fighting. If the result is higher than the command element's unit Command Rating, then the group's spirit is "broken".

Broken groups have their GA and AA values halved on the next turn of combat. They must also make a second morale check to rally at the end of the next turn. If they succeed then they return to full combat readiness without penalty. If the second check also fails, then the unit has surrendered. Surrendered units are removed from play. At the end of the battle, when one side has complete control of the planet, surrendered groups of the victorious side are "rescued" and are returned to play. Surrendered Groups of the defeated side are destroyed.

If the owner of a group that is about to surrender (e.g., the group has already failed its second consecutive morale check) has space superiority over the planet, they may attempt to retreat off world instead of surrender. The broken group's owner must have transport capacity available to embark the retreating group. The player rolls 1d6; on a '1' to '3' the Group is destroyed; on a '4' to '6' they successfully make it off world. They must remain off world for at least 1 turn after which they may be redeployed to the combat area.

In addition to any checks required based on scenario/situation, the following conditions will require a group to make a morale check. A group must make a morale check for each condition that is met. Round up when determining how many elements are required for a check. For example, a group with 7 elements would make a check when losing 4 elements for the first condition below.

- A group loses more than 50% its current elements in one turn due to ground or air attacks.
- A group loses more than 50% its current elements in one turn due to orbital bombardment.
- The invading power lost more than 50% of its current groups in one turn (for any reason); all remaining groups in the army must roll a morale check
- The defending power lost more than 75% of its current groups in one turn (for any reason); all remaining groups in the army must roll a morale check

5.1.5.2 Invasion and Beachhead

When the attacker invades the planet they have two options: perform a 1) fast drop or a 2) standard drop. In a fast drop the attacker lands its units in population and production centers in an attempt to quickly overwhelm the defender. The advantage is that it can lead to a quick victory, but it also allows the defender to fight from prepared positions.

In a standard drop the attacker lands its units away from the planet's population/

production centers and moves overland towards its objective(s). This less daring approach forces the defender to either sally forth to meet the attacker, thus giving up their bonus for fighting from prepared positions, or stand firm and let the attacker land unopposed.

In either case, on the invasion turn all of the attackers non-Marine elements fight at half their GA and AA values (round down). Marines fight at their full combat values. Defender elements are always at full strength.

In the fast drop the defender receives a +1 bonus to GA and AA to represent their "dug-in" bonus. Combat will occur on the turn that the enemy first invades and should be resolved as outlined later in these rules. If the defender wins this first round of combat, then the attackers are forced back onto their ships and the beachhead attempt fails.

In the standard drop, if the defender chooses to sally forth then they give up their "dug-in" bonus but combat will take place on the first turn. If the defender wins, then the attackers are forced back onto their ships and the beachhead attempt fails. If the defender chooses to wait they will keep their "dug-in" bonus for later rounds of combat but there will be no combat on the first turn of the invasion and the beachhead attempt will automatically succeed.

5.1.5.3 Standard Combat Turn

Once the beachhead has been established, combat will continue in the standard manner. The turn begins with the attacker choosing whether to attack the defender or wait. The defender has the advantage of making its decision second, so it will know whether the attacker decided to attack or wait before making its own decision to attack or wait. If one or both sides decide to attack, then combat will occur and be resolved as normal.

If the attacker formed the beachhead using a fast drop then the "dug-in" bonus that the defender received for the invasion turn no longer applies as the attacker is inside the defenses.

If the attacker performed a standard drop and the defender waited, the defender will receive the “dug-in” bonus on the second turn of combat. They will keep the bonus for as long as they continue to win the individual rounds of combat. Once they have lost a round the “dug-in” bonus is lost.

If the defender sallied forth they have already given up their “dug-in” bonus.

Once the defender has lost their “dug-in” bonus it cannot be regained until after the entire battle is over and the last enemy unit on the planet's surface has been killed, captured, or otherwise driven off.

5.1.5.4 Combat Turn Sequence

Each round of combat will go through the following phases. Recall that each round of combat is equal to one campaign turn, so each army will perform each phase once per campaign turn.

Orbital Bombardment Phase: Orbital units bombard planetary positions

Assignments Phase: Assign air unit and Recon functions

Air to Air Phase: Air units attack other air units

Air to Ground Phase: Air units attack ground units; ground units return fire

Ground to Ground Phase: Ground units attack other ground units

Damage is simultaneous within each phase and is resolved before moving to the next phase. Units destroyed in one phase cannot participate in a future ground combat phase.

5.1.5.5 Orbital Bombardment Phase

The player with space superiority (usually the attacker) can conduct orbital bombardment. Only ships that have not participated in space combat may conduct orbital bombardment. To determine the effects of the bombardment, total the number of bombardment points the orbiting fleet produced

as per CG 3.6.4 Orbital Bombardment Phase. This total is treated as the fleet's GA value. Roll a d6 and multiply it by the fleet's GA value, then divide by 10 (round down). This is the damage inflicted on the opponent's ground force.

Orbital bombardment cannot use directed damage, so the opponent will assign the damage as they see fit. Elements can take up to their DV in damage before they are destroyed. Damage must be assigned so that an element is destroyed before damage is assigned to another element. If there are five elements with 3 DV each and they take a total of 10 points of damage from orbital bombardment, three elements must be destroyed with 1 point left over. 2 points could NOT be assigned to each element to create five damaged elements.

It may happen that there are points left over that are insufficient to destroy even the smallest unit (the 1 point left over above). These points are assigned to an element, reducing their DV and making the element easier to destroy in future rounds.

5.1.5.6 Assignments Phase

In this phase both players determine which groups their air elements will be assigned to. They may also designate which air elements will not participate in the Air to Air Phase in order to get a +1 bonus to GA during the Air to Ground Phase, and which air elements will not participate in the Air to Ground Phase in order to get a +1 bonus to their AA during the Air to Air Phase.

Powers can also assign Recon units to decrease the formation bonus of any one enemy group. Recon units that perform this function only contribute half of their GA and AA for this round.

Finally, any group that has had its command element destroyed must assign a new command element at this time. There is no penalty for assigning this new command element, though all morale checks will be based on the new command element's Command Rating, not the Command Rating of the destroyed command element.

5.1.5.7 Air to Air Phase

Air elements attack other hostile air elements in their same group during this phase. Both sides engaged in these aerial battles total the AA of all their air elements within affected groups. Air elements that are not participating in the Air to Ground Phase receive a +1 bonus to their AA values at this time.

Each player rolls d3, multiplying it by their total AA value divided by 5 (round down). This is the total damage inflicted on the enemy air elements. Air to air attacks may use directed damage (see 5.1.5.10 Directed Damage), otherwise the owner of the air elements can distribute damage using the same method as described in 5.1.5.5 Orbital Bombardment, although obviously damage can only be split among air elements in the affected group. Repeat the process for every group that contains opposing air elements.

Note: Combat performed between air elements during the Air to Air Phase is analogous to Flight vs. Flight fire in the CSCR.

5.1.5.8 Air to Ground Phase

Air elements that survived the Air to Air Phase attack enemy ground elements in their assigned groups on this phase, and the ground elements in these groups can return fire against attacking air elements. The air elements attack the ground elements by totaling their GA, adding +1 to the value if they did not participate in the Air to Air Phase. Then roll a d6, multiply the result by the total GA, and divide by 10. This damage can be used to perform 5.1.5.10 Directed Damage, in which case the air elements consider all enemy ground elements to be in a formation bonus level 1 lower than they really are. Otherwise the damage is scored by the opponent as is done in 5.1.5.5 Orbital Bombardment, although damage can only be assigned to ground elements in the target group.

Ground elements simultaneously return fire by totaling their AA, rolling d3, multiplying the two numbers, and dividing the result by 5

(round down). This is the damage scored against the attacking air elements. It can either be scored as directed damage, or assigned in the same manner as other damage.

Note: Air vs. Ground combat during the Air to Ground Phase is analogous to Flight vs. Non-Flight fire in the CSCR.

5.1.5.9 Ground to Ground Phase

In this phase ground elements attack other ground elements. Both sides total the GA of all ground elements in the battle. All elements except those with the Artillery special ability have their GA halved (round down) if they are in a formation bonus. Then both sides roll a d6, multiply by the GA total, and then divide the result by 10 (round down). This is the total damage and it may be used for directed damage or left for the opponent to allocate.

Note: Ground vs. Ground combat during the Air to Ground Phase is analogous to Ship vs. Ship fire in the CSCR.

5.1.5.10 Directed Damage

Directed damage rules for ground combat follow the same rules as for space combat found in the VBAM Campaign Guide but are summarized here for ease of reference.

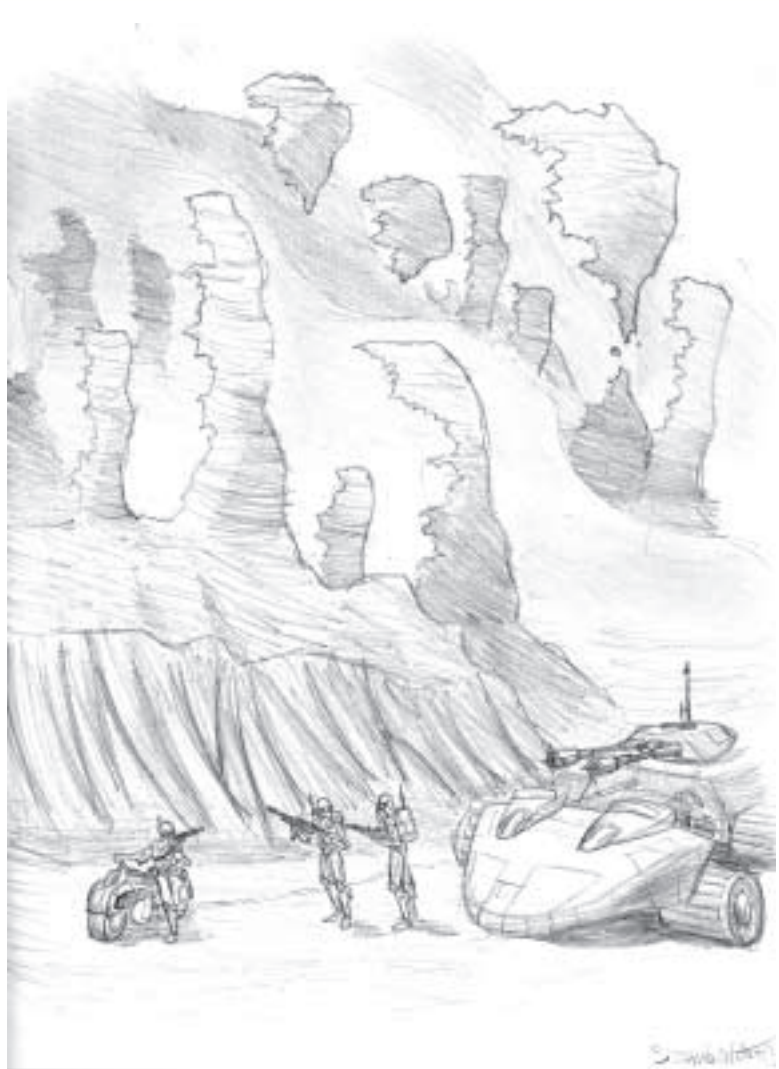
To use directed damage, first select the target you want to destroy. Instead of absorbing its DV, it will absorb its DV and an additional amount equal to half its DV, rounded up. If the target is in a formation bonus it costs significantly more to use directed damage. Multiply the DV by the level of formation bonus to obtain the amount of extra damage needed to destroy the element. This means an element in a level 1 formation bonus costs double its normal DV amount to destroy while an element in a level 2 formation bonus costs triple.

Recon units however can lower the formation bonus of an element. Each Recon unit can be assigned to a specific enemy element and will reduce its formation level by 1. If an element's formation bonus is lowered to less than zero then directed damage against that unit is free.

After calculating the costs for directed damage, any damage left over is assigned by your opponent as normal.

5.1.5.11 Flights in Ground Combat

Most flights have the ability to operate in both a vacuum and atmosphere and could potentially contribute to ground combat beyond the effects of orbital bombardment. Flights cannot participate in both space and ground combat on the same turn, nor can they participate in both orbital bombardment and ground combat on the same turn. They must be assigned to groups like air elements in the Assignments Phase and can participate in the Air to Air and Air to Ground Phases. Their DV attribute remains the same and Anti-Ship becomes Ground Attack and Anti-Fighter becomes Air Attack.



5.1.5.12 General Retreat

Only the side with space superiority has the option of retreating. A player may voluntarily withdraw some or all of his groups during the Assignments Phase. As this retreat is an organized withdrawal, as opposed to the panicked rout of a broken unit, the retreating unit continues to fight as they evacuate, however their GA and AA values are halved on the turn they are being embarked. All units that survive the retreat turn will have successfully evacuated the planet and returned to orbital troop transports or assault ships with available troop capacity.

A player may only retreat as many groups as they have transport capacity for. They can not retreat more groups than they have capacity for, even if they think that their forces will incur enough casualties during the

retreat to free up enough capacity for the remaining units.

5.1.6 Repairing Groups

After combat those groups that have lost elements may repair all elements for half the original cost of the group, regardless of how many elements they have lost. This does not include those extra elements purchased beyond the group's default elements. Any additional elements must again be purchased at the full cost to do so (1 economic point), and all of the original conditions for their purchase still apply.

5.1.7 Supply and Effects of Being Out of Supply Levels

If an army or group is out of supply, they will be unable to restore their lost elements (see 5.16. Repairing Groups).

For each turn that a group is out of supply it will receive one out of supply level. Each out of supply level a group earns will result in one element being removed from the group. Once no elements remain in the group, they group is removed from play.

Once supply is restored to the army or group, then can then begin repairing groups at their location, purchasing additional ground elements, etc., however the elements lost due to the effects of being out of supply will not automatically be replenished. The groups will have to invest economic points to repair them like they had received damage in battle.

5.2 Guerilla Warfare

Ofentimes beleaguered military forces will opt to wage long-term guerilla wars against invaders that are too strong to defeat in conventional ground combat. In such instances, ground troops will hide out among the local population or take refuge in difficult terrain, forming small, tight-knit combat cells. Over time these troops can exact a heavy toll on invading armies.

If these rules are in effect, a player may elect during the CG 3.2 Turn Orders Phase to have their troops assume guerilla status. Only one ground unit per Census can be placed in guerilla status. Only Infantry units can be placed into guerilla status. If a non-Infantry ground unit is placed into guerilla status, they are downgraded to the weakest Infantry unit operated by their empire (typically a Militia unit). Once downgraded, the ground units can then assume guerilla status. If your source makes

no distinction between ground unit types (Infantry, Armor, Artillery, etc.), all ground units are capable of being placed in guerilla status but will receive a -1 Attack penalty while in guerilla status. The selected ground unit(s) will be successfully placed in guerilla status during the CG 3.9 Turn Update Phase so long as they survived any combat during the CG 3.6.5 Troop Combat Phase.

Once in guerilla status, the guerilla ground unit may only attack enemy ground units assigned to patrol their Census unit. The dispersed nature of guerilla warfare however puts limitations on the effective military capabilities of these units, resulting in the guerilla units' Attack value being halved (rounding down, minimum of 1). Defensively, guerilla units are considered to be "dug-in" and gain a +1 to their Defense value so long as the system's Morale is equal to or less than half the Census number (e.g., the guerillas are receiving complicit support from the population). While this condition is met, guerilla units are also considered to be in supply, as long as the system itself is in supply.

If a guerilla unit attacks and survives an engagement with one or more invader ground units during a turn, the Morale of the system will drop by 1 in the CG 3.8.2 Moral and System Loyalty Phase. This means that a string of successful guerilla strikes against the enemy can embolden the population, forcing the planet into revolt against the occupying force!

Rebel support for the guerillas makes it even more difficult for the occupying empire to conduct successful CG 3.4.5.1 Counter-Insurgency missions. The difficulty level of Counter-Insurgency missions is increased by 1 to 3.

If the system's Morale increases to the point that it is greater than or equal to half the system Census number, popular support for the guerillas will have waned and guerilla units will lose almost all of their previous guerilla bonuses. Guerillas will lose their +1 Defense dug-in bonus, begin receiving out of supply levels, and have no effect on Counter-Insurgency mission difficulty.

The active support and assistance of the native inhabitants is extremely important for maintaining a successful guerilla campaign. Once popular support for the guerillas' mission disappears it will be very hard for them to continue to be a threat.

5.2.1 Civilian Militias and Guerilla Warfare

If the Guerilla Warfare rules are in force all civilian Militia generated as a side effect of rebellion can automatically be placed into guerilla status.

5.2.2 Maintaining Supply to Guerillas via Alien Supply Lines (CM Only)

If local support for the guerilla military resistance disappears, it is still possible to keep guerilla units in supply through means of alien supply lines. Two friendly governments can make covert arrangements to have their Trade Fleets deposit supply caches to help keep guerilla units in supply. Normally two powers would have to have at least a Trade Treaty, and more likely a Peace Treaty, in place between their governments before the other would even consider aiding foreign rebels on enemy soil.

To bring supplies to the guerillas, the contested world on which they are stationed must be on the friendly Trade Fleet's trade route and the trade route must include at least one friendly supply point. Once an agreement between the two powers is in place and these conditions are met, the guerillas on the contested world will be considered to be back in supply.

The invading power whose forces currently control the contested world will not learn of this duplicity on the part of his trading partner unless he performs an Espionage: Trade mission in the contested system. Similarly, any power that successfully performs an Espionage: Trade or Espionage: System mission in the contested system will learn that

the Trade Fleet's owner is secretly re-supplying the insurgents.

This option is only available in CM moderated campaigns due to the need to keep information secret from the other players.

5.3 Special Forces

Certain small, elite military units are trained and prepared for special missions and covert operations. These Special Forces units offer unique options for a player.

A unit with the Special Forces ability is automatically able to attempt an Intel mission in any system within 1 jump of its physical location. The player controlling the unit declares the target of the mission during the Intel Phase, and the unit is no longer active/available for that turn.

During the next Intel phase, the unit attempts its mission. The Intel Points for the mission are equal to the unit's Attrition. Additional points may be added according to the normal rules for Intel cooperation found in the VBAM Campaign Guide.

If the mission succeeds, the unit is automatically returned to the originating system. If the mission fails, roll a d10 and subtract 1. On a result higher than the attrition of the unit it has been discovered and removed from play.

Units with the Special Forces ability should represent small, elite groups. As such, the cost for the ability varies based on the other values of the unit. Adding Special Forces to a unit increases its purchase cost equal to the combined value of its Attack and Defense. The maintenance cost for a Special Forces unit is 2 economic points higher than normal.

CM's Note: It is possible, and even advantageous from a cost perspective, to give a Special Forces unit an Attack and/or Defense of 0 (or 1).

5.3.1 Hidden Movement

Some players may be utilizing the optional CG 4.22 Stealth and Concealed

Movement rules. In this case, rather than an automatic infiltration of a system, you can manage the infiltration by sending a small assault ship into the target system with the Special Forces unit aboard. If the ship goes undetected, the unit may carry out its mission the following turn as above, provided the ship remains undetected.

5.4 Variable Quality Militias

This optional rule takes into account both the quality of local industry and population size of a system for determining the quality of the Militias raised there. Not all planetary or civilian Militias will be the same. On backwater agricultural worlds, fielding a truly viable combat force will be difficult. Conversely, on a heavily populated world home to high industry, the citizenry will have an easier time procuring supplies and putting up a formidable fight for their planet in times of peril.

If this optional rule is in effect, the statistics of each empire's base Militia unit will be modified based on the statistics of the system

in which it is located. Attack and Defense values remain static, while the Militia's D Factor and Attrition values receive a boost proportionate to Utilized Productivity and Census respectively.

To calculate the Militia's D Factor bonus, refer to the chart below:

Modified Militia D Factor Chart

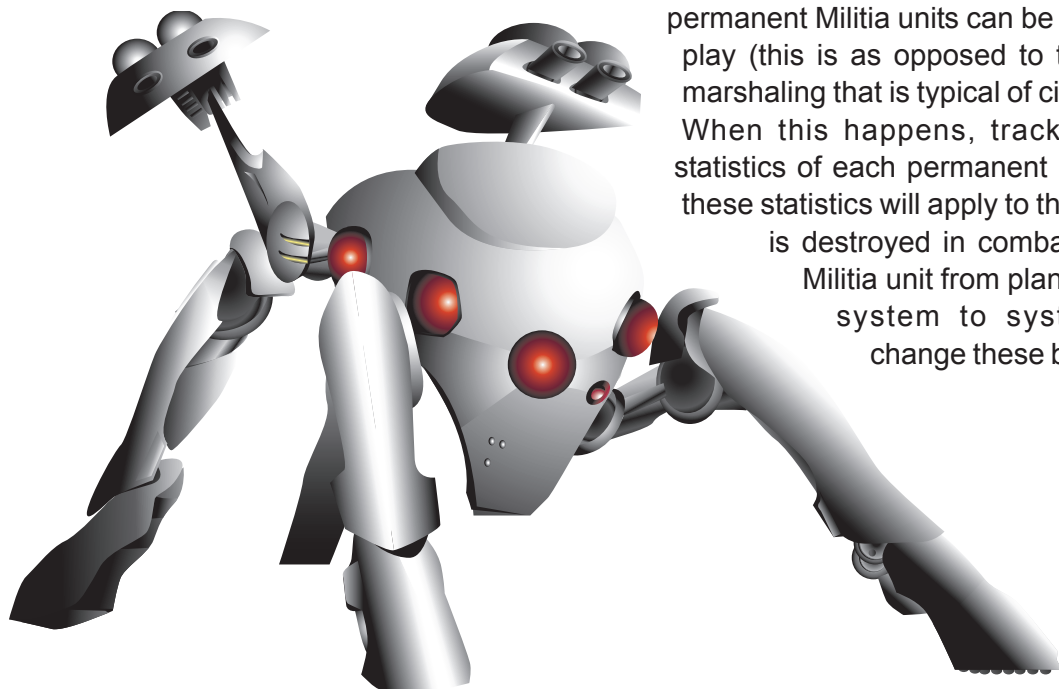
Utilized Productivity	D Factor
0	0
1-2	1
3-5	d2
6-10	d3
11+	d4

Modifiers:

Pre-existing max D Factor value
(ex: a D Factor of d2 on the Militia would add +2 to Utilized Productivity for determining the final D Factor on the chart)

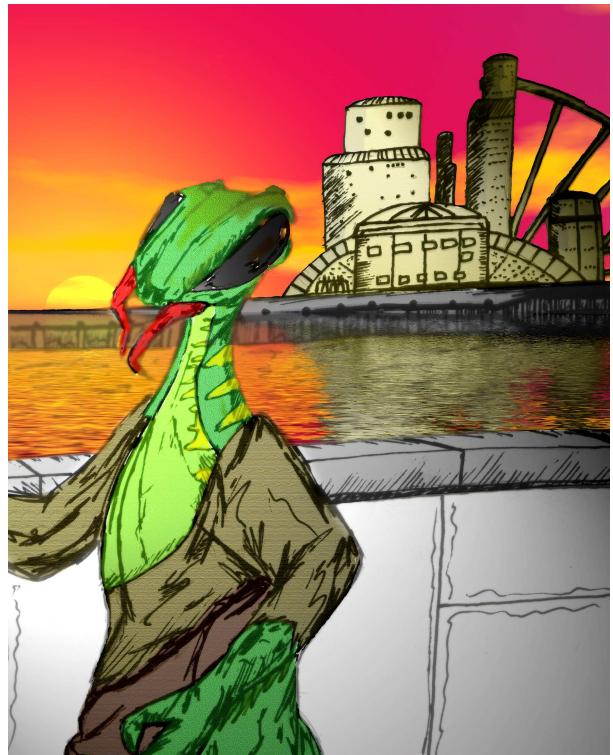
To calculate the Militia's Attrition bonus, divide the system's Census by 3, rounding all fractions down, and add the value to the Militia's base Attrition statistic.

Via random events or other factors, permanent Militia units can be formed during play (this is as opposed to the temporary marshaling that is typical of civilian Militias). When this happens, track the starting statistics of each permanent Militia unit, as these statistics will apply to the Militia until it is destroyed in combat. Moving the Militia unit from planet to planet or system to system will not change these base statistics.



6.0 Advanced Diplomacy and Empire Rules

These advanced diplomacy and empire rules provide additional diplomatic and play options for your campaign. In the inclusion of Non-Player Entity (NPE) rules allows a campaign to include empires that are only human moderated, not completely human controlled. Rules are also included for several additional treaty types, including the Military Appropriations Pact and Research Treaty. Finally, rules are included for building and operating Underworld Empires – crime syndicates and crime lords have finally arrived!



6.1 Non-Player Entities

Non-player entities (NPEs) are empires within a campaign whose diplomatic policies are not directly controlled by a human player. NPEs use a special set of rules in order to create a “simulated opponent” that players (and NPEs) can interact with during the course of the campaign. Actual operation of a NPE requires some degree of human interaction, usually on the part of the CM, but all of the major galaxy-shaping decisions the NPE will make are outside of any player’s direct control.

At the heart of the VBAM NPE rules is the AIX Species Reaction System, a device that distills the psychology of the empire into three core values. Using these AIX statistics the NPE conducts diplomacy with other empires. Everything from diplomatic relationships, hostilities checks, treaty acceptance, and reactions to opposing empire actions are covered as part of these rules.

When would you want to use the NPE rules in your campaign? There are many situations in which it would be advantageous to take advantage of these rules. NPEs are extraordinarily valuable for players that would like to play a solo-campaign with their human-controlled faction as the only player empire in the campaign. Activation of new NPEs will provide the solo-campaign player with opposing empires that they can befriend or conquer as they see fit. Given how the NPE system works, players may begin to see a sly guile driving the actions of their NPE opponents – something that is rare to encounter in a simple artificial intelligence such as this!

NPEs can also be of major assistance to CMs who wish to add additional empires to their campaign but lack available players to fill these new positions. The CM could just as easily add these extra powers and run them himself, but the NPE rules provide a mechanism for handling diplomacy in an unbiased manner. This can avoid arguments over CM favoritism and leave the CM or an appointed neutral power to manage the NPEs fleets and other assets in a manner commensurate with its diplomatic intentions.

6.1.1 The AIX Species Reaction System

These rules utilize the AIX Species Reaction System (AIX for short) to simulate NPE interaction with players. This system is the core of the NPE diplomacy process and will influence nearly all of a NPE's diplomatic interactions with opposing empires.

Under the AIX system, the disposition of a power is measured by three distinct characteristics: Aggressiveness, Integrity, and Xenophobia.

6.1.1.1 Aggressiveness (AG)

This is a measure of the power's tendency to resort to violence to solve their problems. Powers with a high Aggressiveness are hostile and quick to go to war. Powers with a lower Aggressiveness are more pacifistic and will conversely be very reluctant to declare hostilities or war on another power. If drawn into a conflict, such a power will be quick to put an end to it as soon as they can.

Affects: Hostilities Check, Armistice Check

6.1.1.2 Integrity (IN)

This is a measure of the power's willingness or ability to honor their agreements. The higher a power's Integrity statistic, the more honorable they are. Powers with high Integrity are loath to break the treaties they sign, and will react poorly to other races that break treaties with them. Powers with low Integrity will assume a more laissez faire attitude towards politics. Treaties with these powers may not be worth the paper they are written on.

Affects: Breaking Treaties

6.1.1.3 Xenophobia (XE)

This is a measure of a power's attitude towards other alien empires. Powers with high Xenophobia openly dislike other alien species and will take every step possible to limit contact with outsiders. Powers with low Xenophobia tend to more xeno-friendly and will actively

pursue relations with the empires they come in contact with.

Affects: Relationship, Offering Chance, Treaty Acceptance Chance

6.1.1.4 Apply AIX Values

Whenever a new NPE is activated (see 6.1.2 NPE Activation), the CM rolls d100 for each statistic (AG, IN, XE), assigning the result as the NPE's value in that area. Normally the range of values for each AIX statistic is 1 to 100, but values above or below this range are entirely valid and can be used without any negative effects.

Each of these three values is rated on a sliding scale with a neutral balancing point of 50. In other words, an AIX value of 50 in any given statistic is a completely neutral result showing no tendencies to either extreme. The further you get from this balancing point, the more extreme the reactions the NPE will demonstrate in its dealings with other powers.

Example: A new NPE is activated and the CM must now roll to determine its AIX statistics. The CM rolls d100 three times, assigning the rolls to AG, IT, and XE respectively.



CM's Note: For those that would like less randomness in the AIX statistics applied to new NPEs, an alternative method to the above is to assign the average of a 3d100 roll to each statistic instead of the normal 1d100.

6.1.1.5 AIX and Species

In general, there is very little variance between the AIX values of factions within a single species. Many species, humans among them, possess a wide range of differing and often divisive ideologies, but even the most diametrically opposed viewpoints are meaningless when compared to those of alien species. For this reason, generating AIX values for new NPEs that belong to a previously

generated species is handled slightly different than normal.

For these NPEs, start by applying the existing AIX values for the selected species. Once this is done, roll 1d100 for each statistic, subtract 50, and then divide the result by 2. Round fractions to the nearest integer. Finally, add this value to the existing AIX statistic result. The maximum differential between any base species AIX value and that of an offshoot NPE is ± 50 .

Example: A new human NPE is activated in a campaign. In this campaign, humans have base AIX values of AG 50, IN 50, and XE 50. The CM rolls d100 – 50 for each statistic, divides by 2, and then adds the result to the human's base statistics. The CM rolls 20, 3, and 45. AG becomes $(20 - 50) / 2 + 50 = 35$; IN becomes $(3 - 50) / 2 + 50 = 27$; and XE becomes $(45 - 50) / 2 + 50 = 48$.



CM's Note: Some CMs may not like this species-based AIX limitation. This is especially true in universes where all of the players are humans of one variety or another. It can easily be ignored, but was added to help make aliens more alien than members of one's own species.

6.1.1.6 AIX and Unification

If a NPE signs a Unification treaty with another NPE power, the new amalgamated political entity will receive the average of both NPE's AIX statistics (round fractions naturally). The AIX values of both NPEs should be recorded and stored for future reference, in case they should be needed, but otherwise they will have no further affect on the political outlook of the resultant, Unified NPE power.

6.1.1.7 Implications of the AIX System

The values applied through the AIX system are used throughout the NPE diplomacy

process and will be a major influence all of the NPE's interactions with other empires. Of the three statistics, AG and XE are perhaps the most important from the standpoint of foreign powers as they are the most used in NPE calculations. IN is still important, but less so than its two companion statistics.

There exist some combinations of extreme AIX stats that can lead to near archetypal alien personalities.

High XE: This empire will be a classic "stay at home" type that will have very little interest in dealing with outsiders. As long as a high XE NPE does not also have a high AG stat, they should be fairly non-violent and can be safely ignored by most players as far as exterior threats are concerned. In practice, it is very common for high XE powers to adopt a policy of Non-Intercourse with neighboring empires.

High AG: A belligerent NPE, high AG powers can be unpredictable and annoying, but their lack of overwhelming anti-alien sentiments will make peaceful dealings with the power possible. Just keep in mind that high AG powers can be hotheaded and prone to violent outbursts.

Low AG: Total peaceniks, those NPE empires that have a low AG statistic are an expansionistic warmonger's dream come true. Even after repeated attacks, this NPE will try to appease their enemies by offering the olive branch. Slow but steady erosion of their empire is likely to lead to the final collapse of low AG empires.

High AG, Low IN, High XE: The ultimate villain empire, this NPE is violently opposed to alien life and is more than happy to cleanse the galaxy of its presence. Unless by some miracle this NPE decides that it likes your empire, be prepared for a very brutal conflict. The treaties you sign with this power are likely not worth the paper they are written on, and it won't take much to persuade the

NPE that your territories would make a good addition to their empire.

Low AG, Low XE: The antithesis of the previous archetype, an NPE with a combination of these two traits will be extremely friendly towards your empire. In fact, they are almost guaranteed to become good friends and staunch allies given enough time.

Despite the existence of these general archetypes, be prepared for some very interesting diplomatic situations when dealing with NPEs. The structured randomness of NPE diplomacy coupled with more realistic diplomatic limitations, including limits on how quickly NPEs will accept ever higher level treaties, will make diplomacy extremely interesting.

6.1.2 NPE Activation

NPE Activation can take place in one of several different ways. New NPEs can be activated by CM decision, exploration, or as the result of a random annual activation roll (see 2.2 Exploration Campaigns and 6.1.7.1 Annual NPE Activation).

No matter how a NPE is activated, the following procedures are used to generate new NPE powers. This includes determining their tech level, empire size, starting assets, and AIX statistics.

6.1.2.1 NPE Activation Result

If the NPE activation roll is successful, statistics must be generated for the new NPE and its holdings. It is assumed that each newly discovered NPE is of a new, previously unknown alien species. This assumption is not always correct, given that many popular settings have the greater part of the galaxy

inhabited strictly by humanity. If this is the case, it will be noted in the source materials. Some source books may even contain a NPE activation result chart to make NPE activation easier on CMs playing in the setting.

6.1.2.2 NPE Tech Level

The technology level of a NPE determines its inherent technical capabilities at first contact. There are ten separate, distinct technological levels into which a new NPE can fall. Interstellar powers are the most likely to be encountered, primarily because constantly contacting pre-spaceflight natives in a campaign could get old very fast! Roll on the NPE Result Table below to determine the technology level of the newly activated NPE.

Each of these technological levels is described in detail later in this section and carries with it a series of attributes that directly affect the new NPE's starting conditions.



CM's Note: In the case of Elder Interstellar (INT-5) and Ancient Interstellar (INT-6) powers, a CM should carefully consider whether or not to include such powers in their campaign. The introduction of one of these powers can make things very interesting for your players, but it can also destabilize an

NPE Result Table (Roll 2d10)

Result	Effect
2-4	Pre-Industrial (P-IND)
5	Early Industrial (IND-1)
6	Late Industrial (IND-2)
7-8	Interplanetary (IND-3)
9-11	Emerging Interstellar (INT-1)
12-14	Developing Interstellar (INT-2)
15-16	Mature Interstellar (INT-3)
17-18	Expansive Interstellar (INT-4)
19	Elder Interstellar (INT-5) or CM's Choice
20	Ancient Interstellar (INT-6) or CM's Choice

otherwise fun campaign and become a chore for the CM to administer.

6.1.2.2.1 Starting Condition Terms

Before delving into the full tech level descriptions, please take a moment to familiarize yourself with some of the associated terminology:

Starting Points

This is the number of economic points the NPE has available to purchase its starting assets. In each case, the starting point amount is figured relative to the NPE's beginning system income. For example, an INT-1 power is stated to begin with "2 x Total Domestic Product" in starting parts. If the final system output of the NPE's controlled systems was 87, then the INT-1 NPE would have $87 \times 2 = 174$ economic points to spend on its initial infrastructure.

Pre-Contact Exploration

This series of slash delimited values determine the extent of the NPE's pre-contact exploration. Each slashed value represents the percent of unexplored jump lanes the NPE has already explored for up to four jumps out from their home star system.

To illustrate how these values should be interpreted, let's use the pre-contact exploration value of an INT-3 power (100/50/25/0/0) as an example. The first value (100) is the percentage of explored jump lanes connecting to the NPE's home system. In this case, all (100%) of the unexplored jump lanes branching off from their home system have been mapped and start play fully explored.

The second slashed value (50) is the percentage of jump lanes explored in systems one jump away from the home system.

The third slashed value (25) is the percentage of jump lanes explored in systems two jumps away from the home system.

The fourth slashed value (0) is the percentage of jump lanes explored in systems three jumps away from the home system.

Finally, the fifth slashed value (0) is the percentage of jump lanes explored in systems four jumps away from the home system.

of Colonized Systems

This is the number of colonized systems controlled by the NPE at contact. This is represented as a fixed number plus a random modifier based on the NPE's pre-contact exploration. A NPE that has performed more extensive pre-contact exploration will typically have more (or larger) colonies than those that have not journeyed very far from home.

Tech Advancement Requirement

A tech advancement requirement exists for all pre-Interstellar civilizations. This requirement is the amount of tech investment required to reach the next level of technological development. Tech development progresses linearly, from P-IND, to IND-1; from IND-1 to IND-2; from IND-2 to IND-3; and (finally) from IND-3 to INT-1. Unlike normal tech advancement, new technological levels are reached as soon as the last required point of tech investment is applied to the advance.

6.1.2.2.2 Tech Level Descriptions

Pre-Industrial (P-IND)

Starting Points: None

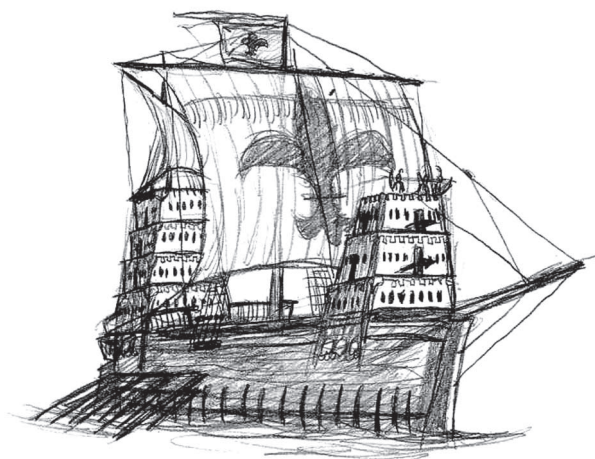
Pre-Contact Exploration: None

of Colonized Systems: None

Tech Advancement Requirement: 2000

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

P-IND powers are under several special restrictions due to their small size and technological naiveté. P-IND powers cannot experience population growth; they ignore all population growth checks. P-IND powers do not



begin play with any Productivity and are incapable of purchasing Productivity improvements until they achieve IND-1. In fact, P-IND Census cannot even utilize Productivity unless enslaved (see 6.4.2 Enslavement).

Early Industrial (IND-1)

Starting Points: None

Pre-Contact Exploration: None

of Colonized Systems: None

Tech Advancement Requirement: 1000

Overview: IND-1 civilizations have begun the process of industrialization, developing more advanced technologies for use in medicine, transportation, and war, among other applications. Although they have the beginnings of a heavy industrial society, IND-1 civilizations do not have the capacity to meaningfully combat the forces of more advanced powers.

As with P-IND powers, IND-1 powers begin play without any native Productivity. Unlike P-IND powers, IND-1 powers can build Productivity. This creates a situation in which the IND-1 power will remain largely stagnant until a random event or exterior power provides the economic points to purchase their first Productivity point, jump starting their economy.

Other than this limitation on starting Productivity, IND-1 powers are under no other special penalties.

Late Industrial (IND-2)

Starting Points: 1 x Total Domestic Product

Pre-Contact Exploration: Home System Only

of Colonized Systems: None

Tech Advancement Requirement: 500

Overview: IND-2 civilizations have advanced their technology to the point that orbital spaceflight and unmanned solar missions are possible. Limitations in drive technology continue to limit the IND-2 power to their world of origin, but for the first time in their history they are capable of building and operating meaningful industrial infrastructure.

IND-2 powers begin play with half their normal starting Productivity (round down). IND-1 powers that advance to IND-2 through tech investment receive a single point of Productivity immediately upon reaching IND-2. This is in addition to any other Productivity they possessed prior to the tech advance.

IND-2 is the first stage of technological development in which a power is allowed to build space units. IND-2 powers cannot build starships or civilian fleets (Colony, Transport, Trade), but they are allowed to build primitive bases, flights, mines, and satellites. These units should be extremely crude and primitive compared to those fielded by more advanced powers.



Pre-Interstellar NPE Space and Ground Unit Templates

Late Industrial (IND-2) Sample Units: Fixed Defenses

Unit Name	Design	Cost	Maint	DV	AS	AF	Basing	Special
Starbase	Base	8	1/1	6	3	2	2	Supply (1)
Outpost	Base	5	1/2	4	1	1	1	
Science Station	Base	3	1/2	2	0	0	0	Scout (1)
SDI Satellite	Satellite	1	1/12	1	0	1	N/A	
Missile Satellite	Satellite	1	1/12	1	1	0	N/A	Ballistic
Basic Minefield	Mine	1/8	1/32	1	0	0	N/A	

Late Industrial (IND-2) Sample Units: Flights

Unit Name	Design	Cost	Maint	DV	AS	AF	Special
Space Shuttle	ST	1/1	1/5	2	0*	0*	Explorer (1)
Heavy Fighter	HF	1/2	1/8	2	0	0	
Medium Fighter	MF	1/3	1/12	1	0	0	
Light Fighter	LF	1/2	1/16	1	0*	0	

Interplanetary (IND-3) Sample Units: Warships

Unit Name	Design	Cost	Maint	DV	AS	AF	CR	CC	Basing	Special
Heavy Cruiser	CA	7	2/3	6	4	2	6	3	1	
Scout Cruiser	ECL	8	3/2	5	2	2	5	2	0	Scout (1)
Missile Cruiser	CL	6	2/4	5	4	1	5	2	0	Ballistic
Light Cruiser	CL	5	2/4	4	3	2	5	2	1	
Destroyer	DD	4	2/6	3	2	2	4	2	0	
Frigate	FF	3	1/6	2	2	1	3	1	0	
Corvette	CT	2	1/8	1	1	1	2	1	0	
Gunboat	GB	1	1/12	1	1	1	2	1/2	0	Attack Boat
Heavy Carrier	CV	6	2/3	5	2	2	5	3	4	Carrier
Light Carrier	CVE	3	2/4	2	1	2	3	1	2	Carrier
Heavy Tender	CV	6	2/3	6	0	2	5	3	0	Tender (4)
Tender	CVE	3	2/5	3	0	2	4	2	0	Tender (2)
Large Freighter	FT	5	2/4	4	0	2	3	2	0	Supply (1/2)
Small Freighter	FT	2	1/6	1	0	1	2	1	0	Supply (1/6)
Troop Transport	FT	3	1/4	3	1	1	2	1	1	Assault

Pre-Interstellar NPE Space and Ground Unit Templates (cont.)

Interplanetary (IND-3) Sample Units: Fixed Defenses

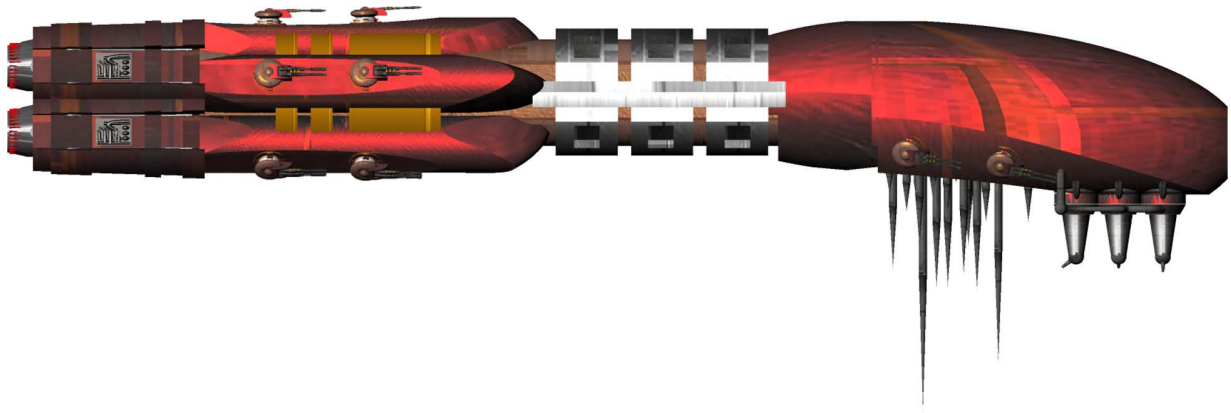
Unit Name	Design	Cost	Maint	DV	AS	AF	Basing	Special
Starbase	Base	12	2/2	10	8	3	3	Supply (1)
Outpost	Base	6	1/2	5	4	2	1	
Laser Satellite	Satellite	1	1/12	1	1	1	N/A	
Missile Satellite	Satellite	2	1/12	1	1	1	N/A	Ballistic
Basic Minefield	Mine	1/8	1/32	1	0	0	N/A	

Interplanetary (IND-3) Sample Units: Flights

Unit Name	Design	Cost	Maint	DV	AS	AF	Special
Space Shuttle	ST	1/1	1/5	3	0	0	Explorer (1)
Heavy Fighter	HF	1/2	1/8	2	1	0	
Medium Fighter	MF	1/3	1/12	1	1*	0	
Light Fighter	LF	1/4	1/16	1	0*	1*	
Breaching Pod	BP	1/2	1/6	1	0*	0*	Direct Assault (1)
Assault Shuttle	BP	1/3	1/12	2	0*	0*	Assault

Pre-Interstellar Ground Unit Templates

Unit Name	Cost	Maint	Attack	Defense	D Factor	Attrition	Special
IND-P Militia	N/A	N/A	0	0	0	1	
IND-P Regulars	1	1/3	1	0	0	1	
IND-1 Militia	N/A	N/A	1	0	0	1	
IND-1 Regulars	1	1/3	2	1	0	1	
IND-2 Militia	N/A	N/A	1	1	0	1	
IND-2 Regulars	1	1/3	1	1	d2	2	
IND-2 Marines	2	1/2	2	1	d2	1	Marine
IND-3 Militia	N/A	N/A	1	1	0	1	
IND-3 Regulars	1	1/3	1	2	d2	2	
IND-3 Marines	2	1/2	2	2	d2	2	Marine



Interplanetary (IND-3)

Starting Points: 2 x Total Domestic Product
Pre-Contact Exploration: Home System Only
of Colonized Systems: None
Tech Advancement Requirement: 250

Overview: IND-3 is the age of interplanetary spaceflight. IND-3 civilizations are largely equivalent to later interstellar civilizations except that they have not yet developed a form of FTL propulsion. This limits them to their system of origin.

IND-3 powers should be treated as any other power, except that their units are incapable of making use of jump lanes. An IND-3 power will only be able to move between star systems once they reach INT-1.

Emerging Interstellar (INT-1)

Starting Points: 2 x Total Domestic Product
Pre-Contact Exploration: 50/0/0/0/0
of Colonized Systems: 1 + 1 per 3 systems explored (round down)
Tech Investment Required: N/A

Overview: INT-1 powers are emerging civilizations that only recently discovered FTL travel. These powers have made their first cautious steps into the galaxy but have not yet founded true interstellar empires.

At INT-1, a power is first able to traverse the jump lanes that connect system to system in the universe. This is impossible prior to achieving this level of technological sophistication.

Developing Interstellar (INT-2)

Starting Points: 3 x Total Domestic Product
Pre-Contact Exploration: 75/25/0/0/0
of Colonized Systems: 2 + 1 per 3 systems explored (round down)
Tech Advancement Required: N/A

Overview: INT-2 powers have survived the infancy of their entrance into space and have succeeded in founding a small yet thriving interstellar empire. The borders of this empire continue to expand with newly explored star system, giving more opportunities for profit – or peril.

Mature Interstellar (INT-3)

Starting Points: 4 x Total Domestic Product
Pre-Contact Exploration: 100/50/25/0/0
of Colonized Systems: 4 + 1 per 3 systems explored (round down)
Tech Advancement Required: N/A

Overview: INT-3 powers have developed mature interstellar empires. Exploration programs, which reached their heights during the INT-1 and INT-2 stages of development, have slowed. In the absence of an ever-expanding frontier, the population of INT-3 powers has begun settling into the varied star systems explored thus far by their empire's scouting forces.

Expansive Interstellar (INT-4)

Starting Points: 5 x Total Domestic Product

Pre-Contact Exploration: 100/75/50/25/0

of Colonized Systems: 6 + 1 per 3 systems explored (round down)

Tech Advancement Required: N/A

Overview: Civilizations that have reached INT-4 are extremely powerful and control a large swath of territory. INT-4 powers have been in space for hundreds, if not thousands, of years. In their travails they have explored far from their homeworld and possess colony worlds equal to or greater than their own homeworld.

Elder Interstellar (INT-5)

Starting Points: 6 x Total Domestic Product

Pre-Contact Exploration: 100/100/75/50/25

of Colonized Systems: 10 + 1 per 3 systems explored (round down)

Tech Advancement Required: N/A

Overview: INT-5 powers are old and powerful, even more so than an INT-4 power. INT-5 powers are relatively rare, however. Once contacted, they can make almost unstoppable enemies or allies.

Ancient Interstellar (INT-6)

Starting Points: 8 x Total Domestic Product

Pre-Contact Exploration: 100/100/100/75/50

of Colonized Systems: 15 + 1 per 3 systems explored (round down)

Tech Advancement Required: N/A

Overview: The final expression of interstellar power is embodied in INT-6 status. The empire controlled by a single INT-6 power is equal to those of half a dozen lesser powers combined. With that level of economic and military potency,

few can stand against the fury of an INT-6 power bent on their destruction.



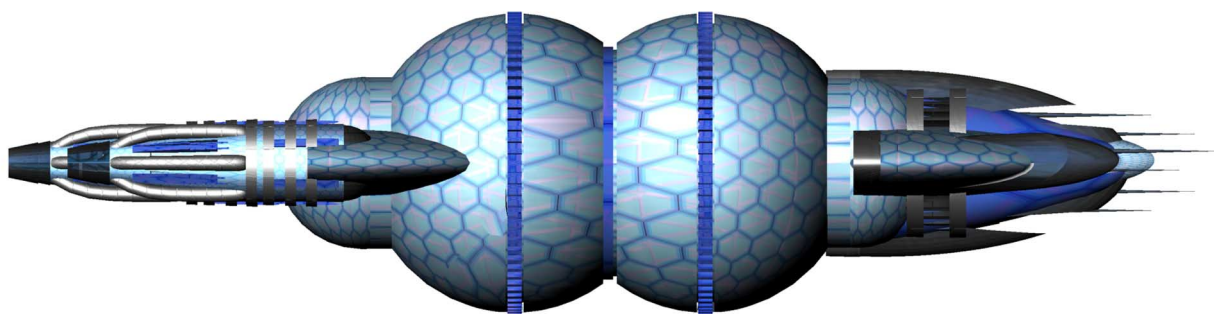
CM's Note: Again, INT-5 and INT-6 powers are potentially unbalancing and are included primarily for use in those campaigns where the player empires have become so powerful that smaller INT-1 or INT-2 powers are no longer a threat. Any newly activated INT-5 or INT-6 power is almost guaranteed to wield greater power than any one pre-existing player empire.

6.1.2.3 NPE Home System Location

If the NPE is at a technological level of INT-1 or higher, then the contact system is *not* the NPE home system but one of the NPE's colony worlds. The NPE home system is located a number of jumps away from the contact system equal to the NPE's Interstellar technology level (e.g., INT-1 homeworld is 1 jump away, INT-2 homeworld is 2 jumps away, and so on). If another unexplored jump lane into the system does not exist, increase the number of available jump lanes by one and use this new lane as the one connecting to the NPE home system. Note that, when the NPE's colonies are placed, all of the NPE's systems will receive a Productivity boost commensurate with its technological status (e.g., more advanced Interstellar powers will receive a greater Productivity bonus).

6.1.2.4 Performing Pre-Contact Exploration

All INT-1 and higher civilizations are considered to have performed some degree of



exploration prior to contact. The amount of exploration is denoted under each technology level in a slashed notation that should be interpreted as follows:

First Value) Percentage of lanes explored in the homeworld system

Second Value) Percentage of lanes explored in systems 1 jump from the homeworld

Third Value) Percentage of lanes explored in systems 2 jumps from the homeworld

Fourth Value) Percentage of lanes explored in systems 3 jumps from the homeworld

Fifth Value) Percentage of lanes explored in systems 4 jumps from the homeworld

For each star system in a particular range bracket (e.g., 1 jump from homeworld, 2 jumps from homeworld, etc), sum the number of unexplored jump lanes and multiply times the appropriate exploration percentage described above, rounding all fractions naturally. The result is the number of unexplored jump lanes already explored by the NPE.

No exploration result that would put the NPE in contact with any existing power is allowed. Any such result should be re-rolled. In the case of static maps that are created before the game starts, the CM must ensure that the new empire's exploration does not conflict with existing inhabited or controlled star systems. By definition, each newly activated NPE power has had no contact with the existing milieu of campaign powers (although they may have contacted other powers).

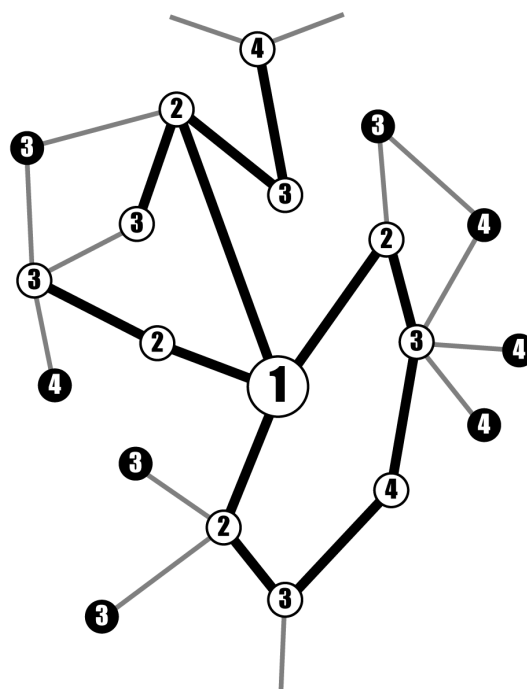
After a new interstellar civilization's pre-contact exploration is determined, activation rolls should be made for each system explored by the NPE power (see 6.1.2 NPE Activation). If a new NPE is activated as a result of these rolls, the CM must determine the state of the relationship between the two NPEs and what treaties (if any) the two NPEs have entered to

this point (see 6.1.2.8 Resolving Pre-Contact Diplomacy).

Example: A new INT-2 power has a pre-contact exploration breakdown of 75/25/0/0/0. This means that 75% of the lanes from the home system are explored and 25% of the lanes one system away have also been explored. If the NPE's home system contained 5 jump lanes, 4 of the jump lanes would already have been explored. If those 4 explored systems contained a total of 11

EXAMPLE:

Mature Interstellar (INT-3) Pre-Contact Exploration



- ① 4 Unexplored Jump Lanes x 100% = 4 Explored
- ② 9 Unexplored Jump Lanes x 50% = 5 Explored
- ③ 11 Unexplored Jump Lanes x 25% = 3 Explored
- ④ N/A (0%)
- ⑤ N/A (0%)

- ① EXPLORED SYSTEM
- ③ UNEXPLORED SYSTEM
- EXPLORED JUMP LANE
- UNEXPLORED JUMP LANE

jump lanes, the NPE would have also explored 3 of them. As the third, fourth, and fifth slashed notation values are '0', the NPE cannot have explored any farther out from their homeworld.

6.1.2.5 Generate System Statistics

Once all explored systems have been determined, the CM should generate statistics for each of the systems using either the CG 2.3.2.4 System Generation rules, or either of the detailed system generation rules found earlier in this book (see 2.1 Advanced System Generation Rules).

6.1.2.6 Place Pre-Contact Colonies

Once all pre-contact exploration is conducted and system statistics have been generated for those systems surveyed prior to contact, it is time for the NPE's colonial assets to be placed on the map. The CM (or player generating the NPE) chooses which systems are colonized based on their base system statistics. When placing these pre-contact colonies, the CM or player should pay special attention to the systems' statistics as well as their strategic location within the NPE's empire. It is far more likely that the NPE would have colonized a major trade node than a backwater star system, unless said backwater system held extremely lucrative mineral wealth.

In addition to the base Productivity statistic on each world, interstellar NPEs receive a bonus Productivity increase at each of their colony worlds based on their tech level. This bonus is to help and demonstrate the maturity of the industry on their colony worlds. Take the Interstellar power's tech level (INT-1 = 1, INT-2 = 2, INT-3 = 3, etc.) and divide by two, rounding down, and add this to the system's Productivity. This Productivity bonus cannot increase a system's Productivity beyond its Census value. Any bonus Productivity that would not be Utilized is lost.

Systems which do not have colonies placed in them during this step have their Census, Morale and Productivity statistics



reduced to 0. RAW and Carrying Capacity statistics remain unchanged.

If the number of systems explored by the NPE is less than the number of NPE starting colonies, then the remaining colonial assets should be integrated into existing colonized systems. For each colony that cannot be placed on the map, increase the Census, Morale and Productivity of one existing colonized system by 1.

6.1.2.7 Generate AIX Statistics

Roll d100 for each of the NPE's three AIX statistics: Aggressiveness (AG), Integrity (IN), and Xenophobia (XE). The die result is then assigned to the corresponding statistic (see 6.1.1 The AIX Species Reaction System).

6.1.2.8 Resolving Pre-Contact Diplomacy

If the newly generated NPE activated additional NPEs during its pre-contact exploration (see 6.1.2.4 Performing Pre-Contact Exploration), then it becomes necessary to resolve what previous level of contact these NPEs have and what treaties (if any) they have signed.

Follow the following steps to resolve pre-contact diplomacy.

Pre-Contact War Resolution Chart

The enemy has 50% or more starting points: *NPE Conquered*. The Pre-Contact War did not end favorably for the weaker empire. Despite their attempts to hold back the enemy advance, they have failed. All of the lesser NPEs systems (but not its starting points) become the property of its victorious enemy.

The enemy has 25% or more starting points, but less than 50%: *Losing the War*. The war is still raging, and this NPE is on the losing end. Both NPEs lose 25% of their starting points (rounding down) and the weaker of the two NPEs (e.g., the one with fewer starting points) has lost half of its systems (rounding up) to the enemy power. These systems must be contiguous or else link to existing enemy or enemy allied territories.

If the stronger of the two NPEs (by starting points) is AG 40 or less, then an Armistice has been negotiated, putting an end to this war prior to contact. Apply the diplomatic effects of an Armistice.

The enemy has 10% or more starting points, but less than 25%: *The Conflict Continues*. Both NPE powers are still locked in a state of war, but neither of them has made substantial headway. Both NPEs lose 10% of their starting points (round down), and the lesser of the two NPEs also lose one system to their rival power. This system must be contiguous or else link to existing enemy or enemy allied territories.

If the stronger of the two NPEs (by starting points) is AG 50 or less, then an Armistice has been negotiated, putting an end to this war prior to contact. Apply the diplomatic effects of an Armistice.

The enemy has less than 10% more starting points: *Low Level Conflict*. The two NPEs are stalemated and neither side has been able to make any headway against their enemy. Neither side loses any of their starting points as a result of the conflict.

If the stronger of the two NPEs (by starting points) is AG 60 or less, then an Armistice has been negotiated, putting an end to this war prior to contact. Apply the diplomatic effects of an Armistice.

1) Roll for NPE Relationships

Roll one d100 for each NPE. The resulting value is then assigned as the current Relationship level between the selected NPE and the target NPE (see 6.1.3 NPE Relationships). Note that for each Relationship two d100 rolls will be made, one for the first NPE's relationship with the second NPE, and vice versa.

2) Hostilities Check

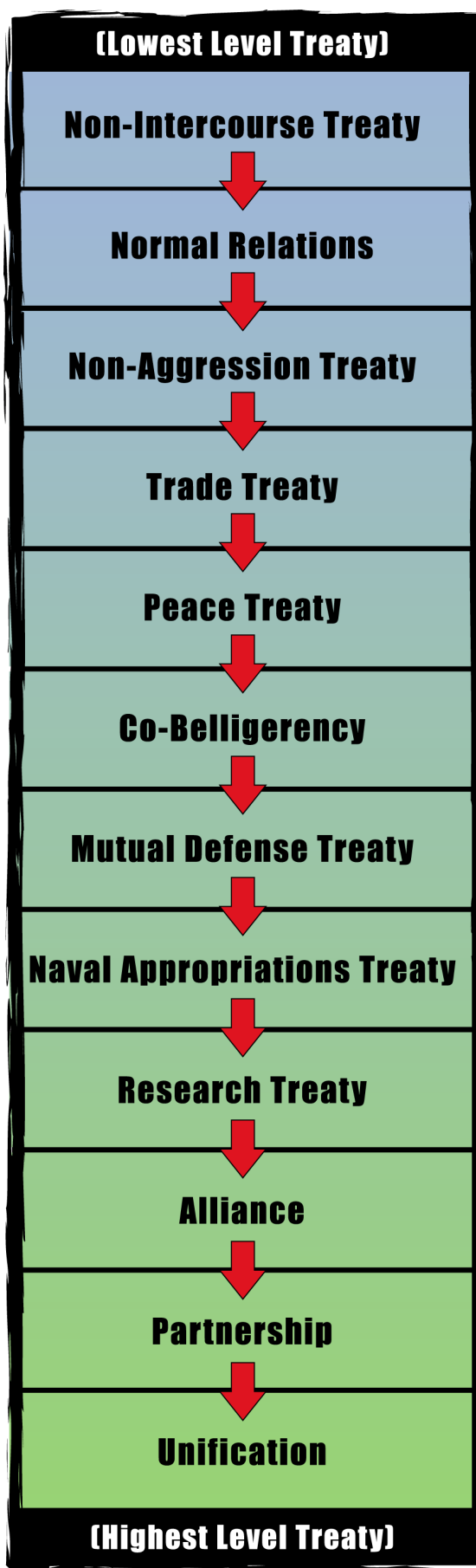
Each NPE makes a 6.1.4.1 Hostilities Check to determine whether or not the two parties engaged in a Pre-Contact War. Unlike

the standard rules for hostilities checks, a successful roll indicates that the two parties engaged in a Pre-Contact War. If this occurs, compare the starting points of both empires and check against the chart above for effect.

Please note that the results of a Pre-Contact War are not resolved until after the placement of all pre-contact colonies is complete.

4) Roll to Determine Starting Treaty Levels

Roll d100 for each NPE and compare the result to their respective acceptance chances (see 6.1.4.4.2 Signing Treaties &



Treaty Acceptance Chances). The treaty with the lowest treaty acceptance chance (e.g., the most difficult to sign) which is less than or equal to the d100 result is the highest level treaty the NPE will have been willing to sign prior to contact.

The highest-level treaty levels generated by the two NPEs are then compared. The least restrictive treaty level will be the current treaty between the two powers. This means that, if one NPE had been willing to sign at most a Mutual Defense Treaty but the opposing NPE's highest level treaty was a Non-Aggression Treaty, only a Non-Aggression Treaty would be signed.

In addition to the highest level treaty, the two powers will have also signed all lesser treaties that came before it. The progression of treaty levels is given on the accompanying chart. For example, if two NPEs entered into a pre-contact Mutual Defense Treaty, they would also have signed a Non-Aggression, Trade, and Peace Treaty in addition to the previously noted Mutual Defense Treaty.

Additional treaties are also available (for example, see 6.2 New Diplomatic States), but they are not 'core' treaties and the chance of a NPE having entered into any of these treaties prior to contact is minimal. In the case of a Co-Belligerency Treaty, this treaty will only be active if both newly activated NPE powers are both have hostilities/war declared against the same opposing power and their initial diplomatic level allows them to have signed the treaty (based on their respective highest level treaty results).

5) Finishing Up

Once these steps are complete, all previous diplomatic interactions between the two NPEs will be revealed and both will be ready to advance in the NPE setup process.

6.1.2.9 Spend Starting Points and Place Assets

The NPE is free to spend as much or as little of its starting points as it wishes. The CM is given carte blanche when deciding how

to spend starting points. The intent is for the NPE to use its starting points to provide it with an acceptable number of starting units and infrastructure. The only caveat is that all purchases paid out of this “pre-activation point pool” must be legal purchases. This means that a NPE that does not start with a shipyard cannot use its starting points to build starships, as there is nowhere the ship could have been built!

For more information on setting up a new empire, refer to CG 2.5 Setting Up the Game. The instructions and tips given in that section are as applicable to setting up new NPE empires as they are to setting up player-controlled empires.

In CM-less play, the purchase and placement of a NPE's starting assets should be performed by either a neutral player or else the player whose empire is located the farthest away from the new NPE's own territories.

6.1.2.10 Tech Investment at Time of Contact

Before a NPE empire begins play, the CM must determine how much of its tech advancement requirement has already been fulfilled. For interstellar NPE powers (INT-1 and later), divide the number corresponding to the current turn (month) number by 12 and multiply the result times the empire's current tech requirement (rounding down). For example, a NPE activated in 2247.5 with a tech requirement of 64 would divide 5 (the current turn) by 12 (total turns in a year) and multiply the result times 64, which equal 26 points of tech investment currently applied towards the NPE's next tech advancement.

In the case of pre-Interstellar NPEs, roll d100 and multiply the result times the tech advancement requirement listed for the NPE's tech level (rounding down). This is the amount of tech investment currently applied towards their tech advancement requirement.

6.1.2.11 Finalizing NPE Activation

Congratulations, your new NPE is almost finished! By this point in the activation

procedure, the NPE's empire, past diplomatic dealings, and initial forces should all have been determined. All that remains is to move on to 6.1.3 NPE Relationships and determine the relationship between this new NPE and the existing power that made contact with it. Because this is the first time the two powers have met, this also constitutes a 6.1.3.1 First Contact situation, and those rules will cover the remaining steps necessary to finalize setup of this new NPE power.

6.1.3 NPE Relationships

NPE diplomatic actions are guided in large part by how they view their neighbors. Each NPE maintains a separate, distinct Relationship value with each opposing power it has come in contact with. This Relationship is measured on a sliding scale with 50 representing perfect neutrality. The higher the Relationship value, the better the relationship between two powers. The lower the Relationship value, the poorer the relationship and the better the chance that they will come to blows. Relationship values have no maximum or minimum value, but typically they will range between 0 and 100 throughout the course of a campaign.

Because each NPE generates and maintains its own set of Relationship values, situations can occur where one NPE has a particular affinity for a second NPE, but that other NPE holds an undying hatred for the first NPE. This might seem odd, but first impressions can differ wildly between species. More often than not, over time the two Relationship values will tend to equalize, or else the relationship will self-destruct and plunge both powers into a state of open hostilities.

6.1.3.1 First Contact

Upon First Contact, each NPE involved rolls d100, subtracting an amount equal to 10% of its Xenophobia value from the result (rounding down). If the two powers are controlled by members of the same species (e.g., two human factions encounter one

another for the first time) add 10% to this roll. This is the initial Relationship between the NPE and the other power. It is important to stress that both powers roll and maintain separate Relationship values. Just because Race A is smitten with Race B does not mean that their love will be reciprocated.

If upon First Contact Relationships are in such a sorry state of affairs that one power or the other has a non-negative 6.1.4.1 Hostilities Chance, roll a d100 against the Hostilities Chance. If the result is equal to less than the chance, the contacting fleet's commander has opted to engage the new alien race in combat. A deep space scenario is immediately generated, but with a scenario length modifier of -4. If both forces successfully made a hostilities check, resolve the scenario as normal. If the opponent failed a First Contact hostilities check of their own, they will receive a -2 to their surprise roll. If the opponent didn't make a hostilities check at all, this penalty is increased to -4. The forces of the power whose hostilities check succeeded receive no bonus or penalty to their surprise roll, but they will ignore all below readiness results.

If neither party rolled a hostilities check, the two powers will assume a diplomatic level of Normal Relations. If a hostilities check is successfully made, then the two powers are considered to have immediately and automatically entered into a mutual declaration of hostilities. This declaration of hostilities will not be resolved until an armistice is signed.

As the final act of resolving a First Contact situation, each NPE involved in the first contact applies a treaty delay to relations with the new power equal to its Xenophobia. This initial treaty delay reflects that newly contacted NPEs will be leery of new alien empires. Until they can acclimate to the new political climate, the NPE will be loath to enter into any long-term treaties with their new neighbors. For more information on treaty delays, refer to 6.1.4.4.2 Signing Treaties & Treaty Acceptance Chances.

6.1.3.2 Diplomatic Shifts

Each turn, the state of a NPE power's relations can shift. As in the real world, a constant web of politicking takes place behind the scenes. While the nature of these backdoor discussions is not readily discernable, their effects can shape the fates of empires.

During the Intel Phase of each turn, roll on the Diplomatic Shift Chart for each Relationship value. The results a diplomatic shift will cause the Relationship to either go up, go down, or stay the same. In the case of a natural die roll of '1', '50', or '100', a 6.1.3.2.1 Critical Diplomatic Shift takes place.

Intel can be assigned during the Turn Orders Phase in an attempt to modify a specific Relationship, whether it involves that power or not. An empire (including player empires) can spend Intelpoints to modify other empire's Relationships as easily as Relationships between their empire and another power. Intel used in this fashion is assigned to a specific NPE Relationship. Each Intel point spent applies a ± 2 modifier to the diplomatic shift roll. Using Intel to achieve a negative modifier might be desired if you are trying to destabilize a Relationship, while a positive modifier can be helpful in improving relations in order to avert hostilities.

Diplomatic Shift Table (Roll d100)

Result	Effect
5 or less	-5 Relationship
6-25	-1 Relationship
26-74	No Effect
75-95	+1 Relationship
96 or more	+5 Relationship

Modifiers:

± 2 per Intel point assigned

Note: A natural '1', '50', or '100' will result in a Critical Diplomatic Shift (see 6.1.3.2.1 Critical Diplomatic Shifts).

As with all diplomatic Intel use, there is no range requirement and all Intel used to modify relationship shifts comes out of the military Intel pool.

6.1.3.2.1 Critical Diplomatic Shifts

Critical diplomatic shifts represent fundamental changes in a political relationship. These rare events have major effects on two empire's political relationship. The reason for the political shift is not given, but it can be inferred from its results.

Critical diplomatic shifts occur whenever a natural '1', '50', or '100' are rolled on the Diplomatic Shift Chart. Critical diplomatic shifts override any other effects on that chart.

Natural '1': Political Disaster

A horrible diplomatic catastrophe has occurred that threatens to destabilize relations between the two powers. BOTH powers have their Relationship values reduced by 10. The NPE that rolled the natural '1' will immediately attempt to break the highest level treaty they have with the target power at a bonus equal to the NPE's Xenophobia. This power's treaty delay times will also be quadrupled as a result.

If no treaties exist to be broken, the NPE will make an automatically successful declaration of hostilities against the target. If a declaration of hostilities already exists, then an automatic declaration of war will occur.

Natural '50': At a Crossroads

The NPE is not sure where the relationship is going, but they know that they are standing at a crossroads. The very future of the galaxy could rest on what their leaders choose to do on this day! The NPE that rolled the natural '50' has its treaty delay reduced to zero and may attempt to sign one treaty of the CM's choice with the targeted power, or else automatically break one or more existing treaties or declare hostilities/war against the power.

Natural '100': Peace in Our Time

A new age of goodwill and understanding has given the two empires hope for a peaceful future. BOTH powers have their Relationship values increased by 10. The NPE that rolled the natural '100' will have its treaty delay reduced to zero and will then immediately attempt to sign the next highest level treaty available to them.



CM's Note: A good CM should make sure to provide a colorful reason for these critical shifts and work them into his or her campaign's story or plot if at all possible. Critical diplomatic shifts can make for a great story hook or to flesh out prior story elements.

6.1.3.3 Relationship Modifiers

Other campaign events can trigger changes in NPE Relationships. In particular, atrocities committed as part of war can have a major impact on how a NPE views another power, or how other powers view them. Below is a list, broken down by category, of different events that can cause a change in NPE Relationships. The number in parenthesis is the amount added to the existing Relationship roll. Only the affected NPE(s) add these modifiers.

Intel Mission Related

- Power implicated in a successful sabotage/insurgency mission (-3)
- Power was caught running an insurgency mission on one of your systems (-2)
- Power was caught running a sabotage mission on one of your systems (-1)
- Power was caught running an espionage mission on one of your systems (-1)

Territory Related

- Power has ceded claim of a system to you (+1)
- Power has captured a claimed system (-1)

- Power has given you a colonized system (+1 per 2 income generated by system, rounding up)
- Power has killed a Census belonging to a mutual defense pact member (-4 per Census)

Diplomacy Related

- Power has signed a non-aggression pact or trade treaty with an enemy (-1)*
- Power has signed a peace treaty with an enemy (-2)*
- Power has signed a mutual defense pact with an enemy (-4)*
- Power has signed an alliance or co-belligerency pact with an enemy (-6)*
- Power has declared hostilities against you (-5)
- Power has declared war against you (-10)
- Power has declared hostilities against a peace treaty member (-1)
- Power has declared hostilities against a mutual defense pact member (-3)
- Power has declared hostilities against an alliance member (-6)
- Power has declared war against a peace treaty member (-1)
- Power has declared war against a mutual defense pact member (-3)
- Power has declared war against an alliance member (-6)
- Power has committed genocide against another power (-20)

Combat Related

- Power has generated an encounter scenario against your forces w/o declaring hostilities or war (-4)
- Power performed a sneak attack (e.g., generated scenario without publicly announcing a declaration of hostilities/war) (-10)
- Power has killed a Census belonging to your empire (-10 per Census)

** = For purposes of these relations modifiers, an enemy is considered to be any power with whom the NPE is currently engaged in hostilities or war.*

6.1.3.4 CMs and Relationships

Events that occur during the course of a campaign may prompt CMs to modify NPE Relationships. There are some acts, especially player initiated ones, that simply cannot be predicted within the confines a strictly delineated set of rules. For that reason, CMs should feel comfortable giving bonuses or penalties to Relationships based on special events.

The litmus test for such changes is this: "If a player was controlling this NPE, would they react favorably or unfavorably to this event or opposing empire's action?" If the answer is 'yes,' then it is wholly appropriate for the CM to intervene on behalf of the NPE and change Relationship values accordingly.

For example, perhaps a player's empire moved into a system that an enemy empire had been using to attack the NPE. By denying their known enemy this attack route into their space, the NPE should really be appreciative to the player empire for giving them a reprieve. Then again, the NPE might have been winning that conflict and would be unhappy that the player's empire decided to steal their spoils. In that case, the Relationship between the NPE and the player empire would realistically drop instead.

The AIX values of an empire might also influence the CMs interpretation of NPE reactions to certain situations. Using the example from the previously paragraph, a high AG NPE would be truly miffed that another power robbed it of the glory of the kill. A low AG NPE meanwhile would be quite happy to have the conflict cut short, given their aversion to violence.

6.1.4 NPE Diplomacy

Each turn, during the Intel Phase and after all 6.1.3.2 Diplomatic Shifts and 6.1.3.3 Relationship Modifiers have been applied, NPEs perform their diplomatic actions. This includes hostilities checks, armistice checks, and offering/breaking treaties (in that order).

6.1.4.1 Hostilities Checks

Although peace and stability is the professed goal of most governments, all too often the pursuit of these 'ivory tower' ideals directly leads to conflict with other rival powers. The reasons for hostilities are numerous. Whether it is for territory, resources, or pure jingoism, at one point or another in their history most nations will find themselves cast into the breach.

During the Intel Phase of each turn, a NPE makes a hostilities check against each of the empires which it is currently in contact with. The percentage chance of success is equal to the NPE's Aggressiveness minus 2 times the Relationship. Roll d100 against this value to determine success or failure. Less Aggressive NPEs will have a lower chance of activating hostilities against another power.

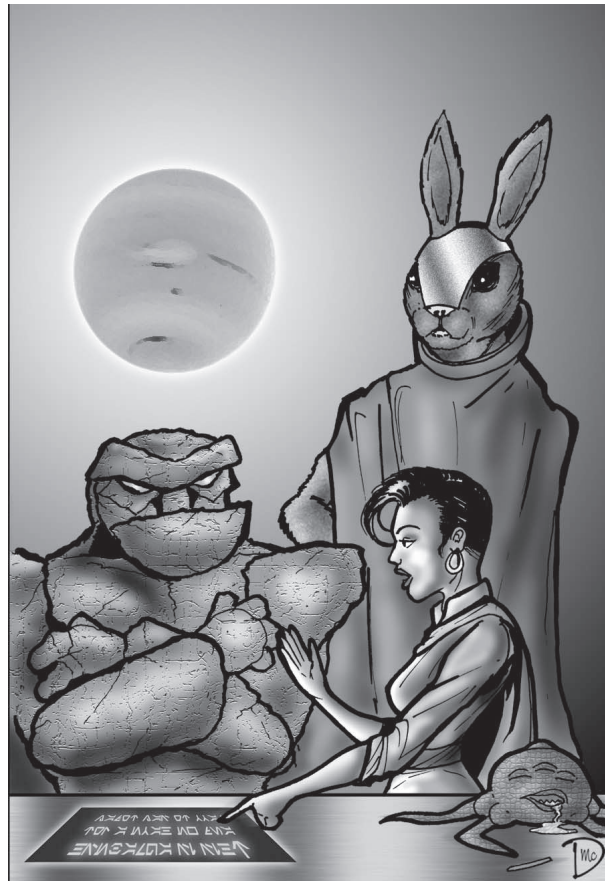
If the hostilities check succeeds, one of the following actions will result, depending on the current status of the Relationship between the two empires.

Hostilities Check
AG – (Relationship x 2)

1) NPE has signed treaties beyond Normal Relations with the target power

The NPE will first attempt to sign a declaration of hostilities against the target power as per CG 3.4.4 Diplomatic Actions. If the declaration succeeds, see section two below for results.

If the NPE fails in its attempt to declare hostilities, it will instead attempt to break its



highest level treaty with the target power. See 6.1.4.4.3 Breaking Treaties.

Example: A NPE rolls successfully on its hostilities check against a rival empire with which it has signed a Non-Aggression Treaty. The base chance of declaring hostilities is 20%. The modifier for being in a Non-Aggression Treaty is -20% (non-cumulative). The chance of breaking the treaty is 0% (20% - 20%) before any other applicable modifiers. Because the chance is zero or less, the attempt to declare hostilities automatically fails.

Having failed its attempt to declare hostilities, the power will now instead attempt to break its highest level treat (the Non-Aggression Treaty).

2) NPE is only in a state of Normal Relations with the target power

The NPE will attempt to sign a declaration of hostilities against the target power as per CG 3.4.4 Diplomatic Actions.

Once a declaration of hostilities has been successfully declared there is a chance that the NPE will opt not to inform the targeted party of this change in diplomatic status. The NPE must make a percentile die roll against its Integrity; if the result is greater than or equal to the NPE's Integrity, then the declaration of hostilities will remain secret until such time as the NPE begins exercising the advantages of the declaration.

If the NPE declared hostilities while still possessing treaties with the target power (see the previous section) *and* was successful in keeping the declaration secret, those treaties will remain in effect until the NPE generates a scenario against the power. Otherwise, all existing treaties are automatically broken once a declaration of hostilities is signed.

Example 1: A NPE rolls successfully on its hostilities check against a rival empire with which it only has Normal Relations. As a result, the NPE will now attempt to Declare Hostilities. The base chance of Declaring Hostilities is 20%. The chance of declaring hostilities is 41% before any other applicable modifiers.

Example 2: The NPE's declaration of hostilities was successfully declared. Now the power determines whether or not the declaration is private or public. The NPE has an Integrity of 67. The NPE rolls d100 and gets a '40'. Since this value is less than the NPE's Integrity value, the declaration of hostilities is not kept secret but is instead publicly announced. The NPE would have needed a '67' or higher in order to keep the declaration confidential.

3) NPE has already declared hostilities against the target empire

The NPE will attempt to sign a declaration of war with the target power as per CG 3.4.4 Diplomatic Actions.

Once a declaration of war has been successfully declared there is a chance that the NPE will opt not to inform the targeted party of this change in diplomatic status. The NPE must make a percentile roll against its Integrity; if the result is greater than or equal to *twice* the NPE's Integrity value, then the declaration of war will remain secret until such time as the NPE begins exercising the advantages of the treaty. Until the declaration is revealed by NPE actions, the normal treaty modifiers associated with having a declaration of war signed against the target power do not apply.

Example 1: A NPE rolls successfully on its hostilities check against a rival empire with which it has already engaged in a declaration of hostilities, which has been reciprocated by the enemy. As a result, the NPE will now attempt to declare war. The base chance of declaring war is -20%, with a modifier of +25% from the enemy already having declared hostilities against the NPE. The power has a 5% chance of declaring war before any other applicable modifiers.

Example 2: The NPE's declaration of war was successfully signed. Now the CM determines whether or not the declaration is private or public. The NPE has an Integrity value of 80. The NPE rolls d100 and gets a '87'. Since this value is less than twice the NPE's Integrity value, the declaration of war is not kept secret but is instead publicly announced. The NPE would have needed a '160' or higher in order to keep the declaration confidential, and since such a role is impossible on a d100 the NPE was honor bound to publicly declare the declaration of war.

6.1.4.2 War/Hostilities Tracking

Once hostilities or war are declared against another power, it becomes necessary for the NPE to track economic losses associated with the conflict for purposes of 6.1.5 Armistice Checks. These economic losses fall into two categories: enemy economic losses and friendly economic losses. The NPE must also track how long the conflict has lasted (the *conflict duration*) as this will have a major impact on the empire's armistice checks.

6.1.4.2.1 Enemy Economic Losses:

Enemy economic losses are tracked from turn to turn until a conflict is ended. The total amount of enemy economic loss must be kept on hand at all times for use in computing the armistice check. The following is a list of applicable enemy economic losses:

- The economic cost all enemy units destroyed in battle, including both space and ground units. Count the repair cost of enemy units that are crippled but not destroyed in battle. This is the primary form of economic loss for the enemy empire.
- The economic cost of all units captured by your empire. This includes captured ships and bases (including enemy shipyards) and any ships captured under construction at enemy shipyards.
- When a system is conquered, the enemy is considered to have taken an economic loss equal to twice the system's per turn income. For example, if the NPE's ground forces conquered an enemy system with an output of 8, the NPE would add 16 to its enemy economic losses total.

Once an armistice is signed, the enemy economic losses total is zeroed out. It does not carry over from conflict to conflict.

6.1.4.2.2 Friendly Economic Losses:

Friendly economic losses are tracked in the same way as enemy economic losses are.

The total amount of friendly economic loss must be kept on hand at all times for use in computing the armistice check. The following is a list of applicable friendly economic losses:

- The economic cost all friendly units destroyed in battle, including both space and ground units. Count the repair cost of friendly units that are crippled but not destroyed in battle. This is the primary form of economic loss for the friendly empire.
- The economic cost of all units captured by the enemy empire. This includes captured ships and bases (including friendly shipyards) and any ships captured under construction at friendly shipyards.
- When a system is conquered, the NPE is considered to have taken an economic loss equal to twice the system's per turn income. For example, if the enemy's ground forces conquered a friendly system with an output of 30, the NPE would add 60 to its friendly economic losses total.

Once an armistice is signed, the friendly economic losses total is zeroed out. It does not carry over from conflict to conflict.

6.1.4.2.3 Conflict Duration

The *conflict duration* is the number of turns that has passed since the power first declared hostilities/war against the enemy power. Each turn, prior to making an armistice check, this value is increased by 1.

Once an armistice is signed, the conflict duration is reset to zero. It does not carry over from conflict to conflict.

6.1.4.3 Armistice Check

After a NPE has successfully declared of hostilities or war, there is a chance each turn that the NPE power will attempt to sue for peace. This is called an Armistice Check. Likewise, other NPEs who have had hostilities/war declared against them will make an Armistice Check of their own. The percentage

Armistice Check

$$\text{Relationship} + (\text{Friendly Economic Losses} - \text{Enemy Economic Losses}) - (25\% \times \text{AG}) - (25\% \times \text{XE}) + (\text{Conflict Duration} \times 2)$$

Round to the nearest integer

chance that the power will offer an Armistice to end the conflict takes into consideration a multitude of elements including the current Relationship with the enemy power, the amount of economic loss incurred by both sides, and the duration of the conflict itself. The Armistice Check formula is given at the top of this page.

Once a NPE successfully activates its Armistice Check one of two things may happen. First, if the targeted empire is a player-controlled empire, that player can decide to either accept or reject the Armistice without having to roll for the attempt. However, if the targeted empire is a NPE, then it must make an *acceptance roll* to decide whether or not the Armistice treaty will be accepted. The NPE power offered the Armistice makes a percentile die roll against its Normal Relations acceptance chance to determine acceptance or refusal. If the targeted empire accepts, then an Armistice is signed, ending the conflict. Both empires will then return to a mutual state of Normal Relations. This same process is used whenever a player empire offers a NPE an Armistice.

If an Armistice Check succeeds but the enemy power does not accept the Armistice, the offering NPE empire receives a +1 bonus to its Relationship symbolizing its desire to continue the peace process. If the targeted empire is also a NPE, it also receives this +1 bonus (whether it likes it or not!).

6.1.4.4 NPEs and Treaties

Offering and signing treaties is the most important part of diplomacy. NPEs can offer, accept, or break treaties with other empires during this step. A NPE's decision to perform any of these actions is heavily dependent on their relationship and past dealings with the target power.

6.1.4.4.1 Offering Treaties

Each turn during the Intel Phase, NPEs roll to determine if they will attempt to sign a treaty with one or more previously contacted empires. The decision to offer a treaty relies heavily on the current Relationship between the NPE and the targeted empire, as well as the NPE's inherent fear of outsiders (Xenophobia).

To determine the treaty offering chance, or simply *offering chance*, take the current Relationship value times 20% and then subtract 10% of the NPE's Xenophobia. Round all fractions to the nearest integer. The result is the percentage chance that the NPE will ask the target empire for a treaty on the current turn.

Offering Chance

$$(\text{Relationship} \times 20\%) - (\text{XE} \times 10\%)$$

Round to the nearest integer

Example 1: Species A has a Relationship value of 43 with the target empire, Species B. Species A has a Xenophobia value of 65. Species A's offering chance for the turn is equal to $43 \times 20\% - 65 \times 10\% = 2.1$, which rounds down to a 2% chance of offering a treaty on the current turn.

Example 2: Species B has a Relationship value of 58 with the target empire, Species A. Species B has a Xenophobia value of 18. Species B's offering chance for the turn is equal to $58 \times 20\% - 18 \times 10\% = 9.8$, which rounds up to a 10% chance of offering a treaty on the current turn.

The previous two examples illustrate the impact that a NPE's Xenophobia can have on

the offering chance. NPEs that are extremely Xenophobic are unlikely to actively pursue diplomatic relations with other empires, instead preferring a state of non-intercourse. Conversely, NPEs with low Xenophobia values will enthusiastically pursue treaty opportunities in an attempt to strengthen relations with other powers.

After a treaty offer is made, the NPE must then determine what type of treaty (if any) it will be offering the target power. To do this, calculate the offering NPE's treaty acceptance chances, referring to 6.1.4.4.2 Signing Treaties & Treaty Acceptance Chances for guidance on how to determine these values. Once the offering NPE's treaty acceptance chances are known, the NPE will attempt to offer the next highest treaty with a positive, non-zero acceptance chance beyond its current diplomatic state.

It is possible for a power to make a successful offering attempt but not have any treaties it is willing to sign with the target power. If all higher level treaties have a treaty acceptance chance of zero or less the treaty offer is cancelled, but the NPE's treaty delay with the power is halved, rounding fractional delays down (see 6.1.4.4.4 Treaty Delay).



CM's Note: It is important to note once more that Xenophobia and Aggressiveness are not related properties. In many favorite science fiction settings these attributes seem to go hand in hand, so it is easy to fall into the cliché that an unfriendly alien is a hostile alien. Under the AIX system, it is completely possible that you may generate a species or faction that are complete Xenophobes, but have a low enough Aggressiveness value so as to render them Pacifistic.

It might become necessary in a campaign to remind your players that those NPEs that seem to not offer or accept treaties are not necessarily out to get them, but would rather just not want anything to do with them.

6.1.4.4.2 Signing Treaties & Treaty Acceptance Chances

The decision to sign, reject or break a treaty has consequences beyond entering into a new diplomatic state. NPEs react to their neighbors' actions. Kindness and friendship are rewarded, while betrayal is avenged.

NPEs, like most realistic governments, are slow to enter into relationships with foreign powers. Where some player powers might feel comfortable jumping directly from Normal Relations to an Alliance, few NPE powers would ever consider such a thing. To NPEs, diplomatic relations is a long-term project, and treaties are not something to be entered into lightly.

Each treaty type is assigned a *treaty delay*. This treaty delay is a penalty that is applied to the acceptance chance when rolling for acceptance of new treaties from a particular power. This penalty to the acceptance chance is equal to the current treaty delay. Each time a new treaty is offered, the treaty delay will be increased. If the treaty offer succeeded, add the full treaty delay. If the offer is rejected, apply half of the treaty delay. Treaty delay increases are cumulative and affect both the offering and/or offered NPE powers.

When a NPE power is offered a treaty by another power (whether human or NPE), they do not automatically accept the treaty. Instead, the NPE rolls against its *treaty acceptance chance*, also referred to as *acceptance chance*, to determine if the NPE wishes to sign the offered treaty. The acceptance chance for any given treaty is equal to the *base treaty chance* for that form of treaty plus the NPE's Relationship value versus the offering empire, minus both the NPE's Xenophobia and applicable treaty delay. Base treaty chances for each current treaty type are listed on the following page.

Treaty Acceptance Chance

Base Treaty Chance + Relationship – XE

A NPE rolls d100 for each treaty it is offered during a turn. If the result on the die is equal to or less than the acceptance chance, then the NPE has accepted the treaty. When a treaty is signed, the offering power receives the listed signing bonus as a modifier to its Relationship value with the target empire. Both powers then increase their treaty delay in relation to one another by an amount equal to that listed for that particular treaty type.

If a treaty is rejected, check the percentile roll against the acceptance chance. If the number rolled is greater than or equal to twice the acceptance chance, then the treaty offer generated an international incident and the Relationship between the two powers receives a penalty. Refer to the International Incident Table to determine the Relationship change.

International Incident Table (Roll 2d6)

Result	Effect
2-4	-1 Relationship
5-7	-2 Relationship
8-10	-5 Relationship
11-12	-10 Relationship

This negative relationship modifier affects all NPEs involved in the failed treaty acceptance roll (e.g., both the NPE that offered the treaty and the NPE that it offered the treaty to).

Additionally, if a treaty is rejected, the offering power receives the listed rejection penalty as a modifier to its Relationship value with the target empire.

NPE Treaties Chart

Treaty Type	Base Treaty Chance	Signing	Rejecting	Breaking	Treaty Delay
Normal Relations	60	N/A	N/A	N/A	XE
Tribute Treaty [†]	50	±0	-5	-10	24
Non-Aggression Pact	40	+1	-2	-2	12
Trade Treaty	30	+1	-1	-2	12
Peace Treaty	30	+1	-2	-5	12
Co-Belligerency	10	±0	±0	-10	18
Naval Appropriations Treaty*	10	±0	-1	-2	18
Mutual Defense Treaty	-10	+2	-1	-10	24
Research Treaty*	-10	+1	-1	-10	24
Alliance	-20	+2	-1	-15	36
Partnership	-40	+4	-5	-20	48
Unification	-60	N/A	-10	N/A	96

* = NPEs will attempt to sign a treaty of this type only if the next highest treaty is unavailable, or if the CM determines that it is the most prudent treaty for the NPE to sign at the moment.

† = Rules for Tribute Treaties and NPE diplomacy vary from those for other powers. See 6.1.4.4.6 Tribute and NPEs for details.

Refer to the table below to determine the base treaty chance for each type of treaty and any applicable Relationship bonuses or penalties associated with signing, rejecting, and breaking treaties.

6.1.4.4.3 Breaking Treaties

As Relationships change it is possible that a treaty that once one attainable with a NPE power will become unavailable. NPEs may also attempt to break treaties as a byproduct of a failed 6.1.4.1 Hostilities Check.

Each turn, during the Intel Phase, a NPE will attempt to break any and all treaties with foreign powers which have a current treaty acceptance chance of 0 or less (see 6.1.4.4.1 Treaty Acceptance Chance). The normal rules for breaking treaties, covered in CG 3.4.4 Diplomatic Actions, are used for breaking treaties, except that NPEs receive an additional modifier to breaking a treaty based on their Integrity. To calculate this modifier, subtract 50 from Integrity and divide by -2, rounding up. This modifier is then added to the chance of breaking a treaty.

Breaking Treaties

Normal Chance of Breaking the Treaty
+ ((IN - 50) / -2)

Round to the nearest integer

6.1.4.4.4 Treaty Delay

As first mentioned in 6.1.4.4.2 Signing Treaties & Treaty Acceptance Chances, a treaty delay is used to show that NPE empires are not likely to hastily accept foreign treaty offers on a whim, and continuously bugging a NPE to sign a new treaty will lead to a deterioration in relations.

Each NPE Relationship is assigned a treaty delay. As a result, a NPE will have a separate treaty delay value with each foreign empire it has contact with. As with Relationship values, treaty delays it is common for two

opposing NPEs to hold wildly different treaty delay values.

Treaty delays affect the willingness of a NPE to enter into a new treaty. When rolling treaty acceptance, the NPEs treaty acceptance chance is reduced by its current treaty delay with the offering power. For example, a NPE with an acceptance chance of 50% and a treaty delay of 18 would have an effective acceptance chance of $50 - 18 = 32\%$.

There are several ways in which a treaty delay can be extended. First, the signing of a treaty will increase the NPEs treaty delay by the listed delay for that treaty (see the treaty chart under 6.1.4.4.2 Signing Treaties & Treaty Acceptance Chances). Refusal of a treaty offer will increase the NPEs treaty delay by half the listed delay for that treaty (round up). Breaking a treaty will increase the treaty delay by TWICE the listed delay for that treaty. In the case of multi-NPE diplomacy, both NPEs are affected by these modifiers. If a NPE offered another NPE a Non-Aggression Treaty and that NPE refused the offer, both would have their respective treaty delays increased by half the treaty delay for a Non-Aggression Treaty (12), which would be equal to an increase of 6 to both delays.

Treaty delays will reduce over time, at a rate of 1 per campaign turn. This treaty delay adjustment takes place at the end of the NPE diplomacy step, after all NPE diplomatic actions are resolved (e.g., after CG 3.4.4 Diplomatic Actions, but before CG 3.4.5 Intel Missions). Additionally, a NPE's treaty delay with a power is halved as the result of a successful offering chance occurring when the offering NPE is not willing to sign a higher level treaty (see 6.1.4.4.1 Offering Treaties).

6.1.3.2.1 Critical Diplomatic Shifts can also affect treaty delays, raising or lowering them depending on the result.

6.1.4.4.5 Intel and NPE Diplomacy

In addition to the normal applications of diplomatic Intel use discussed previously, and in the VBAM Campaign Guide, there are several special circumstances specific to NPE

diplomacy where Intel points can be used to improve the chances of treating offers and acceptance.

6.1.4.4.5.1 Intel and Treaty Offers

The use of Intel can influence the successful ratification of treaties. When offering a treaty, each Intel point spent applied towards the treaty improves the NPE's offering chance by +10% and increases the targeted NPE's acceptance chance by +1%. Intel used in this manner must be allocated towards the treaty as part of the order to offer it in the NPE's Turn Orders for the turn. In this manner, a CM or controlling player can attempt to force a NPE to offer a treaty when it is in its best interest to do so.

Example: Species A has a 7% offering chance with Species B. The CM believes that a Trade Treaty with Species B is in Species A's best interests and wants to attempt to help the process along (both powers have already entered into a Non-Aggression Pact).

Species A applies 6 Intel points towards attempting to sign a Trade Treaty with Species B on the current turn. This improves Species A's offering chance by 60%, for a total offering chance of 67%. Assuming the offering chance succeeds, Species A will also receive a +6% bonus to the target empire's treaty acceptance chance.

6.1.4.4.5.2 Intel and Treaty Acceptance

NPEs can use their unallocated Intel points in the military Intel pool to react to diplomatic overtures made by other powers. Each Intel point applied towards a foreign treaty offer can either increase or decrease the acceptance chance by 5%. In some situations a NPE may wish to ensure that a treaty is signed, while in others it may wish to block a treaty from being ratified.

The decision to use Intel points to modify the acceptance chance is made when the treaty

is offered during the Intel Phase of the turn. The player or CM controlling the NPE can use any or all of the NPE's available Intel points from the military Intel pool to modify the acceptance chance.

Example: Species B receives a Trade Treaty offer from Species A and has an unmodified acceptance chance of 45%. The 6 Intel points spent by Species A increases this value by 6%, to 51%. Species B does not particularly care to involve itself with Species A, as that power has been getting into a lot of border disputes lately. Species B does not wish to be viewed as a token 'ally' of Species A by the other players.

Species B makes the decision during the Intel Phase to allocate 7 Intel points from the military Intel pool to attempt to block acceptance the treaty by reducing its treaty acceptance chance. The 7 Intel points provide a -35% penalty to the acceptance chance, reducing the chance of accepting the Trade Treaty from 51% to 16%. Species B rolls against this value and rolls a '21'. This value is above '16', albeit not by much, so the treaty is rejected.

6.1.4.4.6 Tribute and NPEs

Tribute can be an extremely persuasive diplomatic tool. The offering and demanding of tribute can lead to profound changes in diplomatic relations.

NPEs may only offer Tribute Treaties if Intel points are applied to the attempt. Refer to 6.1.4.4.5 Intel and NPE Diplomacy for details on Intel use in NPE diplomacy. Because of this limitation, Tribute Treaties cannot be offered without CM or player intervention. This prevents a weakling NPE from attempting to finagle tribute out of another, more powerful empire.



CM's Note: NPEs require a great deal of exterior assistance when evaluating when to offer or sign Tribute Treaties (see 6.2 New Diplomatic States for more information on this treaty type). The player or

CM in control of the NPE's activities should be directly involved in the decision whether or not to sign a Tribute Treaty. A NPE cannot sign such a treaty without the express consent of the controlling player/CM. The reason for this limitation is simple: to prevent abuse of NPEs by player empires that would turn NPEs into 'money boxes' to be pillaged through diplomatic means.

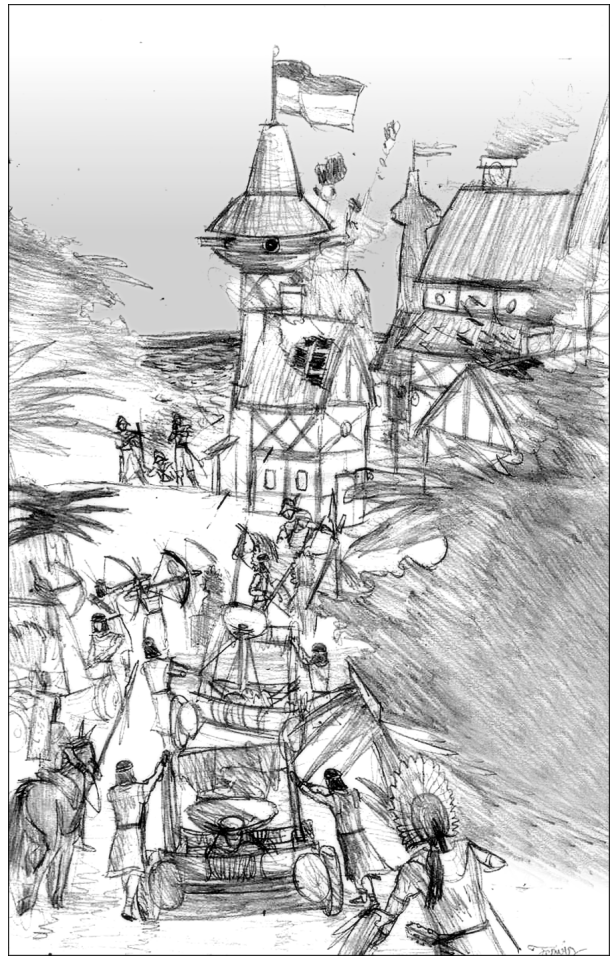
6.1.4.4.6.1 NPEs Offering Tribute Treaties

The option of having a NPE government offer (demand) a Tribute Treaty with another power will always exist, but it is most likely to be exercised when a NPE is strong enough to back up its threats. The player/CM operating the NPE will have to balance its available knowledge of the situation to determine whether or not the NPE it holds a military, economic, and/or political superiority over the possible target of the Tribute Treaty.

Note that a NPE will only attempt to extort tribute out of a power if its acceptance chance for a Tribute Treaty is greater than zero. If the acceptance chance is less than or equal to zero, then the offering NPE is most likely interested in outright conquest rather than simple tribute.

6.1.4.4.6.2 NPEs Accepting Tribute Treaties

The decision to accept a Tribute Treaty once again requires some input from the NPE's human caretaker. As with offering tribute, before a Tribute Treaty is accepted the player/CM should look at what the NPE knows and/or feels about the offering power. If the only other alternative is a possible war or diminished relations with the power demanding tribute from the NPE, then it might be in the NPEs best interests to accept the treaty. However if the accepting NPE is in fact more powerful than the power that is demanding tribute there is likely no reason for the NPE to accept the foolish proposition!



Despite player intervention, acceptance of a Tribute Treaty is still limited by the traditional treaty acceptance rules. If relations between the offering and accepting powers has deteriorated too far and the accepting NPE's acceptance chance for a Tribute Treaty is less than or equal to zero, then the accepting NPE will automatically rebuff the tribute demand. With their acceptance chance at that level, the NPE has resolved not to be extorted by the opposing empire.

6.1.5 NPE Tech Advancement

NPE tech advancement falls into one of three major categories, corresponding to three general levels of NPE sophistication: high tech, mid tech, and low tech.

High tech NPEs are all of those with a technology level of INT-1 or higher. High Tech NPEs conduct research in exactly the same

manner as other player races and are under no special rules or limitations.

Mid tech NPEs includes both IND-2 and IND-3 powers, as well as some IND-1 powers (those with Productivity). NPEs at these two technology levels are still paying tech investment points towards their tech advancement requirement, but both still perform "normal" tech investment, which individual unit advances possibly coming available as time progresses. This is especially true of IND-3 powers, which are treated link INT-1 powers without FTL drive capabilities (e.g., can't use jump lanes).

Low tech NPEs, including P-IND and some IND-1 powers, are generally incapable of performing research. What tech investment they do generate goes entirely into tech investment, which is applied to the NPE's tech advancement requirement. Low tech NPEs see no benefits from their tech investment outside of reaching their advancement requirements.

6.1.5.1 Low Tech NPE Research

P-IND and IND-1 NPEs do not start with any pre-existing Productivity on their homeworlds, nor are they capable of building Productivity immediately after activation (and P-IND NPEs are incapable of building Productivity at all!). As a result, these powers are unable to produce the economic points necessary for tech investment to take place. Instead, all P-IND and IND-1 NPEs generate one (1) point of tech investment each campaign year (e.g., one per 12-turn cycle) per Census on their homeworld. This of course means that, in a worst case scenario, it could take a P-IND NPE nearly *24,000 turns* to reach IND-1, or the equivalent of 2,000 game years.

Realistically, NPEs with a technology level less than IND-3 will not attain a higher technology level during the course of a campaign unless they are directly assisted by other more advanced powers (see 6.1.5.2 Technological Uplift).

6.1.5.2 Technological Uplift

In their travails, interstellar empires may sometimes come upon less developed species. These peoples can run the gamut from being simply pre-FTL to being pre-technological. In any cases, it is possible for a player or NPE to intervene in such a way as to accelerate a pre-interstellar NPE's technology level. The ways that this can be done are varied and depend on the low tech NPE's initial starting conditions. It can involve something either as simple as providing important research assistance and training, or as elaborate as altering the species' genome and genetically guiding them down the path towards sapience. The process of aiding the technological development of a pre-interstellar NPE is collectively referred to as *uplift*.

In order for a power to uplift another less advanced NPE power, they must have a permanent presence at the homeworld of the race to be uplifted. High tech empires have three options available for establishing this presence on the low tech NPE's homeworld.

The first and most desirable option is to build 7.2.9 Uplift Centers on the homeworld of the NPE to be uplifted. Uplift Centers are built like bases (see CG 3.7.4 Base Construction), meaning that the owning player will have to setup a chain of Transport Fleets between sources of available construction capacity and the low tech NPE homeworld in order to first build the Uplift Centers. Once in place, each Uplift Center on a pre-interstellar NPE homeworld will generate 1 tech investment point per turn which will be applied to the low tech NPE's tech advancement requirement. Additionally, all tech investment paid by the NPE is effectively doubled if its homeworld contains one or more Uplift Centers.

The second option available to would-be uplifting empires is to establish a full colony of at least 1 Census on the alien homeworld. This act is seen as being more threatening than building Uplift Centers and is generally more expensive, but it serves roughly the same purpose. All tech investment payments by the aided low tech NPE are doubled thanks to the

presence of the high tech empire's Census on their homeworld. However the widespread contact with outsiders has a better chance of causing unrest. All Morale checks made at the alien homeworld receive a -1 penalty, plus an additional -1 per ground unit stationed on the planet.

The third and final option for uplifting a low tech civilization is through the application of force. If a high tech power garrisons two ground units per low tech Census on the NPE's homeworld, mandatory uplift and assimilation can begin. Even if the high tech empire chooses to conquer the planet, this form of uplift should still be tracked. As with the other two methods, the NPE's tech investment is effectively doubled. However, using ground units to force compliance causes widespread panic and breeds hatred among the local population. Under this form of uplift, all Morale checks with positive effects are ignored and all Morale checks with negative effects are automatically triggered. All rebellion rolls are made at a +2 bonus to the attempt. Finally, the low tech NPE's Relationship with the high tech power is reduced by 1 per turn that the military presence remains on their homeworld.

The uplift of a NPE is complete once they reach INT-1. Beyond this point no additional uplift is possible.

6.1.6 Optional Rules

The following are optional NPE rules that are not typically in play, but are available to those players that would like to take advantage of them.

6.1.6.1 Annual NPE Activation

Under this optional NPE rule, player exploration or CM intervention is not the sole method of activating new NPEs. Instead, there is a chance every 12 turns (e.g., every year) that a new NPE will make its presence known. This adds extra chaos to a campaign, as players will never know when (or where) a new NPE will appear.

Every twelve turns, roll d100. On a result of 10% or less, a new NPE is activated. If the activation roll succeeds, generate the NPE as to 6.1.2 NPE Activation. The new NPE empire will always be interstellar, so ignore any results of IND-3 or lower.

Once the NPE empire has been fully generated, place one of the NPE's fleets (typically a scouting force) randomly in one of the outermost explored systems containing an unexplored jump lane. This is the system from which the NPE will achieve contact with the existing campaign milieu. Once the originating system is determined, randomly select one existing system as the destination system of the new jump lane. If using the 2.2 Exploration Campaign rules, follow the guidelines for establishing new lanes (See 2.2.3 Generating New Systems). If you are not playing a 2.2 Exploration Campaign, simply connect the two systems and roll on the Jump Lane Class Table (see CG 2.3.2.4 System Generation), applying the result to the lane.

6.1.6.2 Player Empires as NPEs

Campaigns can be played where all empires, including those under player control, are managed as NPEs. Each government would be assigned AIX stats and carryout diplomacy as if they were NPEs. If this option is used, players will find that they are no longer the omnipotent ruler of their empire but will instead be subject to the whims and eccentricities of their governments. Players will have to fight to get their policies enacted, making the use of diplomatic Intel that much more important since it will be the primary tool for them to win support among government leaders. The player may also end up having to play damage control with foreign governments after his or her position is undermined by eroding relationships or rejected treaties.

Some players and CMs might find this situation exciting or fun. It certainly acts to cast the player as the head of an empire rather than being the empire incarnate. Be aware though that some players will find this loss of direct control of the affairs of their empire

disconcerting and undesirable. Players should make sure that they can all agree to abide by the NPE diplomatic rules at the start the campaign in order to try to prevent problems later on in the campaign.

6.1.7 The Role of the CM in the Management of NPEs

The CM plays a major role in the smooth operation of NPE empires. It is the CM's responsibility to act as a caretaker for the NPEs, updating Relationships, resolving NPE diplomacy actions, and issuing turn orders, to just list a few items. The CM should try to make the NPEs in his campaign "come alive" for the players. You absolutely do not want your players to consider NPEs to be little static empires that sit there and do nothing. Get creative and string together story lines or diplomatic statements based on the NPEs' actions or reactions to the events in the campaign.

When dealing with NPE reactions to events, CMs should feel free to give NPEs bonuses or penalties to their Relationships with other powers based on campaign interactions. Many of the most common interactions have already been listed within the NPE rules, but they are by no means exhaustive. Individual campaign stories will vary wildly, and the actions of your other players should be factored into the outlook of NPEs as if the NPEs were "real" players, too. If one of your players starts making threatening moves towards an NPE border and the NPE finds out about it, then it makes sense that the NPE's Relationship with that player would be reduced by a few points.

Similarly, when assembling turn orders for NPE powers, a CM should make sure to have the NPE react to the information that it has available. Building on the previous example, let's say that the NPE had recently suffered a fairly catastrophic -5 drop to its Relationship with the player's empire. This could be interpreted by the CM as a sign that the NPE is growing distrustful of the player empire. "What is that sneaky player up to?" the NPE might wonder. Perhaps an Intel Espionage: Fleet

mission into one or more surrounding systems might be warranted, just so that the NPE can check up on what the other power is doing.

That is one possible interpretation of the situation. But to get a fuller picture, the CM will want to consult the NPE's AIX stats and its relations with any other players. If our threatened NPE had a high AG stat, it might not even worry about spying on its neighbor; perhaps using Intel to get started on a declaration of hostilities would be more prudent? If the NPE was a slathering warmonger with an AG of 90 or more, that might be an apropos reaction!

In another case, the threatened NPE might have a neighboring empire (NPE or player-controlled, it doesn't matter) that it is friendly with. They have signed up to a Peace Treaty thus far. With the distrust of the player empire growing, the NPE might be given orders to try and sign a Mutual Defense Pact with the friendly empire.

It is these types of situations that a CM must analyze while running NPE empires in a campaign. Look at the situation from the view of the NPE and ask yourself, "What would I do if I were the player?" Temper your result with the species' outlook, as symbolized by its AIX statistics, and you should have a solid course of action for the empire to follow.

Managing player empires and NPEs both might be too much for some CMs. It is entirely all right for feel overwhelmed with having to control so many aspects of a campaign. Some CMs might find it desirable to delegate control of one or more NPE empires to other parties, preferably neutral players who can manage the 'day-to-day' operations of the NPE, leaving the CM responsible only for resolving the NPE's diplomatic rolls and not the complete management of their empire.



CM's Note: It is possible for CM-less campaigns to make successful use of NPEs, but the threats of bias (or even just the claims of bias) might prevent them from being used in CM-less play unless a

neutral third party is available to moderate the NPEs.

6.1.8 Integrated NPE Diplomacy Example

Integrated Example: NPE Activation

During the course of the Antaran Empire's exploration along the rim, they inadvertently trigger a new NPE power. The campaign is using the 2.2 Exploration rules, including the Exploration and NPE Activation rule. The Antaran's scouting force entered a Major Colony system and had a 20% chance (5% base chance + 15% Major Colony bonus) of activating a new NPE power. The Antarans rolled an '11' and activated a new empire: the Incordu Alliance.

First, we must determine the NPE's tech level. Referring to 6.1.2.2 NPE Tech Level, we roll 2d10 on the NPE Result Table. We roll a '10', which means that the Incordu Alliance is an Early Interstellar (INT-1) power.

Because the NPE is INT-1, the contact system (the Major Colony, which we shall call Silver) is not the NPE's home system. The home system is one jump away, via an unexplored (or unvisited) jump lane. If the NPE had been INT-2, the homeworld would have been two jump lanes distant. The CM creates a new star system, named Incoth (the name of the Incordu homeworld), and applies the following base system statistics: Census 8, Morale 7, RAW 5, Productivity 6, Capacity 10. He then rolls three times on the Special Traits Table, providing results of +1 RAW, +2 Productivity, and +1 Census, +2 Capacity. The Incordu system now has statistics as follows: Census 9, Morale 7, RAW 6, Productivity 8, Capacity 12.

Now we perform pre-contact exploration for this NPE. When generating Incoth, the CM assigned five unexplored jump lanes to the system, one of which was then used to attach the system to the contact system. Because the NPE is an INT-1 power, it has only explored 50% of the jump lanes emanating from its home system, and no jump lanes beyond that. The

system originally had five unexplored lanes, so 50% of this (rounded up) yields a total of three jump lanes explored by the Incordu Alliance prior to its activation by the Antarans. We know of one of these systems (Silver), but the Incordu also explored the Gold (Minor Colony) and Iron (Outpost) systems prior to contact. We roll statistics for these systems now.

While performing their pre-contact exploration, the Incordu encountered a Pre-Industrial (IND-P) civilization in the Iron system. Because they are pre-Interstellar, the Iron system is the native population's home system. Let's call these aliens the Ironlings. We keep the system statistics for a normal Outpost system and roll our one special trait on the table. However, since this is a IND-P power, they cannot begin play with Productivity, so after system generation is complete we must reduce the Iron system's Productivity statistic to 0.

It is now time for the Incordu to place their pre-contact colonies. Being an INT-1 power, they receive 1 + 1 per 3 colonies (round down) at activation. They have explored exactly three non-home systems prior to activation, so they have two colonies to place. Since Iron is already inhabited, the NPE will place its colonies in Silver and Gold instead. Normally, the NPE (CM) would want to place its colonies in the systems with the best statistics.

After colony placement, we finally see if the power has received any bonus Productivity at its worlds. We divide the NPE's Interstellar tech level by 2 and round down. $1 / 2$ (RD) = 0, so the Incordu colony worlds do not gain any bonus to their Productivity statistics.

Now we must generate AIX statistics for our new NPE. The Incordu have AG 100, IN 40, and XE 62. Oops! The Incordu are extremely aggressive and none too friendly. We must also generate AIX stats for the Ironlings. The Ironlings receive AG 91, IN 62, XE 14. They are also fairly aggressive, but are more open to alien interaction than the Incordu seem to be.

With the AIX stats generated, it is now time to resolve pre-contact diplomacy between the Incordu and Ironlings. Both NPEs roll d100

for their Relationship with the other power. The Incordu roll '93', but the Ironlings only roll a '50'.

We must now roll hostilities checks for both powers. The Incordu have a $100 - (93 \times 2) = -86\%$ chance. The Ironlings have a $91 - (50 \times 2) = -9\%$ chance. Because both NPEs' hostilities check chances are negative, there is no chance that they will have entered into a pre-contact war.

It is now time to determine what level of diplomatic contact the Incordu and Ironlings have achieved prior to the arrival of the Antarans. This is done by rolling d100 for each power. The Incordu roll '19' and the Ironlings roll '84'. We compare these numbers to each power's treaty acceptance chances to see what the highest level treaty is they are willing to have signed. The Incordu roll indicates that they would have been willing to sign either a Naval Appropriations or Co-Belligerency treaty as their highest level treaty types (it is a tie between the two values). The Ironlings meanwhile have a highest level treaty of Normal Relations only. Normal Relations is the most restrictive of the two highest level treaty types, so the Incordu and Ironlings are currently in a state of Normal Relations with no other treaties currently signed.

Pre-contact diplomatic actions for both the Incordu and Ironling empires are now complete. If the Ironlings had been an Interstellar power, we would have had to generate star systems and work through activation in the same way we did for the Incordu. Luckily for us, we didn't have to do that in this case!

With diplomacy out of the way, now it is time to spend these NPEs' starting resources. Because the Ironlings are IND-P, they do not receive any starting points, so we actually do not have to worry about making purchases for them at this point. The Incordu meanwhile start with two times their systems' combined output (e.g., total domestic product). We know that their home system generates 48 economic points per turn. Let's assume that Silver has a system output of 15, and Gold has a system output of 9. This gives us a total domestic product of 72, for a total of 144 economic points in the Incordu Alliance's pre-activation point

pool. This points will now be spent on the Incordu's starting assets, including (but not limited to) shipyards, ships, flights, bases, satellites, mines, ground units, civilian fleets, and Intel.

After our purchases are made, it is time to determine how much tech investment both NPEs have made prior to contact. The Antarans activated the NPEs on turn seven of the year 2345 (often written in shorthand notation as 2345.7). The Incordu will have made 7/12 of their normal tech investment goal (round down) upon contact, which is 36 points. We multiple 7/12 times 36 and round down; the Incordu have paid 21 points into tech investment prior to contact.

The Ironlings are pre-Interstellar, so their prior tech investment is handled differently. They will have completed a percentile amount, determined by a percentile die result, of their IND-P tech advancement requirement of 2000. A d100 is rolled with a result of '56' on the die. The Ironlings have completed 56% of their tech investment (round down) prior to activation, so 1120 points of tech investment are applied to the Ironlings tech investment pool to go towards their goal of 2000 points.

The final step in the NPE activation is to roll a First Contact roll for the Incordu in relation to meeting the Antaran scouts at Silver. The Incordu roll for their initial relationship with the Antarans and roll a '26' on the d100. We then subtract 10% of the Incordu's XE stat, rounding down ($10\% \times 62 = 6$), from this roll, which yields '20'. This is the NPE's Relationship value with the Antarans.

As an astute reader might have realized at this point, a Relationship value of 20 does not mix well with a power that has AG 100. We now check to see if the Incordu are capable of making a hostilities check against the Antaran forces. Unfortunately for the Antarans, the Incordu have a $100 - (20 \times 2) = 60\%$ for their hostilities check at first contact. The Incordu roll against this check and roll an '80'. The Antarans breath a sigh of relief. The Incordu decided – against their better judgment, I'm sure – not to attack the Antaran scouting force. However,

there is a very good chance of future conflict between the Incordu and the Antarans.

Finally, with first contact resolved, the Incordu set their treaty delay with the Antarans equal to the Alliance's XE stat (62).

A First Contact roll is not made for the Ironlings in this situation, because the Antarans have not yet encountered the Ironlings.

NPE activation is now complete. We have completed the activation of the NPE that the Antarans encountered, plus all of the NPEs that the Incordu then activated during their setup process. We can now proceed to normal play with the NPE powers.

For the purposes of the rest of the example, the Ironlings will be largely ignored due to their ability to do much of anything worthwhile. Just note that, since they do not have any Productivity on their world, their tech investment rate will be 1 point per campaign year. Without outside assistance, it will take the Ironlings 880 years before they will become an Early Industrial (IND-1) power.

Turn 2345.8 NPE Diplomacy

The first NPE diplomatic action in a turn's Diplomatic Actions Phase is to update all NPE relationships. We roll d100 for each relationship value. The Incordu roll a '23' on the Diplomatic Shift Table for their Relationship with the Antarans. The Relationship goes down by 1, to 19. There are no other events or modifiers that will affect the NPE's relationship at this time.

As noted previously, we are omitting the Ironlings in order to streamline these examples. Normally we would roll a diplomatic shift roll for the both the Incordu and Ironlings to update their respective relationships with one another.

The second diplomatic action is to make a hostilities check (if applicable). The 1 point decrease in the Relationship value has increased the Incordu's hostilities check to 62%. The NPE rolls a '92'. For the second turn in a row, the Incordu have avoided attempting to make a declaration against the Antarans.

Next we check the Incordu's offering chance with the Antarans. Their offering chance is equal to $(19 [\text{Relationship}] \times 20\%) - (62 [\text{XE}]$

$\times 10\%) = -2\%$. Obviously, the Incordu don't like the Antarans enough to even *want* to attempt to sign a treaty with them!

No other diplomatic actions need to be performed for this relationship this turn, as the NPE did not offer a treaty. With the turn's diplomacy over, the Incordu's treaty delay with the Antarans is reduced by 1 to 61.

Turn 2345.9 NPE Diplomacy

First, our diplomatic shift. However, seeing that the diplomatic conditions are pretty bleak, the Antarans elected to invest 10 Intel points towards adjusting the Incordu's diplomatic shift roll with their empire in a positive direction. The Incordu roll '77' on the Diplomatic Shift Table. We then add $10 \times 2 = 20$ to the roll, for a total of 97. This increases their Relationship by 5! Relations are now at a 24.

In order to gain the Incordu's trust, the Antaran government also ordered that a group of three vacant star systems near Incordu space currently under Antaran control be ceded to the Incordu Alliance. This increases the Relationship value to 27.

Unfortunately all of these diplomatic and territorial concessions have done nothing to placate the Incordu's belligerent passions. This turn's hostilities chance is 46, and the d100 comes up a '46'. The Incordu make an attempt to declare hostilities, with a base chance of 20% and no bonuses to the attempt. They roll '55'. The declaration attempt fails.

The Incordu's offering chance remains too low to offer a treaty (-1%) so the treaty delay is reduced by 1 (to 60), and the NPE's diplomacy this turn ends.

Turn 2345.10 NPE Diplomacy

The diplomatic shift roll is '95', and the Antarans once again spent 10 Intel points to improve the diplomatic shift roll. The Incordu's Relationship with the Antarans increases by 5 and is now at 32.

The hostilities chance for the turn is 36%. The hawks in the Incordu government must have a strong following, as the hostilities check rolled by them this turn is a '25'. Once

more, the Incordu attempt to sign a declaration of hostilities, but again they fail on their attempt ('72' rolled).

The Incordu's offering chance has finally reached 0%, but that still means that they will refuse to offer a treaty. Given that the Antarans still haven't pushed their luck and tried to offer a treaty, no checks for treaty acceptance are performed. The treaty delay is reduced by 1 (to 59), and the NPE's diplomacy this turn ends.

Turn 2345.11 NPE Diplomacy

Huzzah! The Incordu's diplomatic shift roll against the Antarans is a natural '100', resulting in a critical diplomatic shift! Their Relationship increases by 10 (to 42), and the Incordu's treaty delay is reduced to 0. The Incordu will also attempt to sign the next highest-level treaty with the Antarans (Non-Aggression Treaty) during this turn, in addition to any other treaties that are offered.

Despite the jubilation, the hostilities chance is still 16%. A '25' is rolled; the Incordu hawks must be highly upset that the Antaran diplomats are proving too resourceful. They had really been looking forward to killing something!

The Incordu's offering chance is now at 2%. They roll a '97', resulting in no additional treaties being offered. The fact that the offering chance is now positive though is a good sign for the future, so long as the era of good feelings continues.

There are no treaty acceptance rolls this turn, but the Antarans do accept the treaty they were offered (very happily, I might add!). The Incordu Alliance appreciates the acceptance of the treaty, and upon signing the treaty we check the NPE Treaties Chart to see what modifiers to apply. Signing a Non-Aggression Treaty will increase the Incordu's Relationship with the Antarans by 1 (to 43) and increase the treaty delay by 12.

The treaty delay was reduced to 0 by the critical diplomatic shift, but the treaty acceptance increased it by 12. The treaty delay is reduced by 1 like it is every turn, setting the delay with the Antarans at 11.

Turn 2345.12 NPE Diplomacy

It is the final turn of the campaign year. The diplomatic shift roll is '42', meaning that diplomatic relations are holding steady.

The hostilities chance is 14%, and the Incordu roll '57'. Again, conflict is delayed.

The Incordu roll a '2' against their offering chance of 2%. Consulting their treaty acceptance chances, the Incordu are unfortunately not willing to offer a new treaty at this time. The treaty acceptance chance for a Trade Treaty is 11%, but this is before we subtract the treaty delay of 11. This reduced the treaty's acceptance chance to 0%, meaning the Incordu are simply not willing to advance their relationship with the Antarans at this time. However, the offer does show a resolve to develop stronger ties in the future, so the treaty delay is reduced by half (rounding down) to 5.

Unfortunately, the Antarans didn't know that the Incordu weren't ready to become good buddies. They offered the Incordu a Trade Treaty this turn. Since we have already determined that the acceptance chance for this treaty type is 0% on the Incordu's side, the treaty is rejected. If the Antarans were a NPE power, they would receive a Relationship modifier for the treaty's rejection. However there is a chance that the treaty's rejection may have caused an international incident. The treaty's acceptance roll ('7') is greater than twice the acceptance chance (0), so an international incident has resulted. Rolling on the International Incident Table, the result is a '2', which means that the Relationship has dropped by 1 (to 42).

Summary

These first few months following the NPE's arrival on the galactic scene have been hard on the Antaran Empire. They opted to give the Incordu three of their claimed systems and invested 20 Intel points to try and improve their relationship. Luckily for them, their investment of resources paid off, and the Incordu are unlikely to be declaring hostilities against them anytime soon. But the Incordu Alliance is still a loose cannon, thanks in large part to its AG 100,

and the Antarans will have to watch them closely.

Meanwhile, the poor Ironlings are forced to toil in their pre-industrial wonderland, farming dirt like only the descendants of true Trata Kamans can.

6.2 New Diplomatic States

The following are a series of new diplomatic states that can be used in your VBAM campaigns. These states can provide additional intrigue and options for campaign players.

Non-Intercourse Treaty (-10)

A Non-Intercourse Treaty is a unilateral agreement declared by a single power that states that the power refuses to establish Normal Relations with another power. A Non-Intercourse Treaty is adopted in situations where a power (typically a NPE) cannot bear the thoughts of establishing Normal Relations with another power, but they are not ready (or can ill afford) declaring hostilities or war against the irksome power.

Once declared, a Non-Intercourse Treaty remains in effect until broken. During this period, the power that declared Non-Intercourse cannot have any dealings with the target empire or empires. This includes signing any treaty in which the target empire is also a signatory. Any treaty offers originating from the target of this Non-Intercourse Treaty will be automatically and categorically refused (this overrides even the abilities conferred by some custom race designs).

Tribute Treaty (80)

A Tribute Treaty is an agreement between two powers that stipulates that one will pay the other a predetermined number of economic points (based either on a fixed sum or as a percentage of their total domestic

product) each campaign turn. The signing of a Tribute Treaty signifies that one of the powers is adopting an obsequious posture, signing away economic advantage to a rival in return for continued peace.

A Tribute Treaty must include the amount of economic points to be paid each turn. Once signed, this tribute takes precedence over all other spending for the power making the payments, including unit maintenance. Payment of tribute in accordance of the treaty is not optional, and the full amount must be paid each turn unless the empire simply does not have enough economic points available. In this instance, the paying empire must pay all available economic points towards the tribute. The remainder of unpaid tribute should be tracked and paid along with other tribute as soon as the empire is financially capable of doing so. As with normal tribute payments, the decision to bring to current all tribute payments is not optional and will occur as soon as the empire has the economic points to do so.



CM's Note: CM intervention is required when deciding upon whether or not a NPE will accept any Tribute Treaty offered to it by another empire.

Naval Appropriation Treaty (100)

A Naval Appropriation Treaty is a decision to allow one of the signing parties to purchase naval equipment from the other. These hardware purchases can come in the form of cast off ships and flights that have already been built, or can be extended to the plans to build certain classes of units. Empires must have signed a Peace Treaty before they can enter into a Naval Appropriation Treaty.

Unlike traditional treaties, the Naval Appropriation Treaty requires a great deal of player intervention to draft. It is not in and of itself a "stock" treaty type. Players must decide which unit types their empire is willing to make available to the other signatories and what limitations they will place on the design's purchase and/or construction. The following

treaty clauses are the most commonly applied to Naval Appropriation Treaties:

Sale of Existing Hulls: This clause, signing powers can sell existing or new construction vessels to one another. The most common use of this clause is to authorize the sale of mothballed or aging units to another power. However there are cases where a power may request the purchase of newer units for transfer. The sales cost of ships can be set at any level that the selling power wishes.

Limited Schematic Access: This clause gives the powers rights to build new construction units of a specific type at their own worlds under the guarded attention of the opposing power. Access to the unit's schematics is limited and a service contract with the originating empire is required to keep the unit operational. Should a Naval Appropriation Treaty of this type be dissolved, any unit(s) built under the treaty will receive one out of supply level per turn until it is refitted with native technologies (as per 7.4 Operating Alien Units).

Limited Schematic Access and Full Schematic Access are mutually exclusive selections.

Full Schematic Access: This clause gives the powers rights to build new construction units of a specific type at their own worlds without the assistance of the opposing power. Unlike Limited Schematic Access, Full Schematic Access cannot be revoked, even if the Naval Appropriation Treaty is canceled! However, dissolution of a Naval Appropriation Treaty of this type will still require the owning power to refit the ships (as per 7.4 Operating Alien Units) in order to make them maintainable by their own forces. Until refitted, these units will receive one out of supply level per turn. A power should be wary of who they give Full Schematic Access to.

Limited Schematic Access and Full Schematic Access are mutually exclusive selections.

Construction Surcharge: This clause adds an additional economic cost to the base construction cost of a unit. The amount of this surcharge is set by the selling empire and is the cost that the opposing power must pay in order to purchase the unit. The effects of a construction surcharge only apply to units for which an opposing power has either Limited or Full Schematic Access.

Maintenance Contract: This clause adds an additional maintenance cost to the operation of designs belonging to a foreign power. If this term is invoked for one or more classes, increase their maintenance cost by 1 economic point per turn. For example, a Heavy Cruiser with a normal maintenance cost of 2/3 would cost the opposing power operating the ship 3/3 instead. This extra maintenance penalty is paid to the empire providing the unit and/or the plans for the unit. Demanding a maintenance contract clause is a good way for an empire to make residual income off of a Naval Appropriation Treaty. Maintenance contract payments end when the treaty is dissolved.

Each ship, flight, base, or other design may be assigned one or more of the clauses listed above. For example, an empire has a Heavy Destroyer class that they wish to make available to another empire. The Heavy Destroyer costs 5 economic points to purchase and has a maintenance cost of 2/5. The empire opts to apply the Sale of Existing Hulls and Maintenance Contract clauses to this Heavy Destroyer under the terms of the Naval Appropriation Treaty. The cost of the Heavy Destroyer is set at 6 economic points, and the maintenance cost is increased by 1 economic point to 3/5. If the empire was to sell 8 of these Heavy Destroyers to another signatory of this particular Naval Appropriation Treaty, the selling empire would receive 48 economic points for the purchase of the hulls. They would also receive 2 economic points per turn from the maintenance contract placed on the design.

This provides the selling empire a total immediate profit of 8 economic points from the sale of the destroyers, plus 2 economic points per turn so long as the opposing power continues to operate the ships and the Naval Appropriation Treaty remains in effect.

Each Naval Appropriation Treaty must stipulate which clauses are in effect, which unit types are included in the treaty, and the treaty duration (if a limited duration is desired, otherwise it is assumed to be a persistent treaty). If changes are to be made to a Naval Appropriations Treaty the treaty must be redrafted to incorporate these changes, at which point the treaty must once again be offered and accepted by the involved parties.



CM's Note: The transfer of ground units between powers could be handled using a Naval Appropriation Treaty if your campaign allows empires to "sell" or "lease" ground units to foreign empires.

Research Treaty (60)

A Research Treaty is an agreement that opens the doors to collaborative research efforts between the best and brightest of one or more empires. By pooling their resources, these scientists are able to work more efficiently, allowing them to achieve breakthroughs in less time than previously required.

During the Tech Phase at the end of each campaign year (e.g., every 12 turns), an empire receives a bonus amount of tech investment equal to 10% of the total tech investment of each opposing power it has signed a Research Treaty with. Round all fractions up. In cases where two or more empires have entered into multiple Research Treaties together, each empire can provide only one 10% bonus, not one per treaty signed. This situation can occur if coalitions form research treaties and an empire is part of multiple coalitions.

Partnership Treaty (-30)

The Partnership Treaty actually goes a step beyond a normal Alliance. Under a Partnership Treaty, the power offering the treaty is actually seeking to become a protectorate of the target power. The equality of the Alliance treaty gives way to a political situation in which the new Partner begins divesting its sovereignty into the target power. Partnered empires operate under the same conditions as an Alliance, with a few modifications.

Partners can purchase all space and ground unit designs belonging to their other Partnered empire(s). These designs are treated like 7.4 Operating Alien Units if that optional rule is in play. Partnered empires also treat all Defense Intel located in one another's systems to be half that of normal (round down).

Unification Treaty (N/A)

Unification is the final step in diplomatic relations. The signing of a Unification Treaty is a demonstration that the two empires are ready to fully amalgamate into a single political union.

Once a Unification Treaty has been signed, the empire that offered the treaty is effectively removed from play and has all of its assets (including systems, fleets, and ground units) are absorbed by the accepting power. All outstanding treaties signed by the offering power are likewise adopted by the accepting power, though their own treaty states take precedence in cases of declarations of hostilities/war. The Unified empire can purchase space and ground units of either player equally at no penalty as they are no longer considered alien designs (see 7.4 Operating Alien Units).

Unification Treaties involving NPEs or Custom Races (created with the MG 2.0 Custom Race Design rules) require some considerations. If two NPEs decide to Unify, the CM should average each of the powers' three AIX statistics to determine the final AIX values for the final, Unified empire. Round all fractions up. After multiple Unifications, NPEs will progressively move towards more moderated AIX values, in essence gaining a more even

temperament by virtue of their mix of different alien perspectives. For powers using the optional Custom Race Design rules, a Unified empire will retain all of the physical traits possessed by the lesser empire and will otherwise increase the total number of design points available to the greater empire by one. The Unified empire will then select social traits from either of its two component empires, up to the Unified empire's design point limit, to apply to the new Unified entity.

The effects of Unification cannot generally be undone. If two empires' relations put them in a position for this to even be a possibility, then it is likely that such a condition of shared respect and admiration would continue on far into the future. Beyond this, the process of trying to convert a Unified empire back into its two constituent empires is extremely difficult. The decision to attempt to schism a Unified empire is left up to CMs. What conditions exist that might spur such a breakdown of Unification? Widespread rebellion within the former empire's boundaries, plot-related elements, and lack of protection from outside threats are all possible triggers for the dissolution of a Unification Treaty. The decision of whether or not to allow such dissolution to take place rests on the shoulders of the CM. Should the CM opt for this to happen, it is recommended that he or she refer to past campaign notes and return the two empires to their pre-Unification boundaries. All space and ground assets should also revert back to the control of their originating power. If using either the NPE or Custom Race Design rules, remember to revert the powers back to their original statistics.

Example 1: Power A signs a Unification Treaty with Player B. Player A currently has an Alliance with Power C and is at War with Power D. Player B meanwhile has nearly the exact opposite conditions (Alliance with Power D, Declaration of Hostilities with Power C). Upon the finalization of the Unification, Player B will retain its Alliance with Power D, but since they have declared

hostilities against Power C, the newly Unified empire will remain at a state of hostilities. The Alliance between Power A and C is effectively cancelled.

Example 2: Two NPEs sign a Unification Treaty. NPE A has AIX values of AG 10, IN 71, XE 43. NPE B has AIX values of AG 54, IN 33, XE 80. The final Unified NPE will have the average of these values: AG 32, IN 52, XE 62.

6.3 Underworld Empires (CM Only)

In some source materials there exist galaxy-spanning criminal organizations whose power sometimes rivals that of empires. The following rules detail how to create and manage these Underworld Empires (UEs) within the bounds of a traditional campaign. Due to the secretive and complex nature of managing them, UEs are only allowed in CM moderated games. Also, they are generally unsuited to exploration or "start from scratch" games, although it is possible to create them at the beginning of the game so they can watch and wait for the chance to expand their influence.

6.3.1 Corruption

The basis for determining most UE activities is a new system attribute called Corruption. This attribute is similar to Morale in that it is limited by Census and applied to every system. The primary function of Corruption is as the source of income for the UE. It represents bribes, protection rackets, gambling, illegal substances, and other illicit means of gathering wealth. A UE will have a total income equal to the combined number of Corruption points in all systems where it operates.

In general the Corruption score of a system is unknown to the owner of that system.



The Corruption score is known only by the CM and the UE that controls the Corruption. However Intel missions can be run by an empire to determine a system's Corruption score (see 6.3.1.2 Fighting/Reducing Corruption).

Elevated levels of Corruption in a system can lead to losses for the owning empire. If the amount of Corruption in a system ever becomes greater than half its Census, then the system is considered *Corrupt*. The UE with the most Corruption in a Corrupt system will gain an income bonus equal to 10% of the system's output (round up). The system's owner will in turn begin losing income equal to the amount the UE gains, but they will NOT know which system has become Corrupt!

Should the amount of Corruption in a system ever become equal to its Census, then the UE with the most Corruption in the system will gain an income bonus equal to 25% of the system's output (round up). As before, the system's owner's income will be reduced by this same amount and the location of the Corrupt system will remain disclosed.

Every turn that a system is Corrupt, there is a 10% non-cumulative chance that the owning player will become aware that the system is Corrupt. The CM should make this roll and the UE should not know the results.

The UE will know all of the system statistics (such as Census, RAW, Productivity, etc) at any system where it has Corruption, and it will also know if the system is on a trade route. Unlike the system owner, the UE will also always

know how much Corruption is in a system and who controls them.

6.3.1.1 Gaining/Spreading Corruption

Adding Corruption to a system is a special Intel mission run by the UE. Most of the rules governing this Intel are the same as for normal empires. The UE purchases a number of Intel points from their point pool at the normal cost (usually 1 economic point per 1 Intel point). The UE then assigns these Intel points to any system where they currently have Corruption. A system can only utilize as many Intel points as it has Corruption points. The rules for combining Intel from multiple systems and for distance from the target are enforced. However, the difficulty of the mission used to determine the Mission Failure Percentage is variable. The base difficulty is 4. Subtract 1 from the difficulty for each jump away from the capital system of the owning empire, following the shortest possible route. The minimum difficulty for a mission is 1.

A UE may move 1 point of Corruption from one system to another if they have infiltrated a Trade Fleet (see 6.3.2 Infiltrating Trade Fleets below). A Trade Fleet may only move one Corruption per turn and only between systems on its trade route. The destination system must already have at least one point of Corruption – infiltrated Trade Fleets cannot move Corruption to a Corruption-less system.

If the UE also controls its own ships (see 6.3.5 Underworld Empire Ship Assets) then it may use a Transport Fleet to move 1 point of Corruption from one system to another. For all intents this “Corruption in transit” is considered a ground unit for purposes of movement (e.g., it cannot embark and debark on the same turn, is lost if the Transport Fleet is destroyed, etc.).

6.3.1.1 NPE Integrity Modifiers to Gaining Corruption

NPEs with extremely high Integrity values are more difficult to corrupt. NPEs with IN 75-89 increase the base difficulty of the mission by 1 to 5, while those with IN 90+ increase this difficulty by 2 to 6.

6.3.1.2 Fighting/Reducing Corruption

To determine the Corruption score of any system, the owner of the system performs a System Corruption Espionage Intel mission. The difficulty of this mission is 2 and follows all the normal Intel rules for launching Espionage missions. It is not necessary to run a mission to determine the amount of Corruption before running a mission to eliminate it.

To reduce the Corruption, the owner of the system runs a Corruption Sabotage Mission. The difficulty for this mission is the current number of Corruption points in the system minus 1, with a minimum difficulty of 1. The owner of the system should NOT be told the mission's difficulty before or after the mission is run, only the mission's effect (if any). Giving any additional information would betray the amount of Corruption in the system.

The UE may voluntarily lower its Corruption in any of its systems. Although there is no immediate benefit in doing this, it may prevent a Corrupt system from being detected.

6.3.2 Infiltrating Trade Fleets

A UE may attempt to infiltrate Trade Fleets, making it easier to raid them (see 6.3.5.4 Raiding) or so that they can use them to

transport their own personnel. To infiltrate a Trade Fleet, the UE performs a Trade Fleet Sabotage Mission with a Difficulty of 2. If successful, the UE will have infiltrated the Trade Fleet.

The owner of the fleet may perform a Fleet Infiltration Espionage mission, which has a Difficulty of 2, to determine if the fleet has been infiltrated.

To remove the infiltration, the owner of the fleet may scrap it, which automatically succeeds in removing the infiltration. Of course much of the cost of the Trade Fleet and the commerce income it generates will be lost should a player elect to go this route. Otherwise, the empire may run a Corruption Sabotage mission, which has a Difficulty of 2. If successful, the UE infiltration of the Trade Fleet will be removed.

For all these missions the Trade Fleet is considered to be in all systems in its trade route for determining distance for Intel costs.

6.3.3 Special Intel Rule

A UE can perform other Intel missions as listed in the Campaign Guide. However, due to limited resources, the difficulty of any sabotage mission is increased by 1. Espionage mission difficulties remain the same. Also, a UE can never maintain Intel. All Intel must be used on the same turn it is purchased. Any Intel points not spent in the turn they are purchased are lost.

6.3.4 Underworld Empires Controlling Systems

Under the basic UE system, the UE itself will not control any systems. However in some settings it may be that the criminal organization has grown into an official “government” of one or more systems. For all intents and purposes these UE empires behave as any other empire in regards to income, maintenance, etc. Consider the Corruption value of the UE systems to be equal to its Census. However the UE government does NOT gain any income

from Corruption on systems it controls, though it continues to earn Corruption income from any foreign systems in which it has Corruption.

UE governments are able to maintain Intel as a normal empire would, but only in systems it controls. It can also use systems it controls as the staging ground for Corruption Intel missions.

Under no circumstances can a UE gain control of a system solely through the use of Corruption. This applies to government and non-government UEs alike. The only way for a UE government to gain control of a system is through the normal means of conquest.



CM's Note: Since the UE has a means of income unavailable to other empires, their income through normal channels (system and trade) should be limited at the beginning of a campaign in order to maintain a balance.

6.3.5 Underworld Empire Ship Assets

In some settings, UEs will be more aggressive in their interactions with other empires, fielding their own fleets and bases. These forces will often be used to raid other empires, or to protect a UE government against empires that are hell bent on "cleansing the galaxy of criminal scum." Your campaign's setting will inform you as to the prevalence of such craft or its availability to UEs. Some settings may even specifically disallow UEs from fielding substantial units.

6.3.5.1 Building Ships

Depending on setting, there are several possible sources for the ships procured and operated by UEs. UE governments will have their own roster of ships and their own shipyards to construct them with, just like a normal empire. For non-government UEs, the CM has a variety of options that can be used to provide UEs access to space units. These options may be combined if desired.

First, attached below is a list of generic UE ships that can be used in your campaign. These ships represent civilian ships that the UE can legally purchase and then modify with weapon emplacements. These ships are generally weaker than comparable ships from normal empires but can be built and maintained without penalty. Under this option the UE does not need its own shipyards.

Second, the CM can rule that the UE can build older ships from other empires in the game. This represents ships that have been captured in the past and examined in enough detail to be manufactured by the UE. As a rule of thumb these ships should be at least 25 years out of date (e.g., In-Service Dates 25 years old or older than the current campaign date). To represent the UE's lack of manufacturing expertise, the AS, AF, and CR of these ships should be reduced by 1 (minimum 1). The numerator of the maintenance should also be increased by one (so a 2/6 becomes a 3/6). For other units (fighters, mines, etc), do not reduce the AS or AF but still increase the maintenance numerator by one. This option will require the UE to maintain their own shipyards or sources of income in order to construct these craft.

Third, the CM can rule that the UE can (or must) buy ships from existing empires. The seller should set the cost and terms of purchase for these ships, and their purchase should require substantial negotiation. A Naval Appropriation Treaty should be used to codify what units are available to the UE, as well as the terms of their availability. Otherwise, the AS, AF, and CR of these units are not reduced, but the maintenance numerator is still increased by 1. When using this option exclusively, the UE will not need its own shipyards.

6.3.5.2 Non-Government Underworld Empire Shipyards

Every non-government UE that builds its own ships must have a shipyard to do so. These shipyards are often hidden in the extreme edges of systems, near obstructions such as

asteroid belts and nebula, or in systems that are currently undiscovered by other powers.

Non-government UE shipyards follow all the same rules as normal shipyards except that they only have a construction capacity of 10, meaning they can only construct 10 points worth of ships per turn, and are limited to a number of dock spaces equal to the system's Corruption. For shipyards in undiscovered systems, the shipyard automatically remains undetected for as long as the system remains unexplored. When another empire successfully explores the system for the first time, there is a 25% chance that the shipyard will also be discovered. If the shipyard remains undetected after the initial exploration it will remain so until the system is colonized, after which it uses the rules below.

To detect a shipyard in a colonized system the owner of the system must specifically assign ships to search for it. The base chance of success is 5%. Modify this chance by the following amounts:

+5% per squadron of searching ship

+5% per scout function of the searching ships

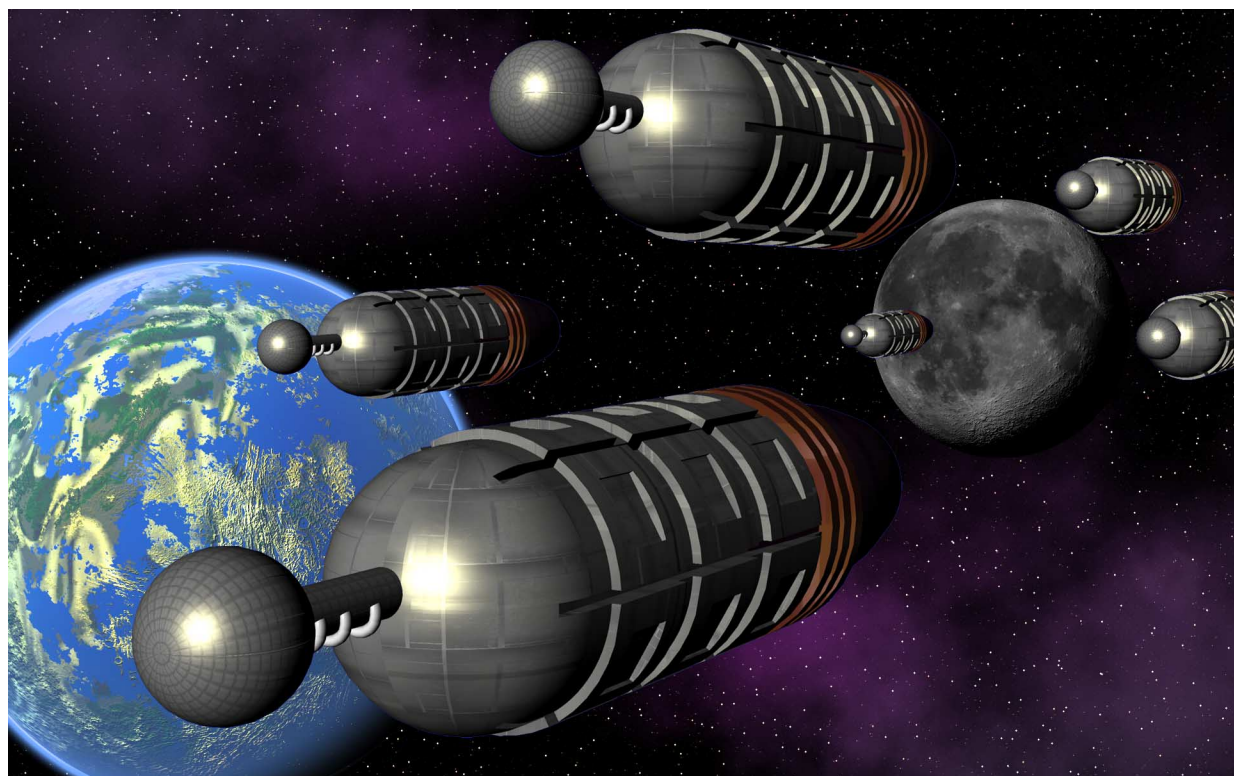
6.3.5.3 Moving Underworld Empire Ships

UE ships move using the standard movement rules. They also use the optional CG 4.22 Stealth and Concealed Movement rules found in the Campaign Guide. For UEs, Stealth and Concealed Movement use is mandatory; it is not optional.

6.3.5.4 Raiding

Many UE groups supplement their income by raiding other empires. For UEs, these rules replace those in section CG 3.6.2.2 of the Campaign Guide.

To raid a Trade Fleet, the UE must be aware of its existence either by having Corruption on a system in the trade route or by using an Intel mission to discover its presence. Once the trade route is detected, the UE should move its fleet into any of the systems on that Trade Fleet's route with orders to perform a raid. Combat will take place with any Escort ships or ships in the system as per the normal rules. If the Trade Fleet has been infiltrated, then the owner of the Trade Fleet suffers a -2 to their readiness roll.



If the UE destroys all combat vessels escorting the Trade Fleet (or if it is unescorted) then raid is successful. The UE will gain a one-time bonus to its income on the next turn equal to the commerce income generated by the trade route. The owner of the trade route will in turn lose the income from this route for the next turn. The Trade Fleet itself is unharmed and may continue on its route the following turn.

6.3.5.5 Underworld Empire Ships and Supply

UEs follow all the standard supply rules, in addition to the following special rules:

- UEs must pay maintenance for their units like any other power. UE units are not immune to the effects of being out of supply and earn out of supply levels normally. UE units are in supply when either one of the two following conditions applies: 1) they are in a system containing an UE shipyard; or 2) they are in a system with a Corruption of 3 or more.
- The UE player may build and use supply caches. These supply caches are one shot supply depots, as described in 7.2.12 Supply Cache. They can be built in any of the UEs systems that have Corruption, and cost 10 economic points to build and have no maintenance cost. They have the same chances of being detected as UE shipyards. After being used once, the cache is removed from play.

6.3.6 Underworld Empires and Diplomacy

Non-government UEs can conduct diplomacy with other empires. The terms and agreements reached through diplomacy is open to CM decision. However agreements, such as the ability to buy ships in exchange for using them against another empire, are possible and encouraged. In these cases entering into the agreement is automatic, as is breaking the agreement (no honor among thieves).

6.3.7 Presence of Multiple Underworld Empires

Most of the rules above assume that there is a single UE in any game. The following rules cover settings where there is more than a single UE.

6.3.7.1 Systems and Multiple Underworld Empires

The total Corruption a system can have is equal to its Census, but it may come from different sources (e.g., different UEs). So a system with a Census of 5 may have 2 Corruption from UE A, 2 from UE B, and 1 from UE C. All UEs are aware of the existence or amount of Corruption each competing UE has in a system. This knowledge is a result of the constant competition between rival crime syndicates. The underworld kingpins know when another organization is trying to horn in on their action.

Because the total Corruption in a system can never be greater than its Census, if one or more UEs attempt to increase their Corruption on the same turn and doing so would put the system's Corruption above Census, each UE must roll d10. The UE with the highest result increases Corruption by 1. The Corruption mission fails for the other UEs, and the Intel points spent on the mission are lost.

6.3.7.2 Intel and Multiple Underworld Empires

The System Corruption Espionage Mission will reveal all the sources of Corruption in the system if successful, thus showing the amounts of Corruption the individual UEs control.

The Corruption Sabotage mission can be either targeted at a specific UE or done as a general sweep. If targeted against a specific UE, use the UE's Corruption as the difficulty for the mission. If the empire launches a general Corruption Sabotage mission, the CM should

randomly determine which UE is targeted and use their Corruption score. Only those UE with Corruption in the system are eligible targets of this general sweep.

UEs can run Intel missions against each other to eliminate their rivals Corruption. Difficulty and rules follow those given in 6.3.1.2 Fighting/Reducing Corruption, with one addition. Whenever a UE vs. UE Intel mission fails the owner of the system is also aware of it.

6.3.7.3 Trade Fleets and Multiple Underworld Empires

A Trade Fleet can only be infiltrated by one UE at a time.

6.4 Enslavement and Genocide

These rules govern the cruel acts that an empire can perform on rival empires, including enslaving or exterminating populations. Unless used for thematic reasons, these rules should be used sparingly. Commission of genocide on a planetary scale should be a rarity, and it is not something to be taken lightly.

6.4.1 Forward

The use of these rules in a campaign can be divisive. For many players, a game is no longer fun once topics of enslavement, extermination, and/or genocide are broached. The story of human history is filled with innumerable atrocities that we as a species would just as soon forget. Slavery and wholesale slaughter of entire peoples has occurred time and time again, both in antiquity as well as in the current day.

CMs are advised to take great caution before allowing the use of these rules in their campaigns. It is recommended that you sit down with your players and have a serious discussion

about the realities of slavery and genocide in order to make sure that they are comfortable playing a campaign where such things can occur. More importantly, as a CM you will want to make sure that your players are mature enough to understand the reality and repercussions of such actions. If you have the feeling that one of your players are going to consistently make light of mass murder or abuse these rules to their own advantage (and not because of a plot or thematic motivation), then it is advised that you restrict or outright refuse to use them entirely.

It must be understood that these options are being included specifically because many science fiction settings and campaigns include species so despicable that they employ these tactics to defeat their enemies. For example, one of the quintessential villains of popular science fiction is the hivemind insectoids who are hell-bent on destroying all other life in the galaxy. It would be impossible to show the enormity of the threat they pose in a campaign without access to these rules. A more historical result hearkens back to the massive slave populations of Rome. In a historical setting trying to capture the political and economic structure of ancient Rome, rules for enslavement at the very least must be considered.

In conclusion, these rules are being included for the purposes of completeness and to provide a uniform set of rules for how such heinous acts can be carried out within a VBAM campaign. These rules are NOT included to give players an excuse to wantonly murder their opponents for no good reason. Enough penalties exist to hopefully dissuade casual use of these rules. Again, the topic of slavery and genocide can be extremely awkward to deal with, more so for some than others, and it is up to the players to handle such situation responsibly and maturely.

6.4.2 Enslavement

Following a successful invasion of a world, the invaders oftentimes find their newly

conquered citizens less than receptive to occupation. Whenever a power successfully invades a planet that is not in a state of unrest (e.g., the system's Morale is 50% of Census or higher), the population is considered to be openly in defiance to the conquering empire. These Census refuse to operate Productivity, but the world is otherwise considered to be in good order. The planetary population will remain uncooperative until a number of ground units equal to the Census are deployed to the planet. Should the number of military units decrease below this number, the system will again cease production and once again refuse to work in service of the invaders.

Unproductive Census can be forced back to work by the application of military force. This 'hand on' military approach to the problem gives the unruly Census no other option but the toil from the new regime, usually in newly constructed work camps. One Census can be enslaved in this manner for every ground unit on the planet. Once enslaved, the Census will begin producing again, allowing one more Productivity to become utilized again. An entire planetary population can be forced back to work in this manner.

If one-quarter (25%) or more of a system's Census are enslaved, the maximum Morale of the system is decreased to no more than 50% of the current Census value (round fractions up). The Morale can be lowered below this value, but it cannot be increased beyond it so long as the number of enslaved Census points is equal to or greater than 25% of the population.

Each turn, during the Morale and System Loyalty step of the Update Asset phase, roll d10 for each enslaved Census, adding +1 to the roll per additional Enslaved Census at its same location. If the result is '10' or greater, the Census has rebelled and a slave revolt has occurred. This is handled in much the same way as normal Census rebellions. However, the partial integration of the slave population into the masters' society gives them an advantage to their attempt. When an Enslaved Census rebels, it receives a special 1d3 D Factor bonus

to the attack and *ignores* the defending ground unit's Defense value!

Should the invading empire decide to transport Census from the uncooperative world elsewhere their movement should be tracked, as they will remain Enslaved Census on any world they are moved to until they are finally freed from their forced servitude (e.g., returned to a friendly world or otherwise win their independence). Once moved, Enslaved Census cannot be mollified through military means, unlike the planetary population from which they were moved. Relocating Enslaved Census throughout an empire will quickly foment dissension and insurrection.

There are diplomatic repercussions to enslaving an enemy population. Any empire known to participate in the slave trade grants their enemies a +10% bonus to breaking treaties or declaring hostilities or war against their empire. This bonus is in addition to any other applicable bonuses. Additionally, if a power's Census are captured and enslaved by a rival power, the affected power receives a non-cumulative +50% modifier to all attempts to break treaties or declare against the rival power. This non-cumulative bonus will be in effect so long as the rival power maintains slaves originating from the worlds of the invaded power.



CM's Note: Enslavement is the only way that an empire can force some low-tech empires to operate Productivity. Despite this, enslavement of an enemy population is still not considered a friendly gesture.

If this rule is in effect, some player may decide to sell Census to own another in return for monetary or other reimbursement. When this occurs, both players are considered to be participating in the slave trade, so once their opponents learn of these actions (either by witnessing the transfer or finding alien slaves on a planet's surface) they will receive the bonuses to breaking/declaring against both powers.

6.4.3 Extermination

Extermination is often the first step towards genocide. The logistical elements required to be in place in order to begin the ground-based extermination of a planet are enormous. The exterminating empire must move significant manpower into the system before they can successfully carry out their bloody plans. However, the rewards of slaughtering the local population can sometimes entice the cruelest of warlords. The population may not be worth anything themselves, but the looting that follows the slaughter can help to fill imperial coffers. The most despicable of aliens are even known to use the extermination of Census as a means of procuring exotic cuisine for shipment back home.

In order to begin exterminating alien Census, an empire must have a number of ground units in the system with an Attrition value total equal to twice the Census value. For example, a system with 6 Census would require a total combined Attrition value of 12 before extermination orders could be carried out. Once this Attrition level is met, extermination can begin.

An empire is allowed to exterminate 1 enemy Census point per campaign turn. This action takes place during the Morale and System Loyalty step of the Update Asset phase of the turn sequence. Each Census point exterminated in this manner reduced the system's Census by 1 and generates a number of economic points equal to the original Census value times 10. These bonus points are not available on the turn that the order is given, but will be added to the point pool for use on the following turn.

Exterminating enemy Census is an even more heinous crime than simply enslaving them. As a result, any power that has had one or more of its Census exterminated by a rival power may automatically break any or all of their treaties with the rival power that committed the extermination. The power also receives a non-cumulative +75% modifier to all future attempts

to break treaties or declare hostilities/war against the rival power. Unlike the diplomatic modifier for enslaving a Census, the non-cumulative bonus for exterminating a Census never goes away and will be in effect for the rest of the campaign. As a result, exterminating a rival Census will create a situation where the affected power will never again trust or deal amicably with the power that butchered its civilians.

6.4.4 Genocide

Genocide of an entire species is something that is entirely possible during the course of a VBAM campaign. Genocide occurs when every Census belonging to a single faction or species is destroyed. This does not mean that their Census have been conquered; it means that each of the empire's Census units have been killed by means of planetary exterminations, orbital bombardment, and/or weapons of mass destruction and that none of their people are left in existence. Such callous disregard for intelligent life leaves little room for negotiation and will almost ensure that any power willing to commit the atrocity will be shunned or hated by all opposing powers.

Once an empire has committed an act of genocide against another, rival power, every other empire in the game that has knowledge of the act will be given the option of immediately and automatically breaking any and all treaties they have with the power. In the future, any other empires that learn of the empire's act of genocide will be presented the same option. In future diplomatic dealings, opposing powers will receive a non-cumulative +100% bonus to breaking treaties and declaring hostilities/war against the empire.

An exception to the genocide rules is that other empires can commit genocide against an empire that has previously committed genocide against another power without incurring any negative effects. In these cases these powers are simply destroying a threatening power (some would go so far as to say an evil power) from the face of the galaxy.

7.0 Advanced Construction and Planet Management Rules

Construction and planet management are two core aspects of any VBAM campaign. Players spend a great deal of time optimizing the efficiency of their systems, either to maximize the revenue that they generate or to optimize their usefulness as military construction centers.

The first half of this section details advanced construction rules, including rules covering new unit types, abilities, and facilities for use in your campaign. Rules are also included for the operation of alien units in your empire's navy, prototyping new military designs, and performing unit refits.

The second half covers advanced planet rules that deal with the operations or efficiency of planetary infrastructure. This covers contingencies from overpopulation and strip mining, to emergency production and terraforming.

7.1 Unit Special Abilities

These new unit special abilities are in addition to those previously compiled in the VBAM Campaign Guide (see CG 5.1.4.9 Space Unit Special Abilities) and extend a source designer's ability to customize an empire's forces, or model specific unit abilities.

Attack Boat

Units with the Attack Boat are small yet sturdy craft with limited endurance. These craft

are generally treated like small starships (referred to as attack boats or gunboats) that are incapable of performing strategic movement without the aid of a larger carrier vessel (see the Tender special ability). Attack Boats can only move between systems (or separate locations within the same system) if a dedicated Tender with available capacity is available to facilitate such movement. Note: If the 7.3. Heavy Basing Capacity rule is being used in the campaign, Attack Boats are allowed to occupy heavy basing capacity at a rate of 1 Attack Boat per point of basing.

In addition to their strategic movement limitations, Attack Boats are structurally weaker than traditional starships. Like satellites, Attack Boats do not cripple; once they have taken damage equal to their DV they are destroyed.

Attack Boats have a fractional command cost, typically 1/6. This fractional command cost indicates that six Attack Boats can be included in a squadron at a command cost of 1.

Biological

The Biological special ability denotes that a unit is either wholly or partially biological in origin. These "living ships" are oftentimes superior to their mechanical counterparts and carry with them many special abilities.

Biological units are capable of performing limited regeneration of their biological components given enough time. They are considered to possess a Self-Repair rating 1 greater than normal (minimum of 1). For example, a Biological unit with Self-Repair (2) would have an effective Self-Repair rating of 3. Independent repairs to damaged components may take some time, but it gives Biological craft a distinct advantage. All Self-Repair conducted by Biological units is free and does not cost the owning empire any economic points to perform!

This natural repair ability is counterbalanced by the Biological vessels' higher than normal repair costs. The cost to repair a Biological unit is twice that of normal, equal to 50% of the unit's construction cost (round up) instead of the standard 25%.

As part of its special self-repair abilities, Biological units are also allowed to “re-grow” lost or destroyed flights that they are capable of docking. To do so, the Biological unit must have available basing to house the new flights and unused Self-Repair points to spend on the flight regeneration. For each point of Self-Repair expended, the vessel can regenerate one flight unit at no cost to the owning player.

Scrapping Biological units provides no economic benefit to the owning player. Unlike mechanical ships, there is typically no economic way to reclaim the time and materials invested in the raising and operation of living starships.

Field Repair

The Field Repair special ability allows a unit to perform CG 3.7.14 Field Repair operations, but not any of the other abilities normally associated with CG 3.6.1.3 Military Supply Ships. The rate of construction remains unchanged (e.g., 1 economic point of repairs per point of Field Repair ability).

Interdictor

The Interdictor special ability represents that the unit is equipped with some special equipment that can prevent enemy units from escaping from combat. This equipment might be used to produce a blanket electronic jamming wave that disrupts faster-than-light drives, or it might generate a solar-mass equivalent gravitic disruption. No matter the method used to perform the interdiction, the effects remain the same. For each point of Interdictor rating, a unit may elect to increase the length of a scenario by 1 round. The effects of multiple Interdictor units are cumulative.

If an Interdictor unit is crippled, its interdiction effects are immediately nullified, immediately reducing the scenario length by the amount of the Interdictor unit had extended it. In situations where the crippling/destruction of an Interdictor unit reduces the scenario length to 0 or less, then the encounter scenario will end upon the conclusion of the current combat round.



CM's Note: Interdictor units have the possibility of being unbalancing and should be priced at a level commensurate with their abilities. Cheap attrition Interdictor units are expressly discouraged.

Mass Driver

Units with the *Mass Driver* special ability are equipped with an integrated weapon of mass destruction. As the name of this ability implies, it is assumed that the most common planet-eering weapon to be mounted on a ship will be a large mass accelerator weapon, but your setting will likely dictate the exact type of deadly bombardment weapon ships in your setting are equipped with.

During the Orbital Bombardment Phase, all non-crippled units with the Mass Driver ability may deploy one CG 3.6.4.3 Weapon of Mass Destruction per Mass Driver function. For example, a ship with Mass Driver (2) has 2 Mass Driver functions and would be able to deploy two weapons of mass destruction during the Orbital Bombardment Phase, whereas a Mass Driver (1) unit would only be able to deploy a single WMD. These WMDs are deployed and bombard the targeted planet immediately; they do not take a full turn of bombardment to take effect! This is in contrast to standard WMD use, which takes a full turn of orbital bombardment to have an appreciable effect. These WMDs are free, with their cost calculated into the unit's base maintenance cost.

Another advantage of Mass Driver equipped vessels is that 50% (round down) of all non-crippled Mass Driver units that survive a Defensive scenario at a planet or system location but are forced to disengage due to scenario length limitations are still allowed to perform their normal WMD bombardment of the planet! The massive damage resulting from simple “buzz bomb” attacks can have a very real impact on a planet.

Traditionally, only ships are equipped with Mass Drivers, and even then it is rare to find them mounted on a ship smaller than a full-fledged cruiser. However some bases or other

fixed defenses may also be equipped with such weapons in order to keep a subjugated empire in line through the force of fear. However, it is not advisable to allow fighters, shuttles, or other flight units to be equipped with Mass Drivers due to a potential for abuse.

Passengers

The Passengers special ability is used to denote those transport craft that are designed specifically to transport living cargo rather than bulk goods. Units with the Passengers ability are very closely related to Military Supply Ships (e.g., those units with the Supply special ability), but the Supply abilities of Passengers units is limited solely to population transport missions.

As with Supply units, each Passengers unit is rated as to its capabilities. The Passengers rating (listed in parentheses after the Passengers declaration) and is equivalent to a Supply rating of the same value for purposes of moving personnel ONLY. Empty Passengers capacity cannot be used to transport any other type of goods.

The primary mission of Passengers vessels is to move people from place to place. In most cases, this function falls under the purview of Colony and Transport Fleets. However, there are some cases where Passengers unit would be beneficial for thematic or rules-based reasons (such as if using 7.5 Personnel Recruitment). When using the Personnel Recruitment rules, Passengers units are more efficient at transporting personnel points. Passengers units are allowed to transport Census, and may carry them at the standard rate of 10 capacity per Census. In other words, it would take 10 Passengers (1) luxury liners to load and transport 1 Census. Passengers ships still cannot form new colonies however, as that requires the use of a dedicated Colony Fleet.

When not being used to transport personnel or Census, Passengers units should be considered to have the Trade ability. This way, idle Passengers units can be put to good use generating extra income for the owning

player (which logically they would be doing during peacetime).

Planetkiller

The Planetkiller special ability denotes a unit that is capable of destroying an entire planet! Such vessels are typically outlawed by all sentients due to their destructive potential. Planetkiller units can perform the special Planetary Destruction orbital bombardment mission.

Q-Ship

A Q-Ship is a militarized freighter that is designed to assist in anti-piracy actions by blending into convoys and taking greedy raiders by surprise. Q-Ships are outwardly indistinguishable from their civilian counterparts until such time as the ships reveal their true nature by arming its weapons or performing other actions inconsistent with a civilian freighter.

To utilize the Q-Ship unit special ability, the ship must be assigned as an Escort to a friendly Civilian Fleet. When assigned in this manner, the Q-Ship is considered to have a command cost half of normal (round down, minimum 1) for purposes of assembling squadrons and task forces. However the cost of Q-Ships does NOT count towards an empire's military fleet totals in a system for purposes of calculating the CG 3.6.2.2 Raiding chance, even if the Q-Ships are not assigned as Escorts.

Only starships (not flights, bases, or other fixed defenses) can be designated as Q-Ships.

Self-Repair

The Self-Repair special ability allows a unit to perform CG 3.7.14 Field Repair on itself (and itself *only*) at the standard rate for such repairs (e.g., 1 economic point of repairs per point of Self-Repair ability).

Organic starships almost always possess the Self-Repair ability to some degree. Advanced technological ships, too, are often equipped with highly developed damage control systems that can repair ships quickly.

Tender

Tenders are large transport vessels that are capable of docking, either internally or externally, small combat craft, including both small ships (Attack Boats) and Super Heavy Fighters. Tenders are rated as to their available basing capacity. The value within parentheses after the Tender notation is the number of craft the unit is capable of transporting at one time. To further illustrate this point, a vessel noted as being Tender (4) would be a Tender capable of simultaneously transporting 4 Attack Boats, 4 Super Heavy Fighters, or a combination of units of both types (but no more than 4 units total).

Attack Boats rely on Tenders for transport between star systems. Super Heavy Fighters' reliance on Tenders is less dramatic, as they can be transported via alternative means (such as standard carrier basing).

Transformative

Some empires, robotic and non-robotic alike, maintain military units that are designed to transform for operation both in space and on the ground. This ability allows for extreme tactical flexibility and adaptation to any engagement situation.

The most common Transformative units are flight units capable of acting as fighters in space or as large mechanized warriors on the ground. When participating in space combat, Transformative flights act largely as normal, with the exception that they can be used to perform Direct Assault missions in their transformed mode. To take advantage of this the option, the flight must forego fire during firing phases two and three. In exchange the unit will perform Direct Assault operations against an enemy unit (as described in CG 3.6.3.19 Capturing Ships and Other Units). The Direct Assault function rating of each Transformative flight is equal to its AF factor. Due to the size of Transformative flights, they may only board vessels with an unmodified DV of three times or more the flight's own DV statistic.

When assigned to ground combat duties, Transformative flights are treated exactly as ground units. These flights receive the Marine special ground unit ability, which allows them to attack from their transports (carriers) without the aid of Assault ships. For purposes of participating in ground combat, the flight unit has the following statistics: Attack equal to AF; Defense equal to DV; a D Factor die with a number of sides equal to AS; and Attrition of 1. The low Attrition statistic for Transformative flights owes itself to the disparity in size between the flights itself and the much larger number of troops and equipment that comprise the armies they are fighting. Because of this low Attrition, flights operating in ground combat mode will be destroyed with the first point of damage that breaches their defenses. Despite their ability to participate in ground combat, the basing of Transformative flights remains limited by a system's available basing capacity.

Example 1 – Transformative Flights as Boarding Units: A Transformative flight unit with DV 2, AS 1, and AF 3 could opt not to participate in firing phases two and three in order to perform a Direct Assault mission against an enemy ship with a DV of 6 or greater. Because the flight has an AF factor of 3*, the flight will score 3 points of Direct Assault attrition damage to the target ship.*

Example 2 – Transformative Flights as Ground Units: A Transformative flight unit with DV 2, AS 1, and AF 3 decides to participate in ground combat. As a ground unit, the flight will have statistics as follows: Attack: 3; Defense: 2; D Factor: D1; and Attrition: 1. The flight is also considered a Marine ground unit.*

Some ships and bases are also capable of performing transformations in battle. Their transformation abilities however are more limited than those possessed by flights. During the Assignments Phase, Transformative ships may elect to transform into their full combat mode. In full combat mode, the vessel has its

DV halved (round up) and its AS increased by 50% (round up). AF and all other ship statistics remain unaffected by the Transformation. If a Transformative unit has already taken enough attrition damage to cripple/destroy it at its lower transformed DV value, then the unit will NOT be allowed to transform. The vessel's crew would not put themselves in jeopardy by performing such a foolhardy action!

Example – Transformative Ship in Full Combat Mode: During the Assignments Phase, a Transformative Heavy Cruiser (DV 8, AS 7, AF 4) is ordered to transform into full combat mode. On that turn, the unit will have an effective DV of 4, but will receive a +4 bonus to its AS factor, increasing it to a total AS of 11.



CM's Note: The versatility that comes with Transformative units should be balanced carefully, usually with much higher construction and maintenance cost. This is especially true in the case of Transformative flight units that can serve in multiple roles within a fleet.

Although the rules do not specifically allow it, CMs may wish to allow Transformative ships and bases to perform as ground unit as well, if it is something that would normally be possible in the campaign's setting. If this is allowed, follow the same basic procedure for converting the unit's statistics, with the exception that the unit's Defense should be equal to its DV divided by 3 (round up) and its Attrition should be equal to its DV. Crippled Transformative ship ground units their Attrition halved (round down). A ship that takes any Attrition damage at all while serving as a ground combat unit is considered crippled.

7.2 Planetary Facilities and Installations

The following is a list of planetary facilities and installations that can be made available to players during the course of a campaign. This includes all current constructs that are built at planets or fixed defense locations, including both planetary and orbital facilities.

Of these installations, only the Supply Depot, Planetary Shipyard, and Orbital Shipyard are widely available. The availability of any other installation types is dependent on either your source materials or CM approval. Some of these may not be appropriate to your particular campaign, but all of them are described here for ease of reference. Full rules for these core facilities can be found in the VBAM Campaign Guide.

All listed costs are the default construction and maintenance costs for the units. Source materials often modify these values, so be sure to consult your source materials to confirm these units' costs for your campaign.

Note: Planetary facilities should not have their Attrition values factored into the Attrition point total when determining ownership of contested planets (see CG 3.6.5.7 Disruption of Planetary Economy).

7.2.1 Supply Depot

A supply depot is a planetary facility that provides vital logistical support to an empire. Without access to supply, fleets and armies will begin to suffer from the effects of being out of supply. Supply depots are purchased and transported like ground units and, when deployed and in supply, extend the supply range of an empire outward of their location.

Construction Cost: 15 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 1, D Factor: 0, Attrition: 7

7.2.2 Orbital Supply Depot

Some settings make heavy use of orbital supply depots, often eschewing the use of planetary supply depots completely. An orbital supply depot is a special base unit that has the Supply Depot special ability. These bases have their advantages and disadvantages compared to planetary depots, but their biggest disadvantage is that they can be drawn into combat and destroyed. They also cannot be moved from the location at which they are built.

Construction Cost: 12 economic points

Maintenance Cost: 1/1

Space Combat Stats: DV: 8, AS: 0, AF: 0, Basing: 0, Supply Depot, Supply (2)

7.2.3 Planetary Shipyard

Planetary shipyards allow a system to expand its planetary ship production capabilities. Additional dock spaces and construction capacity can be of major help if a power is investing heavily on atmospheric ship construction. Planetary shipyards can also produce non-atmospheric vessels, though the cost is much higher than if they were built at an orbital shipyard.

Construction Cost: 16 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 2, D Factor: 0, Attrition: 8

7.2.4 Orbital Shipyard

More often than not, orbital shipyards are referred to simply as "shipyards" since they are the most common shipyard type that will be used in a campaign. Orbital shipyards allow an empire to build both atmospheric and non-atmospheric ships equally without the limitations of a planetary shipyard.

Construction Cost: 20 economic points

Maintenance Cost: 2/1

Space Combat Stats: DV: 15, AS: 0, AF: 0, Basing: 0

7.2.5 Repair Dock

Repair docks are facilities that allow you to perform extensive repairs on all vessels docked there. They are cheaper than shipyards but cannot be used to build new ships. Repair docks can be used to perform routine unit repairs, upgrade existing vessels (see 7.8 Unit Refits), of activate/deactivate units (see CG 3.7.9 Deactivations and Activations). The construction capacity of a repair dock is half that of a normal shipyard (rounded up), with a number of available dock spaces equal to its location's Utilized Productivity statistic.

Construction Cost: 12 economic points

Maintenance Cost: 1/1

Space Combat Stats: DV: 9, AS: 0, AF: 0, Basing: 0

7.2.6 Listening Post

Many governments operate listening posts along their borders. These posts are used to gather vital intelligence information about fleet movements in their own system as well as to coordinate offensive Intel missions into surrounding systems. If used properly, listening posts can increase the security along an empire's borders.

Listening posts are treated like ground-based supply depots (see CG 3.6.1.2 Supply Depots) for purposes of transport and purchasing. Instead of providing supply benefits, Listening Posts instead provide

benefits to Intel operations performed from the system in which the listening post is located.

There are two benefits to establishing a listening post at a planet or system. Firstly, the system's maximum Defensive Intel is increased by 1 for each listening post in the system. This does not provide a free Intel bonus, only the ability to operate more Defensive Intel at the system than would normally be allowed. Secondly, a listening post can extend the range of a single Intel mission launched from that system by 1 jump lane. An Intel mission can only benefit from one Listening Post's range extension bonus at any time (e.g., the bonus is non-cumulative between multiple listening posts).

Construction Cost: 8 economic points

Maintenance Cost: 1/2

Ground Combat Stats: Attack: 0, Defense: 1, D Factor: 0, Attrition: 3

7.2.7 Embassy

Embassies are diplomatic facilities established on foreign soil that allow representatives of opposing political entities ready access to one another for purposes of political discourse. The ability to establish an embassy is automatically granted once two empires have entered into a Peace Treaty, but may be granted before that diplomatic level is reached by mutual consensus of the affected empires. Once these conditions are met, either empire is allowed to build an embassy at the other's Capital system. Embassies cost 15 economic points to purchase and cost 1 economic point per turn to maintain. An empire can build only one embassy at each foreign power's Capital.

Once established, embassies provide several advantages. First, each embassy generates 1 free Intel point per turn for diplomatic use ONLY. This point of diplomatic Intel can also only be used to influence relations involving the foreign power at which the embassy is located. For example, the Intel could be used to aid in signing, breaking, or declaring with/against the target power, or it can be used

to similarly affect that power's relations with other governments. A CM can be a major assisting factor in making the most use of such diplomatic Intel. The free Intel point generated by Embassies must be used on the turn that it is generated. It does not carry over from turn to turn and is a "use it or lose it" bonus.

In addition to serving as a nexus for diplomatic activities, an embassy acts as a safe haven from which an empire's spies can meet, plan, and scheme in relative safety. An embassy allows an empire to base a number of Intel points equal to the system's Census divided by 3 (round up). A foreign Capital with a Census of 10 would allow any embassy built there to house 4 Intel points, for example.

Finally, the presence of an embassy at a foreign Capital system makes it easier for an empire's spies to perform their missions. The difficulty of all Intel missions performed at a Capital system in which you have established an embassy is reduced by 1 (minimum difficulty of 1).

This cuts both ways however. The empire whose Capital you have built an embassy at receives the same bonus when performing Intel missions against your embassy! This empire can attempt to ferret information out of your operatives, or simply break into your embassy and steal the information if they are so bold. In other words, the owner of the Capital system can launch Espionage Intel missions against any of the embassies in his or her Capital system, with the missions' difficulty reduced by 1 (minimum 1)! If such an Espionage mission succeeds, the player will receive a random data report of the type specified in the mission. To illustrate this more fully, a successful Espionage: System mission performed against an opposing player's embassy would result in a random system from the embassy player's empire being selected (usually by the CM) and the information for said system given to the player that launched mission.

The existence of embassies on foreign worlds is public knowledge; their presence cannot be concealed.

Construction Cost: 15 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 1, D Factor: 0, Attrition: 4



CM's Note: Allowing the construction and use of embassies could be used as a means to introduce diplomatic problems for players. For example, an embassy bombing could inflame tensions, or make it difficult to add others to a treaty if one party doesn't like them. There might also be a chance that your diplomat will do something that your government does not approve of, such as sign a treaty without the player's knowledge or consent.

7.2.8 Military Institute

Military institutes are large martial campuses dedicated to training an empire's next generation of military leaders. These academies are prestigious and costly, but can help to foster a more competent and effective military.

A military institute costs 25 economic points and has a maintenance cost of 1/1. At the beginning of each turn after its initial purchase, a military institute will produce an amount of experience points (XP) equal to one-third the planet's Census (round up). These XP are placed into the empire's Military Experience Pool. They can then be used to purchase/upgrade elite officers or crew/army grade levels the same or subsequent campaign turns.

A planet may only support a single military institute. Building more than one institute at a single planetary location has no additional effect.

Construction Cost: 25 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 3, D Factor: 0, Attrition: 5

7.2.9 Uplift Centers

Uplift Centers are special education complexes built on alien homeworlds to assist

in the process of performing 6.1.5.2 Technological Uplift. Uplift Centers are built like bases (see CG 3.7.4 Base Construction), meaning that the owning player will have to setup a chain of Transport Fleets between sources of available construction capacity and the low tech NPE homeworld in order to first build the Uplift Centers. They cannot just be built and moved in like supply depots or listening posts. Once built, the Uplift Center is treated like an immobile ground unit that cannot be moved from its location of construction.

Once in place, each Uplift Center on a pre-Interstellar NPE homeworld will generate 1 tech investment point per turn which will be applied to the low tech NPE's tech advancement requirement. Additionally, all tech investment paid by the NPE is effectively doubled if its homeworld contains one or more Uplift Centers. For example, if the NPE were to pay 1 economic point into tech investment, the presence of an Uplift Center would double the amount to 2 tech investment.

Construction Cost: 30 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 0, D Factor: 0, Attrition: 10

7.2.10 Planetary Defense Shields

Planetary defense shields (PDS) protect a planet from the effects of orbital bombardment by projecting a protective force field across the inhabited regions of the planet. Until a PDS is knocked out, the planet will be largely shielded from the effects of bombardment. A functional PDS effectively halves (round down) the number or bombardment points produced by hostile orbiting fleets. The effects of multiple PDS facilities at a single location are not cumulative, but they do provide redundancy in the event that the orbiting fleet destroys the planet's primary PSD generator.

PDS are treated like ground-based Supply Depots (see CG 3.6.1.2 Supply Depots) for purposes of transport and purchasing.

Construction Cost: 20 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 1, D Factor: 0, Attrition: 10



CM's Note: You may also decide to make advanced planetary defense shields available. For example, an Advanced Planetary Defense Shield (PDS+) might reduce the number of bombardment points produced by orbiting hostile fleets by 75% (round down) instead of just 50%. You might also have Weak Planetary Defense Shields (PDS-) that only reduce the bombardment point total by 25%.

7.2.11 Starport

Starports are travel hubs built on a planet's surface that act as centers of commerce for one or more star systems. The number of people that pass through the shop-filled thoroughfares of your average starport is enough to boggle the mind. This constant ebb and flow of alien visitors invigorates the local economy through duties, tariffs, and docking fees.

Starports cost 30 economic points to build and cost 1 economic point per turn to maintain. Any system that contains a starport increases its system output by 50% for purposes of calculating commerce income. This bonus is not cumulative between multiple starports in the same system, so there is no reason to build more than one starport in a single star system.

Unfortunately, having an open port in a system does come have its disadvantages. Raider attacks become more common, increasing the base raiding chance by 10%. It is also easier for enemy agents to sneak on and off the planet. This results in the difficulty of all Intel missions in the starport's system

being performed at a difficulty 1 lower than normal (minimum difficulty of 1).

Construction Cost: 30 economic points

Maintenance Cost: 1/1

Ground Combat Stats: Attack: 0, Defense: 1, D Factor: 0, Attrition: 8

7.2.12 Supply Cache

A supply cache is a small, hidden installation containing vital food, weapons, replacement parts, and other supplies. Caches are of little use during peacetime, but in times of war blockaded worlds or fleets cutoff from traditional lines of supply may be forced to rely on supply caches for their own survival.

Supply caches are built and transported as a special cargo unit with a size rating of 10. Each supply cache is a limited, one-use supply depot that can fully resupply one planet or squadron at its location. Supply caches are "destroyed" after even a single use.

If more than one player attempts to use the same supply cache on a single turn, precedence goes to the empire that originally purchased the cache. Invading empires will not know of the presence of any supply caches in a system until after they have successfully conquered the system. When using cache's located in contested systems or systems under the control of another empire, fleets must survive all encounter scenarios generated on the turn before they can make use of a supply cache.

If using the CG 4.22 Stealth and Concealed Movement rules, detection of supply caches is not automatic. Far from it, finding a hidden supply cache can be quite difficult. To locate a supply cache, make a special detection roll separate from that to locate any other enemy fleets or forces in the system. The supply cache gains a -50% bonus to its chance of being detected. Players that built or transported the supply cache to its current location will always know where it is located, as will any other powers that possess this knowledge. This includes both allies that have been informed of supply cache locations and opposing powers

that have used Intel to steal such information (though the latter would require CM intervention).

Construction Cost: 10 economic points
Maintenance Cost: None

7.3 Heavy Basing Capacity

The *Empire Rising* source book introduced the concept of Heavy Basing Capacity. Under the standard rules, units are given a single basing capacity statistic (often referred to simply as *basing*), which is equal to the number of flights the unit can operate. If Heavy Basing Capacity is used, basing is broken down into two types: Standard Basing Capacity (BS-s) and Heavy Basing Capacity (BS-h). Both types of basing are governed by the standard basing rules as outlined in the Campaign Guide. For that matter, standard basing operates exactly like traditional basing. All types of flights can be based from standard basing.

Heavy basing on the other hand is reserved for use by larger craft. Shuttles, assault shuttles, breaching pods, and super-heavy fighters are the only flight types that can make use of heavy basing. Shuttles, assault shuttles, and breaching pods (but not super-heavy fighters) may also make use of standard basing, but heavy basing is designed explicitly for their use. Attack Boats are also allowed to use heavy basing, with 1 Attack Boat capable of being based per point of heavy basing capacity.

7.4 Operating Alien Units

During the course of a campaign it is possible for one empire to gain ownership of

another power's fleet assets. Some of the possible ways this could happen are through marine boarding operations in which an enemy ship is captured, by signing specific naval requisition treaties or by capturing ships under construction or in mothballs at alien shipyards.

Upon capture, the new owners of alien units are unable to make actual use of the craft. Alien ships are completely foreign in design and execution and it takes considerable effort to convert their equipment to the point that the owner's crews can control them with any degree of proficiency.

7.4.1 Converting Alien Units for Use

Extensive refits are necessary to make alien craft useable by their new owners. The original alien systems must be replaced by native hardware and a way must be found to integrate the two distinctly different technologies. This requires major alterations to the unit's design. New crew interfaces are also required to make the ship accessible for native crews of the new owner's empire.

The cost to convert non-flight alien units is calculated the same way as in CG 3.7.10 Repairs. In essence the "repairs" being made to the unit include the alterations necessary to make it useable by the power's navy. If the alien unit has already been crippled, then a separate repair job must be performed to return the ship to undamaged status before conversion can take place. Repairing the ship's damage *doesn't* cover the costs of converting the alien unit! They must be paid for separately.

As flights do not require repairs, the cost to convert alien flights for another player's use is a fixed 1 economic point per flight.

Captured but unconverted alien ships and bases (but no other type of unit) can still be used by the new owning player, and even participate in combat, but they function as if they are piloted by green crews until the conversion process is complete regardless of the crew's experience level.

7.4.2 Completing Alien Units under Construction

When using the CG 4.10 Extended Construction Time optional rules, it becomes possible for a power to capture partially constructed alien units following an assault on an enemy shipyard facility. The invasion of the system, and subsequent capture of the shipyard, will cause all construction in the yards to be halted. Because space combat occurs before the Construction Completion Phase, no progress will be made at the shipyard on the turn that it is invaded.

It is now up to the invading power to determine if it wishes to scrap the alien units or else complete their construction. Scrapping alien units uses no special rules and are scrapped as per CG 3.7.13 Scrapping.

In order to finish construction on the alien units and ready them for the new power's own use, a cost equal to 25% of the base cost (round up) of the unit is required. Ship construction will proceed from where it left off, with any previously completed turns of construction counting towards the required total production time. However it will take twice as long for the unit to be completed due to the alien technology involved.

If an alien ship is completed in this manner it does not need to be converted as per 7.4.1 Converting Alien Units for Use.

Example: An alien light cruiser that cost 5 economic points to purchase is captured after one turn of construction has been completed. Remember that construction time is equal construction cost divided by 2, so the light cruiser requires 3 turns of extended construction time to complete. It will cost the invading power 2 economic points to initiate construction completion on the light cruiser.

1 turn of construction has been completed and normally 2 more turns would be required. However, since this is an alien ship design, the remaining construction time is doubled. It will take 4 turns of construction

time before this light cruiser will be ready for service.

7.4.3 Maintaining Alien Units

Once an alien unit has been captured, purchased, or otherwise acquired, the owning power will be responsible for maintaining them. Maintaining alien units can be a very difficult and intensive process, making the operation of alien units cost prohibitive for some empires. In some circumstances though, the benefits might outweigh the costs.

All captured alien designs cost 1 economic point more than normal to maintain. An alien ship with a normal maintenance cost of 2/4 would be increased to 3/4 when in foreign service.

If the alien unit is being operated under the terms of a Naval Appropriation Treaty with a maintenance contract clause, this economic penalty is ignored (see 6.2 New Diplomatic States). It is assumed that the party providing the maintenance contract is keeping the ship up and running without the need of additional economic investment by your empire.

Example: Race A captures one of Race B's heavy cruisers. The heavy cruiser costs 9 economic points to build and has a maintenance cost of 2/3. The ship has been crippled in battle and its crew surrendered to Race A's forces. Race A chooses to convert the ship for their own use. It costs 3 economic points to repair the ship, changing its status from crippled to undamaged, and an additional 3 economic points to complete the conversion process. The ship is now ready for Race A's use.

The maintenance cost of the heavy cruiser is normally 2/3 but, since it is now being operated by another alien species (Race A), the maintenance cost is increased by 1. The heavy cruiser now has a maintenance cost of 3/3 in Race A's service.

7.4.4 Reverse Engineering Alien Units

It is possible to reverse engineer alien units in hopes of gaining knowledge of some of the fundamental technical secrets used in their construction. Reverse engineering projects are never guaranteed success, but the chance of a major tech increase can make it an attractive option.

Before reverse engineering can take place, the alien unit must be moved to a friendly shipyard. Once there, the power can record a reverse engineering order in its turn orders on a subsequent turn. The alien unit must occupy one dock space in the shipyard on the turn that it is being broken down for study. The reverse engineering order will be resolved during the Construction Completion Phase of the turn on which it was given.

In its simplest form, determine the difference between your empire's current Tech Year and the In-Service Date of the captured alien unit. Take the unit's In-Service Date and subtract the capturing power's Tech Year to find the reverse engineering target number. Roll a single d10 die and check it against this target number. If the die result is equal to or less than this number, the reverse engineering attempt has succeeded and the capturing empire will receive 4d6 points of bonus tech investment. Failed attempts result in no tech bonus. Obviously if the reverse engineering target number is less than or equal to 0, there is no chance of earning any kind of tech bonus from disassembling the unit.

The alien unit is 'destroyed' after the reverse engineering attempt is made.

7.4.4.1 Reverse Engineering and Optional Tech Systems

Campaigns that use a different method for tracking technology development can still use the basic mechanics outlined in 7.4.4 Reverse Engineering Alien Units. For example, when using the 8.2 Tech Levels players can evaluate the relative Tech Levels of two empires

to determine whether or not bonus tech investment is earned from the reverse engineering attempt.

To illustrate this possible application, an empire with a Tech Level of 6 captures a Tech Level 10 alien unit and decides to reverse engineer it. Subtracting 6 from 10 gives us a target number of 4 for our d10 reverse engineering check roll. On a roll of 4 or less, the empire would succeed and receive 4d6 points of bonus tech investment.

This system will not work perfectly with all technology systems, but it should give you a starting point for determining the effects of reverse engineering under your own tech system.

7.5 Personnel Recruitment

In many settings the number of new units an empire can field is limited by its ability to recruit or conscript members of the local population. Under this rule, systems with poor Morale will be less likely to generate new recruits.

If this optional rule is used, all units require personnel points to be manned/formed. Ground units are especially affected, as they rely heavily on brute manpower, more so than space units. Each system in an empire will generate a number of personnel points equal to the system's Morale times Census. These personnel points are not cumulative and do not carry over from turn to turn. If unused on the turn they are generated, these personnel points are lost.

Personnel points are spent to activate new units. For space units the ratio of personnel points to construction points needed to fully crew the unit is 1 personnel point per 1 construction point (1:1). Ground units however, being more personnel intensive, require 2 personnel points per 1 construction point (2:1). Fixed defense

and planetary installations (bases, defsats, mines, shipyards, supply depots, etc.) do not require personnel points to activate. The cost of personnel is calculated in their construction costs.

When purchasing ground units, personnel points must be allocated to the unit on the turn that the unit is purchased. With space units, personnel points may be applied during any point in the construction process. If construction on a space unit is completed and personnel units have not yet been spent to activate the unit, then the unit is immediately deactivated and placed into mothballs.

A system can still build new space units (but not ground units) even if it does not have the personnel recruitment level to man them. Once completed, these units will be placed in mothballs until such time that the empire has the personnel available to crew the unit.

Performing repairs (including ground unit attrition replenishment) also requires the investment of personnel points. Damaged units require 1 additional personnel point per 1 economic point spent on repairs. A unit cannot be repaired until enough personnel points are available to cover this extra crewing requirement.

7.5.1 Recruitment Quotas

A system can increase its available personnel points in a system by enacting recruitment quotas. Recruitment quotas temporarily increase a system's Morale statistic for purposes of personnel points only. In order to activate recruitment quotas, a player must spend 1 economic point per point of temporary Morale improvement. Please note that Morale cannot be increased beyond Census in this manner.

Recruitment quotas take effect during the Morale and System Loyalty Phase of the turn sequence and the additional personnel points will be available on the turn after the recruitment quotas are initiated, not on the same turn.

Impressment and conscription, which recruitment quotas largely represent, are not often popular with the populations they affect. As a result, on the turn that recruitment quotas are initiated in a system, a special Morale check is made against the system so affected. The target for the Morale check is equal to the temporary Morale increase (e.g., the number of economic points spent on the quotas order). If the Morale check attempt rolls equal to or less than this target number, reduce the system's Morale by 1.

7.5.2 Reduced Crew Grades

Personnel are at a premium during wartime and empires are sometimes forced to spread their personnel thinly across their entire forces in order to keep pace with combat losses. Players can elect to spend fewer personnel points than normally required to activate new units, but the quality of these units will be noticeably affected by the lack of well-trained manpower.

If 50% (round up) of the normal personnel point requirement is paid, a unit can be activated with a grade level of Novice. If 25% (round up) of the normal personnel point requirement is paid, a unit can be activated with a grade level of Green.

These reduced crew grades will remain in effect until the unit has become battle hardened or been otherwise integrated with other, more experience personnel. Players have the option of returning ships and flights with below average crew grades to a friendly system to 'upgrade' their crew to Regular status. The unit must remain in the target system for the entire campaign turn; it cannot perform any movement, embark/debark units or equipment, etc. The only order that can be performed is the crew switchover. The personnel point cost to upgrade the crew to normal is equal to the unit's construction cost. Essentially, the ship is being completely recreated at the standard, full cost of doing so!

7.5.3 Mothballing

When space units are mothballed, their crews are reassigned elsewhere. This has the effect of canceling out the effects of any preexisting crew grade level, but it also has the effect of returning the unit to an uncrewed state. In order to reactivate a mothballed unit, a player must pay the normal maintenance cost as well as allocate the necessary personnel points to restore crew to the vessel. If one or both of these requirements is not met, the reactivation order will fail and the unit will remain mothballed.

7.5.4 Transferring Personnel Points

It is possible for an empire to transfer personnel points from one planet to another. This action can be performed in one of two ways. The first, and by far the most practical, is to establish a chain of Transport Fleets in each system from the source and destination systems, as is done when performing CG 3.7.4 Base Construction. Once established, this Transport Fleet chain will allow an empire to move up to 20 personnel points from one system to the other. If using the CG 4.14 The Convoy System rules each convoy or chain of convoys is allowed to transport 5 personnel points per convoy point.

The other method for transferring personnel points is to use Transport Fleets to manually transport personnel points using an empire's military freighters. Supply ships can transport 2 personnel points per point of Supply rating used in this manner. Vessels with the Passengers special ability can also be used to transport personnel points, and in fact they are far more efficient in doing so. Each point of Passengers rating allows the unit to transport 4 personnel points. Personnel moved by military freighter craft are loaded/unloaded during CG 3.6.5.6 Landings and Deployment.

7.6 Extended Base Construction Rules

CG 4.10 Extended Construction Rules provided rules for extended construction times for ships and other basic units. However in many settings it will also be appropriate for bases to likewise have their construction times limited in order to recognize that most base types cannot be constructed during a single one month window. As such, this rule is considered a companion to CG 4.10, but need not be used if players do not wish to.

Under the Extended Base Construction rules, the construction of bases is limited by the amount of Utilized Productivity in the system where the base is to be built. Rather than dividing by a fixed value to determine the construction time for a unit (as is done in CG 4.10), divide the construction cost of the base by the system's Utilized Productivity statistic, rounding fractions up. This is the number of turns it will take to build the base. This extended construction time requirement applies equally to full starbases, shipyards, satellites, and other fixed defenses.

If performing remote base construction, each pair of Transport Fleets used to aid in the construction efforts will transfer the equivalent of 1 Utilized Productivity (up to the assisting system's total) for purposes of calculating base construction times. Add this imported Productivity to the system's own, native Utilized Productivity value (if any) to determine the final, modified Utilized Productivity that will be used to determine the base's construction time. The lending system does not lose this Utilized Productivity, it is simply lending some of its construction resources to this other system.

The Transport Fleets must remain in place throughout the base's construction in order for the Utilized Productivity bonus to remain in effect. Should something happen to

affect the transfer of Utilized Productivity, either because of Transport Fleets movement, destruction of the Transport Fleets, or disruption of the lending system's economy, then the base construction time should be recalculated to determine the new construction time for the base.

Example 1: A base with a construction cost of 17 is built in a system with 6 Utilized Productivity. It will then take $17 / 6$ (RU) = 3 turns to complete construction of the base.

Example 2: A base with a construction cost of 17 is built in a system with 1 Utilized Productivity. A total of four Transport Fleets are being used to transfer economic points and Utilized Productivity from two adjacent systems with Utilized Productivity values of 3 and 2 respectively. This provides a modified Utilized Productivity value of 3 (1 from the system, and 1 each from the two pairs of Transport Fleets). It will take $17 / 3$ (RU) = 6 turns to complete construction of the base.



been clearly outlined and the construction cost determined, the player must indicate their intention to create the new prototype in their turn orders. The first ship or base of a class will cost twice its normal construction cost. After construction is completed on the prototype, roll on the Prototype Chart and follow the resulting instructions.

For example, a player has decided to build a new starship with an original construction cost of 4, which would have a construction cost of 8 economic points to prototype. If the CG 4.10 Extended Construction Time rules are in effect (or some CM approved variation thereof), the ship will be completed in 4 turns time. At the end of this process, the player rolls on the Prototype Chart and yields a '5'. This delays the launch of the unit by one more turn. It also forces the next three models to enter production at a higher cost, but the design was ultimately a success and will be able to enter service in the player's fleet. This reflects the difficulties of getting the new design through the manufacturing process and finishing with a viable, working craft.

7.7 Prototyping

During a campaign, players may want to develop and field new unit types. This will be especially important when players realize that they need a new vessel type or want to try demonstrating a new technology. In order for a player to bring a new unit online, they must first create a prototype of that unit.

7.7.1 Ship and Fixed Defense Prototypes

Before the starship prototyping process can begin, the prototype vessel's statistics must be created. The player can design the new unit, but more likely it will be created by the CM or through some other unit conversion process. Any new designs should be subject to CM approval (as applicable). Once the design has

Starship Prototype Chart (Roll d10)

Result	Effect
1	Trial Runs completed successfully, ship may immediately enter service at its normal construction cost.
2	Prototype has completed its trial run and may enter production. The next two units of its type must be built at an additional 50% cost (rounded up) before the design can enter normal service.
3	Prototype has completed its trial run and may enter production. The next three units of its type must be built at an additional 50% cost (rounded up) before the design can enter normal service.
4	Prototype has completed its trial run and may enter production. The next four units of its type must be built at an additional 50% cost (rounded up) before the design can enter normal service.
5	The ship suffers a critical failure that increases the prototype's construction time by one additional turn, after which it will enter service. The next three units of its type must be built at an additional 50% cost (rounded up) before the design can enter normal service.
6	The ship suffers a critical failure that increases the prototype's construction time by two additional turns, after which it will enter service. The next four units of its type must be built at an additional 50% cost before the design can enter normal service.
7	The vessel failed its initial test cruises through the system and was towed back to the shipyard. Another turn of construction and investment of economic points equal to 25% of the prototype's normal construction cost (rounded up) must be spent to correct the error before the ship can return to its shakedown cruiser. A second roll on this chart will be required once modifications to the prototype are complete.
8	Shutdown of several key systems indicates the vessel has a key design flaw. Another two turns of shipyard time and an additional investment of economic points equal to 50% of the prototype's normal construction cost (rounded up) are needed to complete the prototype. Once complete, the prototype must make another roll on the prototype.
9	Shutdown of several key systems indicates the vessel has a key design flaw. Another four turns of shipyard time and an additional investment of economic points equal to 50% of the prototype's normal construction cost (rounded up) are needed to complete the prototype. Once complete, the prototype must make another roll on the Prototype Chart.
10	Catastrophic failure of the starship causes the vessel to fail its prototype run. The prototype is lost (destroyed) and must be rebuilt again at twice the vessel's normal construction to restart the prototyping process. Construction time for this second prototype is increased by four turns and an additional investment of economic points equal to 50% the prototype's normal construction cost (rounded up) are needed to attempt a rebuild of the design. Once this is complete another roll on the Prototype Chart must be made.

Flight Prototype Chart (Roll d10)

Result	Effect
1	Trial Runs completed successfully. The flight may enter production at normal cost
2	Prototype fighter has completed its test flights well, and may enter production. The next two flights of its type must be built for an additional 50% cost before entering service.
3	Prototype flight has completed its trial run in good order and may enter production. The next three flights of its type may be built for an additional 50% cost before entering service.
4	Prototype has completed its test flights without major occurrence, and can enter production. The next four units of its type may be built for an additional 50% cost before entering service.
5	The flight suffers a critical failure that will force the prototype into one more turn of production time at which time it may enter service. The next three flights of its type may be built for an additional twice the normal cost before entering service.
6	The flight suffers a critical failure that will force the prototype into two more turns of production time at which time it may enter service. The next four flights of its type may be built for an additional twice the normal cost before entering service.
7	The flight failed its initial test flights, and was recovered by service vessels. Another turn and 100% more points (rounded up) must be spent to correct the error before rolling on this chart again.
8	Shutdown of several key systems indicates the flight has a key design flaw. Another two turns of shipyard time and twice the normal cost are needed to complete the prototype. Once this is complete another roll on the Prototype Chart must be made.
9	Shutdown of several key systems indicates the flight has a key design flaw. Another four turns of shipyard time and three times the normal cost are needed to complete the prototype. Once this is complete another roll on the Prototype Chart must be made.
10	Catastrophic failure of the flight causes it to fail its test flights. The flight is lost and must be rebuilt again at twice the normal cost of the vessel. Another four turns of shipyard time and an additional 200% cost are needed to attempt a rebuild of the design. Once this is complete another roll on the Prototype Chart must be made.

Please note that no ship may be mass-produced until it has passed the prototyping phase and completed all requirements for deployment. Multiple prototypes may be constructed at the same time, though each prototype pays the same higher cost of construction. Use the best Prototype Chart result among the prototypes of a single class. It is often in an empire's best interests to build multiple prototypes of a single class design in hopes that at least one of them will result in a successful production model.

Vessels whose costs are increased because of a Prototype Chart result don't receive an increase in their construction times if the Extended Construction Time rules are in play.

All fixed defenses (bases, satellites, and mines) are prototyped in the same manner as ships.

7.7.2 Flight Prototypes

Flights, while significantly less expensive to prototype, may still be prone to development problems. Each new flight unit type must be prototyped before deployment in the same manner as ships and bases are prototyped. The Prototype Chart used to evaluate the effects of flight prototyping is different however.

7.8 Unit Refits

An empire will often invest resources in performing sweeping system refits to modernize existing designs in order to maintain their relevancy. Two methods are included for performing unit refits and creating design variants.

7.8.1 Option 1: Progressive Revision Method

Several unit classes listed in the source materials underwent fairly massive refits during their service life. Almost every ship or base receives periodic refits to integrate new

technologies, but the refits listed in the source materials were particularly important and represented massive upgrades to the base hull's performance. Additionally, several hull types received such major modifications as a result of extensive refits so as to be considered variant hulls. Unlike traditional refits, variants are significantly altered from the configuration of their antecedent and are considered a separate unit class from the base hull.

Looking at your source materials, units with refits available have their name followed by a '(Rx)' designation, where x is the revision number of the unit in question. '(R1)' is the original version of the ship, '(R2)' is the first major refit ("Revision #2"), and so on.

Once a refit is made available, typically as the result of tech advancement, the player has the option of producing either model of the class as new construction units for the rest of the campaign. The player may also elect to bring his or her units back to base to apply the refit.

The cost of refitting a unit is equal to either 25% of the base cost of the refit version the unit is being converted into (rounding all fractions up) or the difference in cost between the two refit models plus 1, whichever is higher.

If using the CG 4.10 Extended Construction Time optional rule, refits are subject to extended construction times in the same way as new construction, with the time spent in dock being determined by the cost of the refit instead of the base unit cost (which is typically used for calculating extended construction times).

In order for the refits to be performed, the unit(s) must be at a location capable of their original construction. In most cases this would be an orbital or planetary shipyard, but atmospheric ships can be refitted at any system with the available output and dock spaces (provided by local Productivity) to perform the refit. One dock space must be available at the ship's location in order for it to undergo the refit process (e.g., there must be available space in the yards for the ship to be brought in for the refits).

Once the refit is complete, the existing ship will be considered a member of the refit class for all intents and purposes, including but not limited to maintenance costs, combat statistics, and orbital bombardment.

Refits are only available for those units that have clearly marked major refit versions listed in the source materials. Any classes without available refit models listed cannot be refitted.

Example: After developing medium plasma cannons (Tech Year: 1974), the Circasians began upgrading their Moshesta fleet from the Alpha (R1) model into the Beta (R2) model. The cost of the Moshesta Frigate (Beta) is 4 economic points. Therefore it will take 1 economic point and one turn in the shipyards to convert a Moshesta-Alpha (R1) into a Moshesta-Beta (R2).

7.8.1.1 Variant Hulls

Variants are modified versions of a hull that have received substantial enough changes to warrant them being classified as a wholly unique design type rather than a simple variable of their base hull. Variants are considered separate designs from their base hull, but conversion from one variant type to another is still possible.

Each variant is noted as to its base hull type. Units can be converted into another variant of the same base hull type using the same process outlined above for traditional refits, but the cost to do so is either 50% of the unit's base cost (rounding all fractional costs up) or the difference in cost between the two variants plus 1, whichever is higher. Any variant (including the original class) using the same base hull can be converted into any of the available variants of the hull (including the base hull).

Example 1: The Kolanis Cruiser and Kolanis-V Carrier are of the same base hull type, as indicated in their ship descriptions. The Kolanis-V Carrier is itself a variant of the Kolanis Cruiser, which is the base hull for the class. The Circasian player decides that

he needs more fighter support in his fleets, so decides to convert an existing Kolanis Cruiser into a Kolanis-V Carrier. The Kolanis-V costs 7 economic points to build, so the normal refit cost would be 2 economic points. However this is not a normal refit but instead a conversion of the ship from one class variant to another; therefore the cost of the refit is doubled. This gives a "refit" (conversion) cost of 4 economic points to change the Kolanis Cruiser into a Kolanis-V Carrier. With the CG 4.10 Extended Construction rules in effect, it will take 2 turns for the variant conversion to be completed.

Example 2: The war is over and the Circasian player no longer needs his Kolanis-V Carriers. The choice is made to convert these carriers back into standard Kolanis Cruisers, an applicable choice since it is the Kolanis-V Carriers' base hull type. The cost of a Kolanis Cruiser is 7 economic points, so it will cost 4 economic points to convert each Kolanis-V back into a standard Kolanis. With the CG 4.10 Extended Construction rules in effect, it will take 2 turns for the variant conversion to be completed.

7.8.2 Option 2: Linear Refit Method

Some vessels may reach a point where the technology of their peers has surpassed their own. A player may decide to upgrade these vessels in order to keep them in service, using more modern equipment to achieve parity with newer starship designs.

To refit a starship or base, designate which class is to undergo the refit. This vessel or base must be brought to active status before it can be refitted. The vessel must have already completed prototyping and have one operational vessel of the class in the empire's fleet. One such vessel must be moved to a shipyard much in the same way a ship undergoing trial runs does (see 7.7 Prototypes). Once at the shipyard, it will occupy one dock space while the refit procedures are performed.

The economic cost of a refit is equal to 1 plus the difference between the cost of the original unit and the refit model. The first step in the refit process is to move one ship to be refitted to a shipyard slot. The first refit will be performed at twice the normal cost. This is to reflect the difficult nature of converting the first model to the new design. The ship is required to spend a number of turns in the shipyard being refitted equal to the amount of economic points spent on the refit. Therefore a ship that costs 3 economic points to upgrade will take three turns to complete. No other ship of the same base ship class may be refitted until the first one is completed, after which refits may be conducted at the normal cost to do so.

Please note that refitting a class creates a design variant of that class, which is based on the same hull design. All variants in a class series will be designated by adding an alphanumeric character after the original hull's name to distinguish it from past and future variants of the hull. So a refitted Pacific class cruiser becomes a Pacific A cruiser. The method used to identify variant classes may be changed by the setting or CM preference, of course. For example you may want to use Greek letters or Roman numerals to differentiate your variants.

7.9 Unit Availability

Some classes of units carry a greater economic or logistical cost to build or maintain within an empire's fleet. Large battleships and dreadnoughts cost more to build than cruisers and often have higher maintenance. Realistically, few empires would spend their full military construction budgets on battleships. As a result, applying a unit availability rating to each unit type in your source materials can force players to diversify their fleet and produce more organic order of battle.

There are four different availability levels in Victory by Any Means: Common, Uncommon, Rare, and Very Rare.

Generally speaking, most large battlecruisers (BC), battleships (BB), or dreadnoughts (DN) will fall into the Uncommon availability category. Extremely large battleships, such as super-dreadnoughts (SD), and technology demonstration hulls are typically Rare units. Unsurprisingly, Very Rare units are quite rare and are typically restricted to one-of-a-kind units, or those whose cost is so great that their construction is a major imperial undertaking.

Option 1: Availability Percentages

Under this option, each availability level is assigned a percentage value that designates the total amount of the empire's total military forces (by economic point cost) that units of that availability level can fill. Common units have no limitation and players can purchase as many of them as they desire. Uncommon units can only comprise 33% of the empire's total military forces, Rare 10%, and Very Rare 5%.

To determine the economic cap for each availability type, multiply the availability percentage times the current total economic cost of the empire's military forces (including both ground and naval units). Round any fractions up.

Example: A small empire with 200 economic points worth of military infrastructure could operate an unlimited number of Common units, 66 or less points of Uncommon units, 20 or less points of Rare units, and 10 or less points of Very Rare units.



CM's Note: Calculating the total military strength of your players' empires might become tedious if the empires become too large. It is recommended that you track the cost of the units along with normal maintenance tracking to aid in calculating this cost. Spreadsheets and other electronic utilities can also be very helpful in administering unit availability ratios.

Option 2: Construction Quotas

Similar to Option 1, this option implements availability on a per turn basis, as applied to new unit construction. Each turn, total the number of economic points being spent on all new unit construction (including both space and ground units). A maximum of 33% of this total can be used to purchase Uncommon units, 10% on Rare units, and 5% on Very Rare units (round up in all cases). Players can purchase as many Common units as desired.

Players are allowed to purchase one (1) unit of any given availability each turn regardless of the amount of economic points allocated to the availability level during based on the total points spent on new unit construction. This allows an empire to continue to build minimal numbers of rarer units even on turns that it does not invest heavily on new unit construction.

Example: A small empire plans on spending 38 economic points on new unit construction on the current turn. Up to 38 points can be spent on Common units, 13 points on Uncommon units, 4 points on Rare units, and 2 points on Very Rare units. The empire wishes to build a new dreadnought hull, which has a cost of 9 and availability level of Rare. The empire does not have enough Rare points available in its unit construction budget to build the dreadnought, but since at least one ship of each availability level can be built every turn, the dreadnought can still be produced, though only one can be built on the current turn.

Option 3: Economic Penalties

A simpler option for handling varying availability levels is to apply specific economic and maintenance penalties to ships based on their availability level. Use the following economic penalties for each availability level:

Common: No economic penalties.

Uncommon: +10% economic cost (round up)

Rare: +10% economic cost (round up), +1 maintenance cost penalty

Very Rare: +20% economic cost (round up), +1 maintenance cost penalty

Example: An empire is building a new, Rare dreadnought hull which normally costs 9 economic points to build and has a maintenance cost of 2/2. Because it is a Rare unit, the cost of the unit is increased by 10% (round up), increasing the cost of the unit to 10 economic points. The maintenance cost of the unit also increases by +1 to 3/2, as compared to the original 2/2 maintenance cost.



CM's Note: Economic penalties are easier to calculate and control, possibly making them a more desirable solution. However, it does not in and of itself help to stop players from building fleets comprised entirely of rare units. If you have many mathematically inclined players that feel compelled to min/max their forces based on cost effectiveness, this option might keep them from purchasing rarer units as they will not necessarily be quite as cost-effective.

7.10 Overpopulation

Under the normal rules, systems are not able to support more Census than their Capacity under any circumstances. However, under the Overpopulation option rule, systems are allowed to support up to 50% more Census (round down), but in so doing they run the risk of riots and malcontent among the system population.

Each turn that a system is overpopulated, make a special Morale check. The target value is equal to the number of Census minus Carrying Capacity. If the Morale check is activated, then the system Morale drops by 1.

Overpopulated worlds will suffer heavy civilian casualties should it fall into full rebellion. If an overpopulated system rebels, reduce its Census by 1. It can only be hoped that the rebellion can be contained lest the tragedy be repeated in the future.



CM's Note: When used in conjunction with the 9.1 Rebellion rules, players will need to carefully monitor their planetary populations to avoid rioting and violent outbreaks. It is possible for an empire to fall beneath its own weight if too many of its core worlds become grossly overpopulated.

7.11 Strip Mining

Normally, a power will establish long-term mining ventures in the systems it controls. However some empires are not quite as conservative in their exploitation of resources. These more reckless powers desire faster returns on investment despite any damage it might cause to the local environment. Rather than using conventional mining methods to harvest the system's native resources, some powers will resort to strip mining – destroying a world's ecology and long-term worth in return for short-term gains.

Any power may order a system to begin strip mining operations in the empire's turn orders. Systems being strip mined have their effective RAW values increased by 1. This is a temporary bonus only; it is not permanent. Rapid exploitation will inevitably lead to the wasteful depletion of natural resources. Each turn that a system performs strip mining, roll d10; on a roll of '10', the system's permanent RAW value is reduced by 1 (minimum 0). It is possible to reduce a system's RAW value to 0 as a result of strip mining. Any system with a RAW value of 0 cannot be strip mined, nor will it ever again be a source of productive output.

The use of strip mining by an empire is typically restricted to worlds of limited strategic

usefulness, or else is used only in times of desperation. The threat of permanently depleting one's major RAW sources should be enough of a deterrent to keep most players from abusing these rules.

7.12 Productivity Liquidation

During the course of a campaign, a player may decide to liquidate some of his industrial assets. These assets are represented as Productivity points in the VBAM Campaign System. Each system is allowed to sell off (liquidate) 1 Productivity point per campaign turn. Each Productivity point liquidated in this manner returns an amount of economic points equal to 50% of its purchase price. In other words, multiply the Productivity level of the system by 5 and the result will be the number of economic points the empire will receive as a result of the Productivity liquidation. Once the Productivity point is liquidated, reduce the system's Productivity statistic by 1. An empire must be in control of a system (e.g., holds a majority of the productive regions of the planet, as outlined in CG 3.6.5.7 Disruption of Planetary Economy) before it can liquidate its Productivity.

Liquidating Productivity points is a fast and easy way for a power to acquire liquid capital for use in other spending projects. It can also be an effective way to 'loot' captured enemy systems that are almost assuredly going to fall back into the hands of the enemy. By liquidating the capital on these worlds, the power can exact an economic blow against its enemy while reaping an economic benefit itself.

7.12.1 Slower Productivity Liquidation (Optional Rule)

The basic Productivity Liquidation rules makes no differentiation between varying infrastructure (Productivity) densities that will

necessarily affect the ease of looting a planet and may make it too easy for a player to quickly strip a planet of its Productivity. This optional rule attempts to mimic this by forcing players to make a special die roll for every liquidation attempt.

When attempting to liquidate Productivity, roll d10; if the die result is equal to or less than the planet's Productivity the liquidation attempt succeeds, netting the appropriate number of economic points (as described in 7.12 Productivity Liquidation). Any other result indicates that your forces were unable to meaningfully loot the planet on the current campaign turn.

7.13 Emergency Production

In times of need, a player may opt to temporarily accelerate construction efforts at their shipyards. This increase in production speeds is balanced by the cost and risk of emergency production operations.

The decision to begin Emergency Production at a shipyard is made during the Turn Orders Phase and does not become active until the next campaign turn (e.g., a shipyard's Emergency Production bonuses cannot be used on the turn that the shipyard is ordered into Emergency Production). While performing Emergency Production the shipyard's maintenance cost is doubled. After all, the dockworkers aren't going to work overtime for nothing! Emergency Production cannot be used for more than 12 consecutive turns at any given shipyard.

If using the normal construction rules, the player may increase the construction capacity and number of available dock spaces at any shipyard by 50% (round up). If using the CG 4.10 Extended Construction Time rules, the required construction times for all units at the shipyard are halved. Regardless, instituting

Emergency Production at a planet will double the cost of all shipyards at the location.

Each consecutive turn of Emergency Production at a shipyard after the first incurs a 5% cumulative chance of a catastrophic accident. If an accident occurs, roll on the following chart:

Emergency Production Accident Table (Roll d10)

Result	Effect
1-6	One random ship in the shipyard is "crippled" and will have to be repaired after construction is completed in order to return it to full strength.
7-9	One random ship in the shipyard is destroyed.
10	The shipyard is crippled. This damage must be repaired before ship construction at the shipyard may resume.

Once Emergency Production ends, the shipyard must spend an equal number of turns at Limited Production. During Limited Production, the construction capacity and available dock spaces of the shipyard is reduced by 50% (round down). If using the CG 4.10 Extended Construction Time, add 1 to all construction times while at Limited Production.

7.14 Extended Trade Routes

Normally, a Trade Fleet is restricted to trade routes containing a maximum of three systems. This is conducive to ease of play, but leads to situations where many of the most

lucrative markets in enemy empires are out of range of an empire's own trade routes.

Extended trade routes can be used to reach these more distant systems, though at a reduction to the overall income generated by the Trade Fleet. For every additional system beyond three added to the trade route, the overall income percentage generated by the route is reduced by 2%. This penalty is subtracted from the basic trade route income percentage of 10%. For example, a trade route containing five systems would produce commerce income at a rate of 6% instead of 10% because the two extra systems incur a 4% ($2 * 2\%$) penalty to trade income.

Extending a trade route over additional systems can quickly reduce income from a route to the point that the player will actually decrease the amount of income generated by the route instead of increasing it. Players should be careful to calculate what income advantage extending the trade route will have, if any, before they elect to do so.

Example 1: For purposes of this example, consider a string of six consecutive systems, labeled A – F, with system outputs of 60, 32, 8, 36, 60, and 10, respectively.

A trade route encompassing systems A – C (three systems) would generate $60 + 32 + 8 = 100 * 10\% = 10$ economic points of commerce income each turn.

If the trade route was extended to include System D, the income generated from the route would become $60 + 32 + 8 + 36 = 136 * 8\% = 10$ economic points. This is the same amount as would be earned on the traditional three-system route.

If the trade route was extended one addition system, to include System E, the route's income becomes $60 + 32 + 8 + 36 + 60 = 196 * 6\% = 11$ economic points. Here extending the trade route actually made us an extra economic point, so the extension is beneficial.

Finally, extending the trade route to encompass the last system will provide a route income of $60 + 32 + 8 + 36 + 60 + 10 =$

$206 * 4\% = 8$ economic points. Ouch, our commerce income from the route dropped by 3 economic points! Extending trade routes to include low-output systems is not a good idea.

Extending trade routes can be useful if you are trying to gain access to systems you could otherwise not reach, such as in the case of extending the trade route out to include System E where our trade route income actually increased.

Example 2: For purposes of this example, consider a string of six consecutive systems, labeled A – F, with system outputs of 60, 32, 8, 0, 36, and 60, respectively.

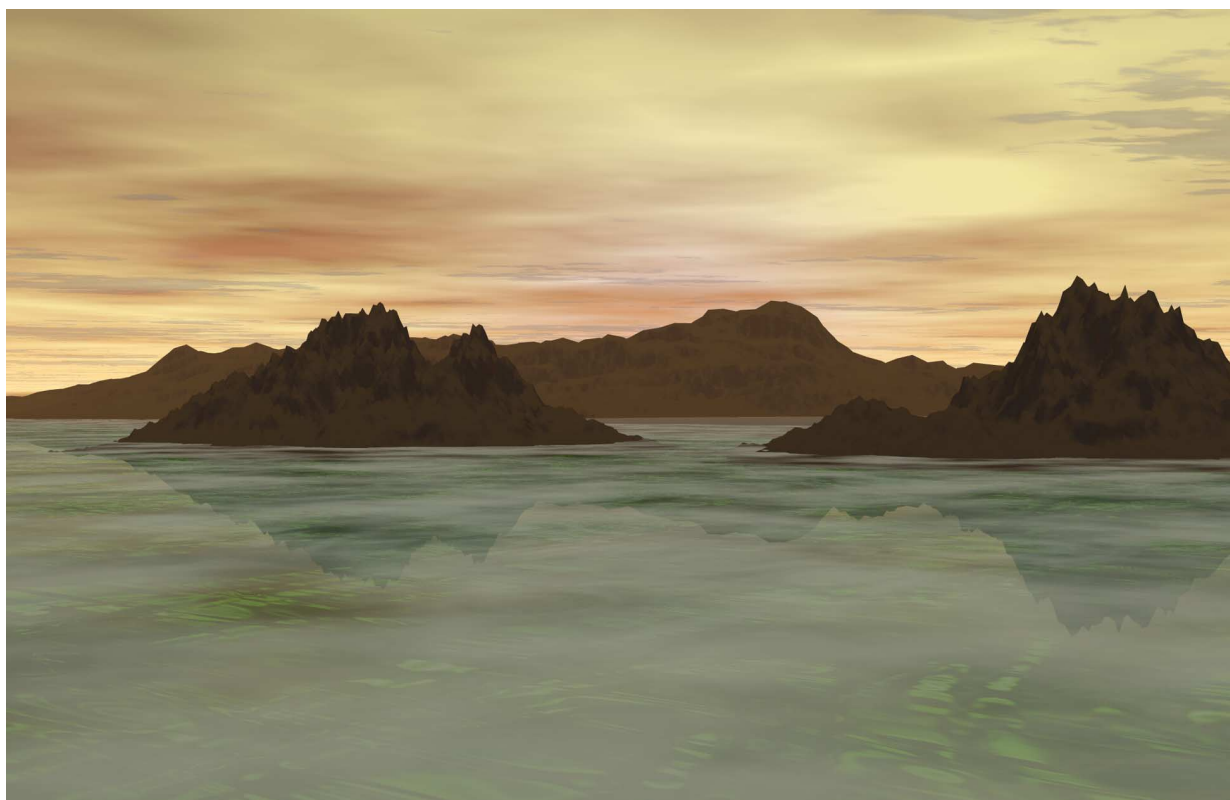
A trade route encompassing systems A – C (three systems) would generate $60 + 32 + 8 = 100 * 10\% = 10$ economic points of commerce income each turn.

If the trade route was extended to include System D, the income generated from the route would become $60 + 32 + 8 + 0 = 100 * 8\% = 8$ economic points, a net decrease of 2 economic points from the three-system route!

If the trade route was extended one addition system, to include System E, the route's income becomes $60 + 32 + 8 + 0 + 36 = 136 * 6\% = 8$ economic points. The inclusion of this route does not add any additional income, though it does not lose anymore income, either.

Finally, extending the trade route to encompass the last system will provide a route income of $60 + 32 + 8 + 0 + 36 + 60 = 196 * 4\% = 7$ economic points. This is even worse than the income an additional economic point over the past two extensions!

This example illustrates an important point about extended trade routes. Sometimes it is not economical to extend a trade route. Players should always check to make sure that extending a trade route will provide a real benefit and not accidentally lower the route's overall income.



Because Trade Fleets are allowed to visit more than three systems on their trade route, the rules for Trade Fleet encounters (CG 3.6.2.1 Encountering Trade Fleets) must be amended when using Extended Trade Routes. Assign each system on the Trade Fleet's route to a single number of a d6 (or a d10, if the Trade Fleet passes through more than six systems). If there are fewer systems than numbers on the die, these will remain unassigned. The die is then rolled, and the Trade Fleet and its escorts will be located in the system matching the die result. If an unassigned number is rolled, re-roll the dice until an assigned number is rolled.

7.15 Terraforming

Terraforming is the process of manipulating a planet's environment to better suit inhabitation of a particular species. Alterations to the planet's temperature, atmosphere, hydrosphere, and ecology can all be used to optimize it towards the owning power,

making it more conducive to long-term habitation.

In a VBAM campaign, terraforming is primarily used to increase the Carrying Capacity of planets under an empire's control. However, when using the 2.1 Advanced System Generation rules, the scope of terraforming projects is expanded to include more detailed changes to the native environment.

7.15.1 Terraforming Projects

All terraforming is conducted via the use of *terraforming projects*. Terraforming projects are performed in much the same way as tech investment with the player investing economic points towards one or more terraforming projects. A planet must be colonized before terraforming projects can begin. Additionally, a planet is only allowed to maintain one terraforming project per Census. If a planet's Census is reduced below the point it can support one or more of its terraforming projects, those projects that can no longer be supported are cancelled and all funding applied to them are lost.

Terraforming project progress is evaluated on the twelfth turn of the campaign year during the Update Asset Phase. Divide the amount of economic points invested in the terraforming project to-date by the total cost of the terraforming project, and then divide the resulting value by 2 (rounding down). This is the percentage chance that the terraforming project is complete. If the roll succeeds, then the terraforming project is complete and its effects can be applied to the target planet. If the roll fails, additional time and investment are needed before the terraforming project will be complete.

7.15.2 Cost and Effects of Basic Terraforming

In its most basic form, terraforming will attempt to modify a system's base Carrying Capacity. The economic cost of the terraforming project is equal to 25 times the new Capacity value. Once the project is successfully completed, the system's Carrying Capacity will be increased by 1. Terraforming cannot increase a system's Capacity statistic beyond 50% of its original value (round up). Therefore a Minor Colony with an initial Capacity of 6 could have its Capacity increased to a maximum of 9, but no more than that.

7.15.3 Cost and Effects of Advanced Terraforming

With the introduction of climate ratings in the advanced system generation rules, terraforming takes on a whole new relevance. Empires can initiate terraforming projects to either change specific environmental variables on a planet or else increase the planet's Capacity statistic. No matter which effect is desired, the cost of the terraforming project remains the same. The type of terraforming project being performed (Climate or Carrying Capacity) must be declared when the terraforming project is initiated.

The cost of a terraforming project is heavily dependent on the size of the planet and

its current habitability for the owning player, particularly its climate (see 2.1.1.5 Climate Ratings for more information on climate statistics). The cost of the project is equal to the planet's climate variance for the owning power times twice the planet's Capacity, plus 50.

7.15.3.1 Climate Terraforming

Before the terraforming project begins, the player should note which of the planet's three climate rating statistics he or she is attempting to modify, and in which direction (up or down). Successful completion of the terraforming project will adjust the statistic 1 point in the indicated direction.

A planet's climate rating can only be adjusted a maximum of ± 5 points from its original values. This limit is not per climate rating statistic (temperature, atmosphere, hydrosphere), but is combined between all three statistics. For example, if a power reduces a planet's temperature by 3 and increases its hydrosphere by 1 the power will only be able to adjust 1 more statistic before the maximum terraforming allowance is reached.

Once the maximum number of climate changes have been made, the planet will have to be "deterraformed" back towards its original values before any other climate modifications can be made. Deterraforming missions cost the same as any normal climate terraforming mission and carry all the same rules and limitations.

7.15.3.2 Carrying Capacity Terraforming

This simple terraforming project is used to increase the Carrying Capacity of a planet by 1. The planetary Capacity increase takes place once the terraforming project is completed. Terraforming cannot increase a planet's Capacity statistic beyond 50% of its original value (round up).

8.0 Advanced Tech Rules

This section includes advanced technology rules that make small alterations or additions to the tech advancement process. This includes rules for making tech advancement happen at a quicker rate, applying tech levels to modify tech-related Intel missions, and allowing players to perform directed research projects.

8.1 Accelerated Tech Advancement

For some campaigns, it is beneficial to accelerate the rate at which players can earn tech advancements. This is especially true when playing in an online, play-by-email campaign where the 12-turn research cycle can mean that players will not see any tech advancement for months of real world game time.

Under the Accelerated Tech Advancement optional rule, tech is evaluated during the Tech Phase of the sixth and twelfth turns of each game year. This tech advancement check is conducted in the same manner as described in CG 3.3 Tech Phase. There remains a maximum chance of two tech advancements per campaign year, with the second having the same maximum 50% chance of success as outlined in the standard rules. If a player makes a tech advancement on turn six, he or she will then be attempting for their second tech advancement for the campaign year on turn twelve. This limitation keeps tech advancement in check and prevents abuse by players.

If a tech advancement is earned during the Tech Phase of the sixth turn of the campaign year, subtract the empire's tech advancement requirement from the amount of points currently in its tech investment pool. The amount of tech

investment in the pool cannot be reduced below zero. This reduction in the amount of tech investment in the pool covers the 'cost' of the mid-year tech advancement. The player can then use any remaining tech investment points in the pool, plus any further investment into tech on subsequent turns, to go towards the second possible tech advancement for the campaign year.

Should the player succeed in making BOTH of his possible tech advancements in turn six, then no more tech advancement will be possible for the remainder of the campaign year and no roll will be performed on turn twelve. In this situation, any tech investment paid in on turns seven through twelve are not lost but will instead be carried over into the next year of the campaign.

If a player does not achieve a tech advancement in turn six, the current tech investment pool is unaffected and all previous tech investment will go towards the later turn twelve tech evaluation. Since the player did not earn a tech advancement on turn six, the turn twelve tech advancement check will be conducted exactly as per the standard rules provided in CG 3.3 Tech Phase.

Example 1: An empire has a total domestic product of 134 economic points and a base tech advancement percentage of 50%. As of the Turn Orders Phase of turn six, the empire has paid in 85 points of tech investment into its tech investment pool. During the Tech Phase of turn six, an evaluation is made to determine if the empire will receive its tech advancement. $134 \times 50\%$ equals 67; the empire's current tech investment is 85, so it is guaranteed to make its first tech advancement for the year. The empire's Tech Year is increased by 1 as a result of the tech advance and 67 points of tech investment are subtracted from the 85 currently in the tech investment pool, leaving 18 points remaining in the pool.

On turn twelve, during the Tech Phase, the second (and final) tech evaluation for the campaign year is performed. Since turn six,

the empire has invested a further 21 points of tech investment, increasing the pool's balance from 18 to 39. Total domestic product remains unchanged. To determine the chance for the second tech advancement succeeding, divide 39 by 67 and then divide the result by 2. The result is 29%. The empire rolls d100, but the die result is '97'; the tech advancement attempt has failed. The tech investment pool is reduced to zero and the empire is now ready to begin investing for future tech evaluations.

Example 2: An empire has a total domestic product of 134 economic points and a base tech advancement percentage of 50%. As of the Turn Orders Phase of turn six, the empire has paid in 38 points of tech investment into its tech investment pool. During the Tech Phase of turn six, an evaluation is made to determine if the empire will receive a tech advancement. 134 times 50% equals 67; the empire's current tech investment is 38, yielding an advancement chance of 56%. The empire rolls d100, but the die result is a '97'; the tech advancement attempt has failed. The amount of tech investment points remains unchanged and is saved to go towards the turn twelve tech evaluation.

On turn twelve, during the Tech Phase, the second (and final) tech evaluation for the campaign year is performed. Since turn six, the empire has invested a further 40 points of tech investment, increasing the pool's balance from 38 to 78. Total domestic product remains unchanged. The chance of earning the first tech advancement is automatic, as the empire has paid an amount greater than or equal to 67 into tech investment. 67 points are subtracted from the tech investment pool, reducing its total to 11.

After this first, automatic success, the empire must determine the chance that the second tech advancement will succeed. Divide 11 by 67 and then divide the result by

2. The result is 8%. The empire rolls d100, and the die result is '01'; the tech advancement attempt has succeeded! The empire gains a second tech advancement and the tech investment pool is reduced to zero. The empire is now ready to begin investing for future tech evaluations.

Example 3: An empire has a total domestic product of 134 economic points and a base tech advancement percentage of 50%. As of the Turn Orders Phase of turn six, the empire has paid in 12 points of tech investment into its tech investment pool. During the Tech Phase of turn six, an evaluation is made to determine if the empire will receive a tech advancement. 134 times 50% equals 67; the empire's current tech investment is 12, yielding an advancement chance of 17%. The empire rolls d100, but the die result is a '25'; the tech advancement attempt has failed. The amount of tech investment points remains unchanged and is saved to go towards the turn twelve tech evaluation.

On turn twelve, during the Tech Phase, the second (and final) tech evaluation for the campaign year is performed. Since turn six, the empire has invested a further 9 points of tech investment, increasing the pool's balance from 12 to 21. Total domestic product remains unchanged. The chance of earning the first tech advancement is now 31%. The empire rolls d100, and the die result is '57'; the tech advancement attempt has failed! The empire does not receive a tech advancement and there are no further attempts to resolve. The current tech investment pool is left unchanged and the points currently in the pool carry over into the next campaign year and will count towards future tech evaluations.

8.2 Tech Levels

The extent of technological development varies from power to power. Some advanced interstellar species possess much greater technical knowledge than those that have only recently joined the galactic stage. This optional rule applies a new characteristic, called a *tech level*, that describes the relative technological advancement of competing powers and is used to modify the results of CG 3.4.5.1 Espionage: Tech. The rule may also find applications in future rules releases.

8.2.1 Starting Empire Tech Levels

All empires begin a campaign with a tech level of 6 unless otherwise noted in the source materials or campaign-specific guidelines. By starting at a tech level of 6, early tech level growth will not destabilize the tech parity between player empires. A CM may decide to start empires at tech levels higher or lower than 6, which is often done for thematic reasons relating to a specific empire's background within the campaign universe. As a rule, older powers will be more advanced and have higher tech levels, while less advanced powers will have lower tech levels.

If your campaign is using both the Tech Level and 6.1 Non-Player Entity rules, apply the following tech levels to new NPEs as they are generated or otherwise become available.

8.2.2 Increasing an Empire's Tech Level

At the start of the campaign, multiply your empire's tech advancement goal by 10. This is the empire's *tech level* advancement goal. Track the amount of tech investment that your empire pays into tech. Once your empire has paid in an amount of tech investment equal to its tech level advancement goal, it will have earned a tech level increase! When this happens, increase your empire's tech level by

1. After the tech level advancement has been earned, re-evaluate your tech level advancement goal by multiplying your current tech advancement goal (Note: *not* your tech level advancement goal!) by 10. Your empire will not earn another tech level increase until this new goal is met.

It should be observable that the cost of each additional tech level advancement will almost always cost more than the last. As an empire's economy grows, which is usually tied to its own territorial growth, its tech advancement goal and tech level advancement goal will also increase.

8.2.3 Tech Levels and Espionage: Tech Missions

The relative tech levels of two powers will determine the degree of benefit Espionage: Tech missions provide to the launching player. After all, a super-advanced empire should gain little of value when stealing technologies or blueprints from pre-industrial cave men!

NPE Tech Level Table

NPE Tech Level	Tech Level
P-IND	0*
IND-1	1
IND-2	2
IND-3	4
INT-1	6
INT-2	8
INT-3	10
INT-4	12
INT-5	18
INT-6	24

* = Because division by zero is impossible, it is equally impossible to gain any benefit from Espionage: Tech missions launched against Pre-Industrial powers.

Upon success of an Espionage: Tech mission, divide your opponent's tech level by your own tech level, then multiply the result by the target system's output, rounding all fractions normally. This is the amount of tech advancement gained from the mission.



CM's Note: The Tech Levels optional rule can be of great utility in curbing possible abuse of the Espionage: Tech mission.

Stealing technological data from a less sophisticated race, which is likely less capable of defending itself from spy missions, will have a lower return on investment than stealing data from a more advanced race.

8.2.4 Rebellions and Tech Levels

Any system or systems that breaks away from an existing empire will inherit the tech level of their source empire.

8.3 Directed Research Projects (CM Only)

In addition to normal tech advancement, an empire can allocate points towards developing specific projects. Each directed research project is assigned a difficulty rating which determines the cost of the project as a percentage of the empire's normal tech advancement goal (see CG 3.3 Tech Phase for how to calculate that goal).

Easy (25%): Easy research projects are those that are not difficulty for your researchers to conceive and are on a small

enough scale so as to make their development economically viable.

Difficult (50%): Difficult research projects can be particularly vexing in complexity, requiring substantial resources to develop.

Hard (75%): Hard research projects are cumbersome and require large number of scientists and equipment to successfully complete.

Impossible (100%): Impossible research projects are rare, but not unheard of. These boondoggles can easily sap a nation's economy.

The percentage value in parenthesis next to each difficulty rating is multiplied times the empire's tech advancement goal to determine the amount of directed tech investment required for the project to succeed.

Tech investment applied to a directed research project does *not* count towards the empire's normal tech advancement goal! It applies only to the project those tech investment points are specifically applied to. All investment stays with the project until it is either completed or abandoned. This means that an empire that invests heavily in directed research will still have to pay towards their normal tech advancement lest they fall behind technologically. If a project is abandoned, recovery of spent tech investment is impossible.



CM's Note: Directed research projects can be put to good use in your campaigns to force your players to perform research on plot-related artifacts, ruins, diseases and more in an effort to forward the story line.

9.0 Advanced Morale and System Loyalty Rules

These advanced rules expand upon the materials laid out in CG 3.8.2 Morale and System Loyalty. Of particular note are optional rules for making rebellions and insurrections a far more potent and deadly threat to an empire's survival.

9.1 Rebellion

This optional rule expands upon the rules for rebellion found in the VBAM Campaign Guide. When these rules are in effect, the impact of planetary rebellions is greatly increased and, in some instances, may lead to full-blown civil war. Unlike the low-level insurrections defined in the Campaign Guide, rebellions such as these can affect not just the rebelling system but also other systems in the area. Local military forces, once thought unerringly loyal, may desert your command and join the rebel alliance. If multiple systems join together to form a strong separatist movement, the situation may even lead to a full-blown civil war.

9.1.1 System Loyalty States

The following system loyalty states are delineated in CG 3.8.2 Morale and System Loyalty:

Good Order: Good Order systems are those at which the Morale is greater than or equal to half the system's Census (round up). Good Order worlds are contented and rebellions in such systems are rare.

Unrest: Any system whose Morale is equal to or less than half the Census is in a state of Unrest. Under this state, all production is immediately halved. A state of Unrest is characterized by widespread dissension among the population. Rioting and elevated violence often are associated with this state.

Rebellion: Once a system's Morale drops to 0, the system is in Rebellion. Such planets do not provide any material benefit to the owning player and are in fact attempting to break away from their controlling empire. If unoccupied by ground troops at the outbreak of the Rebellion, the planet automatically secedes (see 9.1.3 Secession).

9.1.2 System Loyalty Check

System loyalty checks are performed every turn for each planet or system that is in a state of Unrest or Rebellion. Roll d10, adding +1 for each turn the system has been in a state of Unrest or Rebellion. If using the MN 2.0 Custom Race Design rules, Confederate government types add an additional +1 to this roll and Decentralized governments add +2. If the result is 10 or more, then the system is considered to have failed its system loyalty check and as a result the situation on the planet has deteriorated.

In the case of a system experiencing Unrest, a failed system loyalty check reduces the system's Morale by 1. If the system is already in Rebellion (Morale 0), then the system will immediately attempt to secede from its parent empire!

It is important to reiterate that, if a system enters into a state of Rebellion and there are no ground units defending the planet, it will automatically secede.

9.1.3 Secession

Secession is the ultimate expression of disgust with an empire's current political regime. Once a system declares its intent to secede, a chain of events is set in motion that can have a major impact on the whole of an empire.

1) Restore Order in the Rebel System

First, the seceding system's Morale is increased to half its Census statistic value (rounding up). This represents the population's desire to stake out their own course and present a united front to any potential enemies. The system will begin setting itself up as independent state, and will purchase units, conduct Intel missions, pay maintenance costs, etc. like a normal empire until it either wins its war and achieves 9.1.5 Independence or is retaken by the original owning empire.

2) Roll Loyalty Checks for Squadrons, Bases, and Civilian Fleets

Second, loyalty checks must be made for all of the empire's units in the seceding system to determine whether or not they have joined the rebellion. Roll d10 against each squadron, base, or civilian fleet in the seceding system. If the government is of a Confederate or Decentralized type, subtract 1 from the die roll. If the result is less than or equal to the system Census, then the squadron, base, or civilian fleet has joined the rebellion!

Trade Fleets must roll randomly to determine which system they are in during the turn (if this roll has not already been made during CG 3.6.2.2 Raiding) prior to loyalty checks being made. If the Trade Fleet is in the rebelling system, then a loyalty check must be made for this unit as well.

Finally, all shipyards in the rebelling system will automatically defect to the rebel cause. There is no chance that they will remain in loyalist hands.

Rebelling units change their affiliation immediately to that of the rebellious world and will be available for rebel use on the following campaign turn.

Squadron, Base, or Civilian Fleet Loyalty Check (Roll d10)

Target Number: System Census

Effect: If less than or equal to Census, then the unit(s) will have joined the rebellion.

Mine, Satellite, and Ground Unit Rebellion Table (Roll d10)

Result	% Rebelling
0 or less	None
1	5%
2	10%
3	15%
4	20%
5	30%
6	40%
7	50%
8	60%
9	75%
10	90%
11 or more	100%

Modifiers:

- +1 Confederate Government
- +2 Decentralized Government

3) Determine the Number of Rebelling Mines, Satellites, and Ground Units

Mines, satellites, and ground units, are harder to sway to the side of the rebellion. In the case of mines and satellites, these automated defenses are easier for loyalist forces to take control of remotely, scrambling the rebel-held command codes so that they cannot assume control over the local defense grid. As for ground units, troops tend to be more loyal to the empire than the planet since most of the forces stationed on the planet are assumed to be non-natives hailing from various other planets in the empire.

Roll on the table above to determine the percentage of these units (by economic cost) that have joined the rebellion, then separately total the economic cost of all mines, satellites, and ground units in the seceding system. Multiply each of these three totals by the percentage result from the chart, rounding any fractions up. This is the economic cost of the units of each type that have gone over to the

rebellion. The loyalist faction decides which of its mine, satellite, and ground units remain under its control, selecting units of each type with a total economic/purchase cost equal to or less than the unit type cost total minus the rebel forces percentage share.

Militia ground units that exist in a system will always join the rebel side during the process of secession. They are citizens of their planet first and the empire second and will not betray their core loyalties under any circumstances.

4) Roll Morale Checks for Surrounding Systems

Finally, the secession of a system can cause ripples of unrest to expand to other neighboring worlds. Whenever a system attempts to secede, whether the attempt is successful or not, make a special Morale check for each adjacent star system controlled by the same empire. The target number is 2. If the Morale check fails (the d6 roll is 2 or less), then the affected system's Morale decreases by 1.

Note: this Morale check is only performed on the turn that a system attempts to secede, not on subsequent turns following the secession attempt.

5) Finalizing the Secession Attempt

Once all loyalty checks and Morale checks have been made, the act of secession is complete. On the next campaign turn, the rebels will have to begin the fight for their very existence in their war for independence.

Example: A seceding system (Census 5) contains 5 ship squadrons, 1 starbase, 48 mines, 30 satellites, 5 Regulars, and 1 Marine. A d10 is rolled for each of the ship squadrons and the starbase. A 1, 3, 10, 10, 9, and 5 are rolled, respectively. Because the system has 5 Census, rolls of 5 or less result in the forces rebelling. In this case, two ship squadrons (the first and second) have joined the rebellion, as has the starbase. All other ship squadrons remain loyal to the empire.

For mines, satellites, and ground units, the seceding rolls a 6 on the applicable chart, yielding a result of 40%. The total cost of mines in the system is 8; the total cost of satellites in the system is 30; and the total cost of ground units is 7. We then multiply each of these values by the percentage result from the chart (40%), yielding 4, 12, and 3 respectively. The loyalist player selects her forces first, as the original empire still controls 4 points of mines ($8 - 4 = 4$), 18 points of satellites ($30 - 12 = 18$), and 4 points of ground units ($7 - 3 = 4$). The loyalists retain control over 24 mines, 18 satellites, 2 Regulars, and 1 Marine. The rebels receive the remainder of the mines, satellites, and ground units in the system.

9.1.3.1 Secession of Multiple Systems from a Single Empire

If multiple star systems within a single empire declare their intent to secede from the union, the CM should determine whether or not they are acting together or individually. If the seceding star systems are adjacent or otherwise located in the same general area of an empire, it is assumed that each of the separatist worlds are working together in their bid to withdraw from the empire. In this case, the seceding worlds will be considered a single political entity for purposes of administration and control.



CM's Note: It is ultimately up to the CM whether or not each star system that secedes from a single empire is becoming its own sovereign power or instead gaining membership in another pre-existing rebel state. CMs may also decide to have a secessionist colony opt to be annexed by a neighboring non-aligned government (either player or NPE controlled). The political affiliations of rebel worlds during a civil war will invariably be linked to the political climate and back-story of your individual campaign.

9.1.3.2 Secession and Advanced System Generation Rules

When using either the Commodore or Admiral level advanced system generation rules, found in the 2.1 Advanced System Generation Rules section of this book, a system does not have a single uniform Census value. Rather, individual planets will be subject to rebellion. This necessitates some clarifications to how secession is handled.

1) Restore Order at the Rebel Planet

The seceding planet's Morale is increased to half its Census statistic value (rounding up). This represents the population's desire to stake out their own course and present a united front to any potential enemies. The planet will begin setting itself up as independent state, and will purchase units, conduct Intel missions, pay maintenance costs, etc. like a normal empire until it either wins its war and achieves 9.1.6 Independence or is retaken by the original owning empire.

2) Roll Loyalty Checks for Squadrons, Bases, and Civilian Fleets

Loyalty checks must be made for all of the empire's units in the seceding planet's system to determine whether or not they have joined the rebellion. Roll d10 against each squadron, base, or civilian fleet in the seceding system. If the government is of a Confederate or Decentralized type, subtract 1 from the die roll.

The target number for this loyalty check depends on the location of units in the system. Units in the seceding planet's zone (inner, middle, or outer) will join the rebellion if their d10 result is less than or equal to the system Census. Craft in all other zones have half this chance, rounding naturally. So an empire's units in the same orbital zone as a rebelling planet with a Census of 7 would rebel on a roll of '7' or lower, while other squadrons, bases, and fleets in the system would need a '4' or less to join the rebellion.

Trade Fleets must roll randomly to determine which system they are in during the turn (if this roll has not already been made during CG 3.6.2.2 Raiding) prior to loyalty checks being made. If the Trade Fleet is in the rebelling system, then a loyalty check must be made for this unit as well. Trade Fleets are always considered to be in the system's rebelling zone for purposes of loyalty checks.

Finally, all shipyards in orbit of the rebelling planet will automatically defect to the rebel cause. There is no chance for them to remain in loyalist hands.

Rebelling units change their affiliation immediately to that of the rebellious world and will be available for rebel use on the following campaign turn.

3) Determine the Number of Rebelling Mines, Satellites, and Ground Units

This step remains unchanged, except that only mines, satellites, and ground units at or on the rebelling planet are affected by the planetary rebellion. Similar units located at other planets in the systems are not affected and cannot join the rebellion.

4) Roll Morale Checks for Surrounding Systems

Whenever a planet attempts to secede, whether the attempt is successful or not, a special Morale check is made for all the empire's colonies in the rebelling planet's system and each adjacent star system. The target number for colonies in the rebelling planet's system is 4, and the target number for colonies in adjacent systems is 2. If the Morale check fails, then the affected planet's Morale decreases by 1.

Note: this Morale check is only performed on the turn that a system attempts to secede, not on subsequent turns following the secession attempt.

5) Finalizing the Secession Attempt

Once all loyalty checks and Morale checks have been made, the act of secession is complete. On the next campaign turn, the

rebels will have to begin the fight for their very existence in their war for independence.

9.1.4 Civil War

A civil war undoubtedly will follow every planet's attempt at secession. This battle between the rebels and loyalists will continue until one side or the other emerges victorious. Control of the secessionist colonists should fall to the CM or an uninvolved power. The breakaway republic should be treated as a new empire for all purposes.

The rebel colony's former empire will likely attempt to retake the breakaway planet. Meanwhile, the sole goal of the rebel system will be to ensure its own survival. For the rebels, conquest of other systems is not really a major goal. The CM or player controlling the rebels should use their best judgement in deciding what military actions have the greatest chance of preserving the rebel world's safety.

During the civil war, the rebels will be able to purchase or build anything that their original empire was capable of building at the beginning of the rebellion. Any new unit designs or technologies developed by the loyalists after the start of the civil war will be unavailable to the rebels. Rebel factions are unable to perform meaningful tech investment during the civil war. Unless contradicted by your source materials, rebels cannot invest into tech until after the civil war is over.

9.1.4.1 Resolving a Civil War

Of the wars an empire can fight, none will test the mettle of its soldiers more than a civil war. The test is to see whether or not the empire can weather the storm of rebellion and emerge intact.

A civil war can end in one of three ways:

First, the war can end with the signing of an armistice between the original empire and the secessionist state. This result is seen as a victory for the rebellious system or systems and will lead to 9.1.5 Independence.

The second way that a civil war can end is by the total subjugation of the rebel forces.

This includes both the conquest of the rebel-held system(s) as well as the elimination of all rebel military forces.

Third, the rebelling system can itself enter into a state of "rebellion," demonstrating that loyalist forces have made inroads in the colonial government and are attempting to force it back into the empire. If the situation leads to another 9.1.3 Secession attempt, the new loyalist "rebels" will follow the same procedures for determining their starting assets, except that the original empire (with whom the actual, non-loyalist rebels are fighting) will take possession of these assets. Essentially, the secession of a rebel system will revert control of the system back to the original empire.

If a rebellion in a system is put down by force, the rebel world is reintegrated into the empire and will be unable to attempt a new rebellion for the remainder of the civil war so long as even a single loyalist ground unit remains in the system. However if rebel forces retake the system it will automatically rejoin the rebellion and have its Morale restored to half of its Census, rounding up. It will not however make a new secession attempt, so the loyalties of any enemy forces remaining in the system will not be tested.

9.1.4.2 Rebel Diplomacy During a Civil War

While a civil war is still being fought, the rebels are allowed to conduct diplomacy with foreign powers. Of particular importance to the rebels will be treaties of Co-Belligerency that would lead to overt military support from foreign powers. Non-Aggression Pacts and Trade Treaties would also be of high priority for the rebels.

The intricacies of diplomacy between foreign governments and rebel powers are left up to the CM and his or her players. Aiding a rebellion is likely to have major diplomatic repercussions for any power. In addition to actual diplomatic complications such aid may bring, the loyalist faction receives a +10% bonus to attempts to break treaties or declare

hostilities/war against opposing powers that they know are providing support of any kind to the rebel faction. In the cases of two powers that have a shared animosity, funding a rebellion in the enemy's empire would be a good way to destabilize their enemy's government and may be worth the diplomatic penalties to do so.

9.1.5 Independence

Following the signing of an armistice that ends a civil war, the rebel power is considered to have achieved full independence from the mother country. Henceforth, the rebel state should be considered a normal empire for all purposes. The power will carry out all of the normal operations of a fully-functioning empire.

Control of the newly-independent power can be placed in the hands of a new player or the CM. The CM may also choose to establish the new power as a NPE power (see 6.1. Non-Player Entities). The new power will roll new AIX statistics in addition to new Relationship values for each empire it is in contact with. The CM should make sure that any foreign powers that aided the rebels during their civil war receive favorable Relationships with the victorious NPE. The Relationship value between the independent power and its original empire should be set at a level just above that at which the Hostilities Check chance equals 0%. This will ensure that the new NPE empire will not attempt to turn around and immediately declare a war they are not ready to fight.

9.2 Elevated Rebel Threat

The existing rebellion rules make it extremely difficult for a rebellion to actually occur in a system. The poor combat ability of individual Militia (Census) ground units makes it almost guaranteed that they will lose out against the military unit guarding their Census point.

In campaigns where an elevated threat of successful rebellion exists, all rebelling Census Militia units receive modified combat values based on the world at which they are located (see 5.4 Variable Quality Militia for these rules). Additionally, ground units patrolling a Census are more vulnerable to attack, so much so that their Defense value is halved (rounding down) when defending against rebel Militia attacks.

9.3 Annual Morale Shifts

Once per campaign year (e.g., every 12 turns), make a special Morale roll on the Annual Morale Shift Table for every planet or system in each player's empire. This optional rule will allow the mood of planetary populations to naturally shift over time rather than only changing in reaction to specific campaign events, such as the effects of invasion or random events.

Annual Morale Shift Table (Roll 2d6)

Result	Effect
2	-2 Morale
3-4	-1 Morale
5-9	No Change
10-11	+1 Morale
12	+2 Morale

10.0 Elite Officers and Crews

This section includes advanced rules for the implementation of elite officers and crews into your campaign. Elite officers can add personality and flair to a campaign, while graded crews and armies will allow players to differentiate between green units and battle-hardened veterans. An alternative experience system is also presented for players that tracks experience on a unit-by-unit basis and provides for less graduated experience improvements.

10.1 Elite Officer System

Some of the most appealing science fiction universes on film or in print are populated with larger than life heroes and villains that can single-handedly affect the world around them. These *elite officers* can take many forms. Soldiers, diplomats, spies, bureaucrats, doctors, dreamers – all of these colorful characters can be created using the Elite Officer System.

As an overview, elite officers are created using experience points (XP). Elite officers can purchase levels in various officer classes, with each level providing the officer with an additional special ability. As an officer gains rank and seniority, additional and more powerful abilities will become available for purchase. High level officers of any class are forces to be reckoned with and can play a major role in your campaign.

10.1.1 Officer Classes

The types of abilities available to an elite officer are determined by that officer's level in seven basic classes. These classes are Fleet Officer, Flight Officer, Ground Officer, Administrator, Diplomat, Scientist, and Rogue (non-military only). Officers will gain levels in



these classes as they gain experience. An officer's dominant class is that in which he or she has the highest level, and it will typically be the class in which the officer will excel.

10.1.1.1 Fleet Officer

Fleet Officers have received military training in starship combat. They typically captain fleet command ships or lead task forces into battle. The abilities conferred by a Fleet Officer affect the performance or capabilities of ships, bases, satellites, or other defenses in his or her fleet.

10.1.1.2 Flight Officer

Flight Officers have received military training in the piloting of small craft, principally star fighters. Flight Officers serve as wing commanders in control of a squadron's flight wings. Through their mix of experience, training, and luck, Flight Officers can be a potent force on the battlefield.

10.1.1.3 Ground Officer

Ground Officers have received ground combat operations training. Ground Officers provide valuable benefits to ground unit operations, helping to bolster defenses at an embattled world or else make the invasion of foreign soil that much easier. Gnarled and war weary, Ground Officers are often overlooked by their sky-bound brethren.

10.1.1.4 Administrator

Administrators are trained to oversee governance of planets and outposts. They bring years of bureaucratic expertise to their job and can be used to streamline colonial operations. It is not uncommon for military officers to earn Administrative ranks during their tenure as military governors.

10.1.1.5 Diplomat

The Diplomat class includes everything from true diplomats to spies. In other words, any mission profile that involves the use of Intel would fall under the broad umbrella of the Diplomat. Often Diplomats do turn out to be more than they appear...

10.1.1.6 Scientist

Scientists are a supplemental class, meaning that their abilities are designed to support the operations of other officer types. Even though they are often forgotten, these officers are instrumental in achieving the breakthroughs that secure the future of the empire.

10.1.1.7 Rogue

This special non-aligned officer class is available only to non-government powers. Rogues are the unruly scoundrels of the galaxy. You might find Rogues traveling the galaxy on tramp freighters, running commerce stations in neutral territory, or working as mercenaries for foreign governments. No matter their occupation (if they have one!), Rogues are jacks of all trade, and masters of none.

10.1.2 Officer Abilities

As officers increase their level in any of the seven different officer classes they will be granted additional special officer abilities. These abilities provide benefits that the officer can use on subsequent turns. They represent the officer's growing skill or influence and the higher the officer's level in a class, the more powerful his abilities will become.

The following section (categorized by class and area of emphasis) provides the abilities available to each officer class. Each ability has both a name and a level prerequisite, given in "Level X". Officers must have at least this level in the associated class before they can purchase the ability.

Unless otherwise noted, all officer abilities can be purchased multiple times for cumulative effect. For example, a Fleet Officer that has received three levels of the Defense: Ship would increase his unit's DV by a total of +3, or +1 per level of the ability.

Elite Fleet, Flight, and Ground Officers may only improve their units' abilities to a maximum of twice their original values, with a minimum bonus of 1. Example: a DV 2 frigate assigned an elite Fleet Officer that gives a +4 DV bonus to his command ship would only receive a +2 DV bonus.

Some abilities, notably Squadron, Task Force, and planet level combat abilities, are noted as being *Restricted* in their descriptions. This denotes that the ability carries special restrictions that apply to how they interact with other Restricted abilities. If a unit, squadron, or task force is subject to the effects of more than one officer providing the same Restricted benefit, only the best bonus between the officers is used. The effects of non-Restricted abilities are not subject to this limitation; they are cumulative with those generated by Restricted abilities.

Example: A task force includes three Fleet Officers. One officer has one level of Defense: Task Force (+1 DV to all non-flight units in the officer's task force), the second

that has two levels of Defense: Squadron (+2 DV to all non-flight units in the officer's squadron), and the third has one level of Defense: Ship (+1 DV to the officer's non-flight unit). Both Defense: Task Force and Defense: Squadron are Restricted abilities, so only the best bonus is used. The squadron that contains the officer with two levels of Defense: Squadron will use his +2 DV bonus, as it is superior to the other officer's +1 DV Defense: Task Force bonus. All other squadrons will use this other officer's task force level bonus.

Because Defense: Ship is not a Restricted ability, its effects are cumulative with those of either of the other two Restricted abilities of this type. If placed in the same squadron as the second officer, this officer's unit would receive a total of a +3 DV bonus (+1 from Defense: Ship, +2 from Defense: Squadron). If placed in any other squadron, the officer would receive only a +2 DV bonus (+1 from Defense: Ship, +1 from Defense: Task Force).

10.1.2.1 Fleet Officer Abilities

Defense (Fleet)

Defense: Ship – Level 1

Effect: +1 DV bonus to the officer's unit.

Defense: Squadron – Level 3

Effect: +1 DV bonus to all non-flight units in the officer's squadron. (Restricted)

Defense: Task Force – Level 6

Effect: +1 DV bonus to all non-flight units in the officer's task force. (Restricted)

Anti-Ship (Fleet)

Anti-Ship: Ship – Level 1

Effect: +1 AS bonus to the officer's unit.

Anti-Ship: Squadron – Level 3

Effect: +1 AS bonus to all non-flight units in the officer's squadron. (Restricted)

Anti-Ship: Task Force – Level 6

Effect: +1 AS bonus to all non-flight units in the officer's task force. (Restricted)

Anti-Fighter (Fleet)

Anti-Fighter: Ship – Level 1

Effect: +1 AF bonus to the officer's unit.

Anti-Fighter: Squadron – Level 3

Effect: +1 AF bonus to all non-flight units in the officer's squadron. (Restricted)

Anti-Fighter: Task Force – Level 6

Effect: +1 AF bonus to all non-flight units in the officer's task force. (Restricted)

Command (Fleet)

Command Rating: Ship – Level 1

Effect: +1 CR bonus to the officer's unit.

Command Rating: Squadron – Level 2

Effect: +1 CR bonus to all non-flight units in the officer's squadron. (Restricted)

Command Rating: Task Force – Level 5

Effect: +1 CR bonus to all non-flight units in the officer's task force. (Restricted)

Command Cost: Ship – Level 1

Effect: –1 CC bonus to the officer's unit.

Command Cost: Squadron – Level 4

Effect: –1 CC bonus to all non-flight units in the officer's squadron. (Restricted)

Command Cost: Task Force – Level 8

Effect: –1 CC bonus to all non-flight units in the officer's task force. (Restricted)

Basing (Fleet)**Basing: Ship – Level 1**

Effect: +1 Basing bonus to the officer's unit. The unit must be capable of basing at least a single flight in order to benefit from this ability.

Basing: Squadron – Level 4

Effect: +1 Basing bonus to all non-flight units in the officer's squadron. The unit must be capable of basing at least a single flight in order to benefit from this ability. (Restricted)

Basing: Task Force – Level 8

Effect: +1 Basing bonus to all non-flight units in the officer's task force. The unit must be capable of basing at least a single flight in order to benefit from this ability. (Restricted)

Miscellaneous - Combat (Fleet)**Assault Specialist – Level 1**

Effect: Increases the officer's unit's Direct Assault rating by 1, or can be used to negate the effects of an enemy Security Specialist onboard a unit in the target squadron.

Escape Pod – Level 1

Effect: The officer receives a +50% bonus to 10.1.7.1 Surviving Space Combat.

Engineer: Damage Control – Level 1

Effect: At the end of a scenario, if the officer's assigned unit receives attrition damage but is not itself crippled in battle, then this attrition damage is removed and the ship remains undamaged – it will not auto-cripple as a result of the damage. This ability can only be purchased once per officer.

Formations: Ship – Level 1

Effect: +1 formation level bonus to the officer's unit. Fixed defenses cannot benefit from this ability.

Raiding Specialist – Level 1

Effect: This officer's fleet receives a +1 readiness modifier benefit in raider encounters. This is in addition to the fleet's readiness modifier from surprise. (Restricted)

Ramming Speed – Level 1

Effect: When performing ramming maneuvers, this officer's unit is considered to have a DV 50% greater than normal (round up) for purposes of calculating ramming damage. (Restricted)

Security Specialist – Level 1

Effect: The officer's unit gains an effective +1 formation bonus level against Direct Assault (breaching/boarding) attacks.

Engineer: Repairs – Level 2

Effect: This officer's unit receives a limited CG 3.7.14 Field Repair ability. The officer can perform 1 point of field repair on his ship only for each level of this ability.

Master Tactician – Level 2

Effect: Officer's fleet receives a +1 surprise bonus when generating an encounter. (Restricted)

Master Strategist – Level 2

Effect: Officer's fleet may increase or decrease the scenario length by 1 round, or the officer can be used to include/exclude one unit from the scenario. (Restricted)

Defense Coordinator – Level 3

Effect: The officer's unit receives the Guardian (1) special ability. If assigned to a unit that already possesses this ability, increase its Guardian rating by 1. (Restricted)

Formations: Squadron – Level 3

Effect: +1 formation level bonus to all non-flight units in the officer's squadron. Fixed defenses cannot benefit from this ability. (Restricted)

Sacrificial Resolve – Level 3

Effect: Once per scenario, this officer's squadron can declare (during the Assignments Phase) that it is using this ability. All non-flight units in the squadron double their AS and AF values, while reducing their formation bonus levels to 0. Scouts can be used to increase formation bonus levels normally. Each level of this ability allows the officer to declare Sacrificial Resolve multiple times in an engagement, once per level of the ability. (Restricted – A squadron can only benefit from one Sacrificial Resolve declaration at a time)

Strike Coordinator – Level 3

Effect: The officer's unit receives the Disruptor (1) special ability. If assigned to a unit that already possesses this ability, increase its Disruptor rating by 1. (Restricted)

Unpredictable – Level 3

Effect: The opposing fleet receives a –1 surprise penalty when generating an encounter against this officer. (Restricted)

Military Instructor – Level 4

Effect: Increases the number of XP earned from a battle by +10% (round up). (Restricted)

Formations: Task Force – Level 6

Effect: +1 formation level bonus to all non-flight units in the officer's task force. Fixed defenses cannot benefit from this ability. (Restricted)

Hero's Presence – Level 6

Effect: All non-flight units in the officer's squadron receive a +25% bonus to their combat factors (round up). (Restricted)

Miscellaneous - Non-Combat (Fleet)**Adventurer – Level 1**

Effect: The officer's unit receives a +1 scout function bonus for 2.2 Exploration use only. This bonus can only be used if the officer's

unit has either the Scout or Explorer special ability.

Bombardment: Ship – Level 1

Effect: +1 bombardment point bonus to the officer's unit. Only those units normally capable of generating bombardment points will benefit from this ability.

Communications Officer – Level 1

Effect: The fleet receives 1 free Intel point each turn that can be used to perform Espionage Intel missions. If unused in a turn, this Intel point is lost. This officer's ability can be combined with normal Intel when performing Espionage Intel missions.

Intelligence Operative – Level 1

Effect: Increases the difficulty level of all Intel missions launched against the officer's unit, or any units based from the officer's unit, by 1. (Restricted)

Political Favorite – Level 1

Effect: The officer's rank is increased by an additional +1 for each level of this ability.
Example: A Level 2 Fleet Officer whose only two levels are in Political Favorite would have an effective officer rank of 4 instead of 2.

Logistics: Supply Levels – Level 2

Effect: Units in the officer's squadron ignore their first out of supply level, after which point this ability is considered "used" until the officer is moved back within the basic supply range of a supply point. Multiple Logistics: Supply Levels officers, or officers with multiple levels of this ability, can be used in succession to keep a squadron from going out of supply for an extended period of time. This ability only applies to the officer's squadron; not any other squadron in the officer's fleet.

Sensor Specialist – Level 2

Effect: The officer's unit receives a +1 scout function bonus. This bonus can only be used

if the officer's unit has either the Scout or Explorer special ability.

Bombardment: Squadron – Level 3

Effect: +1 bombardment point bonus to all non-flight units in the officer's squadron. Only those units normally capable of generating bombardment points will benefit from this ability. (Restricted)

Logistics: Range – Level 3

Effect: Extends the basic supply range of the officer's fleet by 1 jump. (Restricted)

Bombardment: Task Force – Level 6

Effect: +1 bombardment point bonus to all non-flight units in the officer's task force. Only those units normally capable of generating bombardment points will benefit from this ability. (Restricted)

10.1.2.2 Flight Officer Abilities

Defense (Flight)

Defense: Wing – Level 1

Effect: +1 DV bonus to the officer's flight wing.

Defense: Squadron – Level 3

Effect: +1 DV bonus to all flights in the officer's squadron. (Restricted)

Anti-Ship (Flight)

Anti-Ship: Wing – Level 1

Effect: +1 AS bonus to the officer's flight wing.

Anti-Ship: Squadron – Level 3

Effect: +1 AS bonus to all flights units in the officer's squadron. (Restricted)

Anti-Fighter (Flight)

Anti-Fighter: Ship – Level 1

Effect: +1 AF bonus to the officer's flight wing.

Anti-Fighter: Squadron – Level 3

Effect: +1 AF bonus to all flights in the officer's squadron. (Restricted)

Miscellaneous (Flight)

Basing: Carrier – Level 1

Effect: +1 Basing bonus to the officer's carrier unit. The unit must be capable of basing at least a single flight in order to benefit from this ability.

Bombardier – Level 1

Effect: The officer's flight generates +1 bombardment points in addition to its normal bombardment point amount.

Breaching Specialist – Level 1

Effect: When assigned to a Direct Assault flight unit (e.g., a breaching pod), this offer increases the craft's Direct Assault rating by 1. The officer may opt forego this ability and instead can be used to negate the effects of an enemy Security Specialist onboard a unit in the target squadron. (Restricted)

Improved Ejection Seat – Level 1

Effect: The officer will always survive any engagement, even if his flight, squadron, or task force is destroyed in battle.

Intelligence Operative – Level 1

Effect: Increases the difficulty level of all Intel missions launched against the officer's flight or carrier unit by 1. (Restricted)

Flight Wing

A *flight wing* (or simply a *wing*) is a group of up to 4 flights.

Political Favorite – Level 1

Effect: The officer's rank is increased by an additional +1 for each level of this ability.
Example: An Level 2 Fleet Officer whose only two levels are in Political Favorite would have an effective officer rank of 4 instead of 2.

Anti-Piracy Training – Level 2

Effect: This officer's flight wing ignores below readiness modifiers in raider encounters. (Restricted)

Attack Run Coordinator – Level 2

Effect: If the officer's flight wing is on a dedicated Anti-Ship mission, it may change its assigned target after the resolution of ship fire in Fire Phase One. (Restricted)

Ballistic Specialist – Level 2

Effect: The officer's flight wing receives one free ballistic package at no additional cost. If the optional CG 4.21 Ballistic Packages is not in use, the wing instead receives a +1 DV, +1 AS, or +1 AF bonus instead. This officer ability only affects Ballistic flight units. (Restricted)

Expert Interceptor – Level 2

Effect: If the officer's flight wing is on a dedicated Anti-Fighter mission, it may change its assigned target after the resolution of ship fire in Fire Phase One. (Restricted)

Jump Pilot – Level 2

Effect: When command a wing of FTL-capable flight units, the wing's basic supply range is increased by 1 jump and is considered a Fast Ship for purposes of movement. (Restricted)

Strike Commander – Level 2

Effect: The officer's flight wing considers all enemy units to be in a formation bonus 1 level lower than they actually are for purposes of directed damage. (Restricted)

Escort Pilot – Level 3

Effect: The officer's flight receives the Guardian (1) special ability. If the assigned flight already has the Guardian ability, increase its Guardian rating by 1. Only one level of this ability has any effect.

Recon Pilot – Level 3

Effect: The officer's flight receives the Reconnaissance Unit special ability. Only one level of this ability has any effect.

Strikefighter Pilot – Level 3

Effect: The officer's flight receives the Disruptor (1) special ability. If the assigned flight already has the Disruptor ability, increase its Disruptor rating by 1. Only one level of this ability has any effect.

Wing Commander – Level 3

Effect: This officer improves the effectiveness of dedicated Anti-Ship and Anti-Fighter flight missions. Flights in the officer's wing receive an additional +1 AS bonus when on dedicated Anti-Ship missions, or a +1 AF bonus when on dedicated Anti-Fighter missions. (Restricted)

10.1.2.3 Ground Officer Abilities

Attack (Ground)

Attack: Unit – Level 1

Effect: +1 Attack to the officer's ground unit.

Attack: Planet – Level 3

Effect: +1 Attack to all of the empire's ground units at the officer's location (ship, if invading from transports, or a planet). This ability may only be purchased once per officer. (Restricted)

Defense (Ground)

Defense: Unit – Level 1

Effect: +1 Defense to the officer's ground unit.

Defense: Planet – Level 3

Effect: +1 Defense to all of the empire's ground units at the officer's location (ship, if invading from transports, or a planet). This ability may only be purchased once per officer. (Restricted)

Attrition (Ground)**Attrition: Unit – Level 1**

Effect: +1 Attrition to the officer's ground unit.

Attrition: Planet – Level 3

Effect: +1 Attrition to all of the empire's ground units at the officer's location (ship, if invading from transports, or a planet). This ability may only be purchased once per officer. (Restricted)

Miscellaneous (Ground)**Invasion Specialist – Level 1**

Effect: This officer's unit receives an additional +1 Attack when invading from Assault ships.

Tactical Support Specialist – Level 1

Effect: The bombardment point requirement for all CG 3.6.5.3 Tactical Support conducted at the officer's location is reduced from 4 to 3. This ability may only be purchased once per officer and its effects are not cumulative.

Experienced Peacekeeper – Level 2

Effect: The officer's ground unit receives the Peacekeeper special unit ability. This ability may only be purchased once per officer.

Seasoned Marine – Level 2

Effect: The officer's ground unit receives the Marine special unit ability. This ability may only be purchased once per officer.

Defensive Position – Level 3

Effect: +1 Defense dug-in bonus to all of the empire's ground units at the officer's location. Obviously, the officer must be assigned to a planet for this ability to have any effect. This ability may only be purchased once per officer. (Restricted)

Infrastructure Suppression – Level 3

Effect: Once a beachhead has been captured on a planet, this officer allows his empire to perform CG 3.6.5.4 Productivity Suppression at his location at a cost of 3 bombardment points per Productivity suppressed, rather than the 4 bombardment points typically required for this action. This ability may only be purchased once per officer. (Restricted)

10.1.2.4 Administrator Abilities**Environmental (Administrator)****Environmentalist – Level 1**

Effect: This officer increases his assigned system's Carrying Capacity by 10% (minimum 1). Capacity will return to normal if the Environmentalist leaves the system. (Restricted)

Charismatic – Level 1

Effect: +1 bonus to all Morale checks made in the officer's system. (Restricted)

Technologist – Level 1

Effect: Every twelve turns, during the Tech Phase, this officer generates a number of bonus tech investment points equal to his assigned system's Census statistic. (Restricted)

Infrastructure (Administrator)

Basing Master – Level 1

Effect: The effective Productivity of the officer's assigned system is increased by 1 for purposes of basing capacity ONLY.

Industrial Magnate – Level 1

Effect: This officer reduced the cost of Productivity increases at his assigned system by 10%. Round all fractional Productivity costs up. (Restricted)

Mogul – Level 1

Effect: This officer increases his assigned system's system output by 10% (minimum 1) for purposes of commerce income ONLY. (Restricted)

Taskmaster – Level 1

Effect: The construction capacity at the officer's system is increased by 10%, and the number of available dock spaces at each shipyard is increased by 1.

Infrastructure Specialist – Level 2

Effect: This officer temporarily increases a system's Utilized Productivity statistic by 1. Productivity will return to normal if the Infrastructure Specialist leaves the system. (Restricted)

Military and Intelligence (Administrator)

Instructor – Level 1

Effect: This officer generates 1 XP per turn, which is placed into the empire's Military Experience Pool for future use. This XP is generated prior to the point in the Update Asset Phase that XP are spent.

Intelligence Liaison – Level 1

Effect: All Intel missions launched from the officer's system gain a +1 Intel bonus. (Restricted)

Martial Readiness – Level 1

Effect: All ground units in the officer's system receive an additional +1 dug-in defensive bonus. (Restricted)

Shrewd Leader – Level 1

Effect: This officer provides a +1 Defensive Intel bonus to his assigned system.

Logistics: Range – Level 3

Effect: If the officer's system is a supply point, the system basic supply route is increased by 1. (Restricted)

Logistics: Supply Depot – Level 3

Effect: This officer acts like a supply depot at his current location. (Restricted)

10.1.2.5 Diplomat Abilities

Diplomacy (Diplomat)

Charismatic – Level 1

Effect: +1 bonus to all Morale checks made in the officer's system. (Restricted)

Negotiator – Level 1

Effect: This officer produces 1 Intel each turn for use on diplomatic actions only. The Intel is lost if it is not used; it does not carry over from turn to turn.

Diplomatic Courier – Level 2

Effect: This officer is self-mobile and can use a personal transport to move about independently. The courier vessel is considered a Fast Ship with a DV equal to the officer's rank and all other statistics (including CC) set to 0. This ability can only be purchased once. (Restricted)

Firebrand – Level 2

Effect: When assigned to an attempt to break a treaty or declare hostilities/war against another power, this officer adds +10% to the attempt. (Restricted)

Peacemaker – Level 2

Effect: When assigned to a specific foreign power, this officer will modify the opposing empire's chances of breaking a treaty or declaring hostilities/war against the officer's power by -10%. (Restricted)

Special Envoy – Level 2

Effect: The unit this officer is assigned to receives the Diplomatic special unit ability. If the unit already has the Diplomatic ability, then the officer will instead generate 1 extra diplomatic Intel point each turn. This Intel point must be spent on the turn it is generated or it is lost, and it can only be applied towards diplomatic actions. If the officer is not assigned to a ship, then this ability has no effect unless the officer is assigned to an embassy.

Ambassador – Level 3

Effect: When assigned to an embassy, this officer generates an additional 2 Intel points each turn for use on diplomatic actions only. The Intel is lost if it is not used; it does not carry over from turn to turn. If your campaign does not utilize the embassies, the ability instead increases the amount of diplomatic Intel points the officer receives by 25% per level of this ability (round up). (Restricted)

Spycraft - General (Diplomat)**Infiltration – Level 1**

Effect: This officer ignores 1 point of Defensive Intel in the target system.

Stealth Infiltrator – Level 2

Effect: This officer is self-mobile and can use a stealth infiltration craft to move about independently. The infiltrator vessel is considered both a Fast Ship with a Stealth unit, with a Stealth rating equal to the officer's rank. The ship has a DV 1 and all other statistics (including CC) set to 0. This ability can only be purchased once. (Restricted)

Intel: Difficulty – Level 5

Effect: All Intel missions this officer performs have their difficulty level reduced by 1 (minimum difficulty 1). This ability can be purchased only once. (Restricted)

Spycraft - Espionage (Diplomat)**Espionage: Fleet – Level 1**

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: Fleet missions.

Espionage: System – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: System missions.

Espionage: Intel – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: Intel missions.

Espionage: Tech – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: Tech missions.

Espionage: Trade – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: Trade missions.

Espionage: Troops – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: Troops missions.

Espionage: Officer – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Espionage: Officer missions.

Intel: Espionage – Level 4

Effect: This officer receives a +1 Intel bonus when assigned to an Espionage mission. (Restricted)

Spycraft - Sabotage (Diplomat)**Sabotage: Industrial – Level 1**

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Industrial missions.

Sabotage: Counter-Intel – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Counter-Intel missions.

Sabotage: Tech – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Tech missions.

Sabotage: Troop – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Troop missions.

Sabotage: Starship – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Starship missions.

Sabotage: Installation – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Installation missions.

Sabotage: Population – Level 1

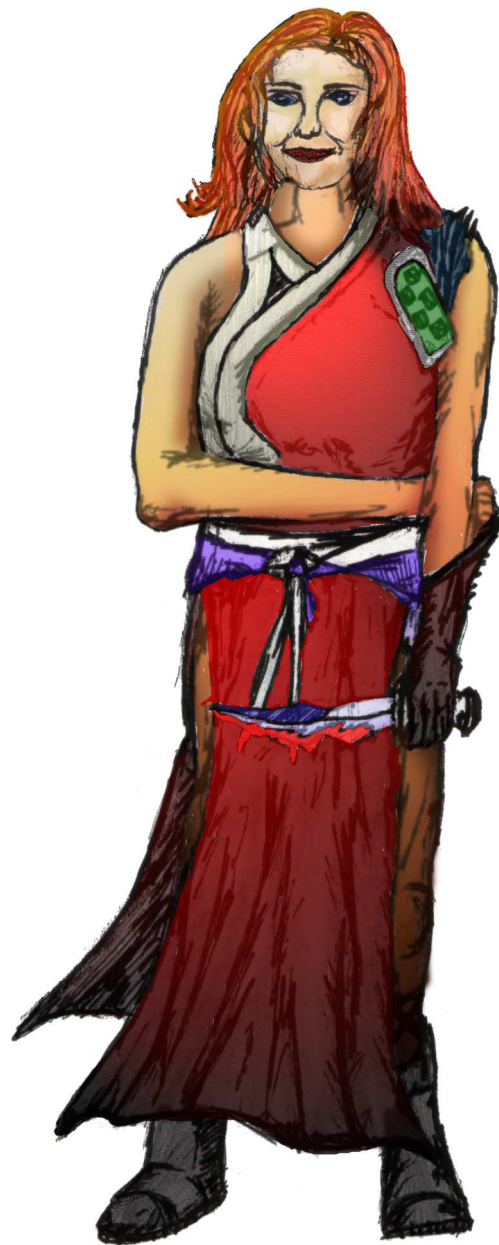
Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Population missions.

Sabotage: Assassination – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Assassination missions.

Sabotage: Capture Officer – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Capture Officer missions.

**Sabotage: Rescue Officer – Level 1**

Effect: This officer receives a +1 Intel bonus when assigned to Sabotage: Rescue Officer missions.

Intel: Sabotage – Level 4

Effect: This officer receives a +1 Intel bonus when assigned to a Sabotage mission. (Restricted)

Spycraft - Insurgencies (Diplomat)**Insurgency: Insurgency – Level 1**

Effect: This officer receives a +1 Intel bonus when assigned to Insurgency: Insurgency missions.

Insurgency: Counter-Insurgency – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Insurgency: Counter-Insurgency missions.

Insurgency: Officer Subversion – Level 1

Effect: This officer receives a +1 Intel bonus when assigned to Insurgency: Officer Subversion missions.

Intel: Insurgency – Level 4

Effect: This officer receives a +1 Intel bonus when assigned to an Insurgency/Counter-Insurgency mission. (Restricted)

10.1.2.6 Scientist Abilities**Exploration (Scientist)****Adventurer – Level 1**

Effect: The officer's unit receives a +1 scout function bonus for 2.2 Exploration use only. This bonus can only be used if the officer's unit has either the Scout or Explorer special ability.

Planetary Surveyor – Level 1

Effect: When using the optional 2.3 Star System Surveys rules, this officer increases his unit's available scout functions by 1 for purposes of performing survey missions only. This scout function bonus has no other use. If these optional rules are not in effect, the ability has no effect.

Xenoarchaeology – Level 1

Effect: When this officer is in assigned to a fleet that is encountering either ancient ruins or an alien derelict, all tech investment bonuses are increased by 20% (round up).

If rolling on a special artifact or derelict chart, this officer can re-roll if the first result is not to the player's liking. The second roll cannot be re-rolled, however. (Restricted)

Science Vessel – Level 2

Effect: This officer is self-mobile and has access to a small science vessel so that he can move about independently. The science vessel is considered a Fast Ship with a DV equal to the officer's rank and all other statistics (including CC) set to 0. The science vessel is also equipped with the Explorer ability, with a rating equal to the officer's level in the Scientist class. This ability can only be purchased once. (Restricted)

Explorer – Level 3

Effect: The officer's unit receives a +1 scout function bonus for 2.2 Exploration use only. If the officer's unit is not a Scout or Explorer it will instead receive the Explorer (1) unit special ability.

Medicine (Scientist)**Public Health Coordinator – Level 1**

Effect: All officer survival rolls made at the officer's assigned planet receive a +20% bonus, improving the chances of survival. (Restricted)

Doctor: Ship – Level 1

Effect: All officer survival rolls made at the officer's unit receive a +10% bonus, improving the chances of survival. Officers assigned to Hospital ships increase this bonus by 10%, from +10% to +20%. (Restricted)

Terraforming Specialist – Level 1

Effect: Reduces the cost of one terraforming project at the officer's location by 5%. Round fractional project costs up. (Restricted)

Biological Weapons Expert – Level 2

Effect: When assigned to a unit, this officer provides 1 free Weapon of Mass Destruction for use each campaign turn. (Restricted)

Doctor: Squadron – Level 2

Effect: All officer survival rolls made in the officer's squadron receive a +10% bonus, improving the chances of survival. Officers assigned to Hospital ships increase this bonus by 10%, from +10% to +20%. (Restricted)

Doctor: Task Force – Level 3

Effect: All officer survival rolls made in the officer's task force receive a +10% bonus, improving the chances of survival. Officers assigned to Hospital ships increase this bonus by 10%, from +10% to +20%. (Restricted)

Terraforming Master – Level 3

Effect: Reduces the cost of *all* terraforming projects at the officer's location by 5%. Round fractional project costs up. (Restricted)

Engineering (Scientist)**Prototype Designer – Level 1**

Effect: If using the 7.7 Prototyping rules, this officer subtracts 1 from rolls on the Prototype Chart for units being built at his location. If those rules are not in use in your campaign, this officer instead increases the number of available dock spaces at all of the system's shipyards by 1. (Restricted)

Repair Specialist – Level 1

Effect: The repair cost of the officer's unit is reduced by 1 (minimum repair cost of 1 economic point). (Restricted)

Researcher – Level 1

Effect: This officer generates 1 point of tech investment each campaign turn.

10.1.2.7 Rogue Abilities**Fleet Officer Abilities (Rogue)**

Anti-Fighter: Ship – Level 1
 Anti-Ship: Ship – Level 1
 Assault Specialist – Level 1
 Basing: Ship – Level 1
 Command Rating: Ship – Level 1
 Defense: Ship – Level 1
 Engineer: Damage Control – Level 1
 Escape Pod – Level 1
 Formations: Ship – Level 1
 Intelligence Operative – Level 1
 Raiding Specialist – Level 1
 Security Specialist – Level 1
 Logistics: Supply Levels – Level 2
 Master Strategist – Level 2
 Master Tactician – Level 2
 Logistics: Range – Level 3

Flight Officer Abilities (Rogue)

Anti-Fighter: Ship – Level 1
 Anti-Ship: Wing – Level 1
 Basing: Carrier – Level 1
 Breaching Specialist – Level 1
 Defense: Wing – Level 1
 Improved Ejection Seat – Level 1
 Intelligence Operative – Level 1
 Strike Commander – Level 2

Ground Officer Abilities (Rogue)

Attack: Unit – Level 1
 Attrition: Unit – Level 1
 Defense: Unit – Level 1
 Invasion Specialist – Level 1
 Tactical Support Specialist – Level 1
 Seasoned Marine – Level 2
 Infrastructure Suppression – Level 3

Administrator Abilities (Rogue)

Basing Master – Level 1
 Charismatic – Level 1

Intelligence Liaison – Level 1
Martial Readiness – Level 1
Shrewd Leader – Level 1
Taskmaster – Level 1
Infrastructure Specialist – Level 2
Logistics: Range – Level 2
Logistics: Supply Depot – Level 3

Diplomat Abilities (Rogue)

Negotiator – Level 1
Infiltration – Level 1
Espionage: Fleet – Level 1
Espionage: Intel – Level 1
Espionage: Tech – Level 1
Espionage: Trade – Level 1
Espionage: Officer – Level 1
Sabotage: Industrial – Level 1
Sabotage: Counter-Intel – Level 1
Sabotage: Tech – Level 1
Sabotage: Troop – Level 1
Sabotage: Starship – Level 1
Sabotage: Installation – Level 1
Sabotage: Population – Level 1
Sabotage: Assassination – Level 1
Sabotage: Capture Officer – Level 1
Sabotage: Rescue Officer – Level 1
Insurgency: Insurgency – Level 1
Insurgency: Counter-Insurgency – Level 1
Insurgency: Officer Subversion – Level 1

Scientific Abilities (Rogue)

Adventurer – Level 1
Planetary Surveyor – Level 1
Ship's Doctor – Level 1
Repair Specialist – Level 1
Xenoarchaeology – Level 1

Rogue Special Abilities (Rogue)

Bodyguards – Level 1
Effect: This officer's guards negate the first point of Direct Assault attrition damage scored against his unit.

Bounty Hunter – Level 1

Effect: This officer's unit receives the Direct Assault (1) special unit ability. If the unit already is a Direct Assault unit, then its rating is increased by 1. During combat, this officer can forego the normal Direct Assault bonus and instead attempt to perform a special Assassination or Capture Officer Sabotage Intel mission. The attempt is made in the End of Round Phase. The amount of free Intel this officer receives for the mission is equal to his officer rank. Therefore a Bounty Hunter with an officer rank of 4 would receive 4 Intel points towards his mission. No enemy Defensive Intel in the system applies to this special mission's chance of success.

Criminal – Level 1

Effect: This officer provides +1 Intel to any one attempt per turn to increase Corruption in a system.

Merchant – Level 1

Effect: When assigned to a trade route, this officer generates +1 economic points of commerce income each turn.

Mercenary – Level 1

Effect: For purposes of ground combat, this officer is considered his own ground unit. The unit's Attack and Defense are increased by 1 for each level of this ability an officer purchases, and D Factor is d3. Attrition is always equal to 1 regardless of how many times this ability is purchased.

Operative – Level 1

Effect: This officer generates 1 Intel point each campaign turn that can be used for any purpose. If unused, this Intel point is lost. This Intel can be combined with other Intel sources.

Pirate – Level 1

Effect: +10% bonus to the Raiding Chance in the officer's current system location, and roll on the Raiding Table are made at a +1 bonus.

Rebel – Level 1

Effect: When assigned to a system, this officer can elect to modify Morale checks made in the system by ± 1 . The decision to do so is made in the player's turn orders, before Morale checks are made performed during the Update Asset Phase of the campaign turn. This ability can be used to spread dissension in enemy systems or strengthen resolve in friendly ones.

Stealthy Movement – Level 1

Effect: This officer's unit receives a -5% bonus to any CG 4.22 Stealth and Concealed Movement detection attempts.

Smuggler – Level 1

Effect: This officer's unit receives the Blockade Runner (1) special unit ability. If the unit is already a Blockade Runner, its rating is increased by 1. (Restricted)

Crime Lord – Level 3

Effect: The difficulty of increasing Corruption in the officer's system is reduced by 1. (Restricted)

Fast Little Ship – Level 3

Effect: This officer is self-mobile and can use a fast converted freighter to move about independently. The infiltrator vessel is considered a Fast Ship, with a DV equal to the officer's rank and AF equal to half the officer's rank (round up), and all other statistics (including CC) set to 0. This ability can only be purchased once. (Restricted)



CM's Note: CMs are encouraged to create new abilities and/or classes as necessary to capture the essence of their game world.

10.1.3 Officer Rank

Rank determines the seniority of the officer within his or her chain of command or

other hierarchy. The higher the officer's rank the greater the preference the officer shall receive when it comes to postings. A high-level officer will never be assigned to a location beneath his station. When assigning officers to positions in your empire (see 10.1.5 Officer Assignments), officer rank will be a determining factor in deciding officer assignments.

An elite officer's rank is equal to the total of all his or her officer class levels. To determine an elite officer's rank, sum all of the officer's class levels. The result is the officer's total rank.

Example: An officer is defined as a Fleet Officer (Level 2), Flight Officer (Level 1), and Scientist (Level 1). The officer's total rank is 4.

10.1.4 Experience Points

Experience points (XP) are used to purchase new officers, improve existing officers, and purchase additional crew grade levels. There are many ways that an empire can earn XP, but an empire will earn the majority of its experience via combat, particularly space combat.

Regardless of where experience comes from, unspent XP are placed into the empire's Military Experience Pool. On future turns, players may use some or all of the XP in their Military Experience Pools to make officer/crew purchases or improvements. The amount of XP in the Military Experience Pool should be tracked by the player, and will usually appear on the turn sheet and be tracked in a manner similar to the Military Intel Pool is tracked.

10.1.4.1 Earning Experience Points

The following section outlines the different ways that a power can earn XP. Most XP are earned as a result of participating in combat, but that is not the only way to increase an empire's available XP. Experience can also be earned when an officer successfully negotiates a treaty or performs an Intel mission.

10.1.4.1.1 Space Combat Experience

Use the following formula to calculate the XP earned as a result of a space combat engagement:

$$\begin{aligned}
 & \text{(Total Enemy Fleet Cost / Total} \\
 & \quad \text{Friendly Fleet Cost)} \\
 & \quad \times \\
 & \text{Cost of Enemy Units Damaged/} \\
 & \quad \text{Destroyed} \\
 & \quad \times \\
 & \text{(Cost of Surviving Friendly Units /} \\
 & \quad \text{Total Friendly Fleet Cost)} \\
 & = \text{XP Earned} \\
 & \quad \text{Round Down}
 \end{aligned}$$

The total cost of either fleet is based on the original construction costs of the units that comprise them. In the case of units with fractional construction costs (such as flights), round all fractions up before performing the calculations above. Crippled units apply their full construction cost towards their fleet's cost total. The same holds true for calculating the cost of units destroyed in battle.

When calculating the cost of units damaged or destroyed in a battle, units that have been crippled but not destroyed in the encounter add their repair cost to the damaged/destroyed total for the power's fleet instead of their original construction cost. For example, a DV 8 Heavy Cruiser that is crippled in the battle will cost 2 economic points to repair. When calculating space combat experience, the Heavy Cruiser adds 2 economic points to the damaged/destroyed total for its fleet.

The 'Cost of Enemy Units Damaged/Destroyed' is the economic cost of enemy units destroyed or crippled in the battle. Destroyed units add their full construction cost to this total, while newly crippled units add their repair cost (and detailed above).

The 'Cost of Surviving Friendly Units' is equal to the power's Total Friendly Fleet Cost minus the 'cost of all friendly units damage/

destroyed during the battle: the full cost of destroyed units and the repair cost of crippled units – in other word's, the opponents 'Cost of Enemy Units Damages/Destroyed').

The more disproportionate the forces in a space engagement, the more variance in the number of XP earned by either side. A larger force that trounces a much weaker force will earn comparatively little experience from the encounter because the inferior opponent never stood a chance against them. Conversely, a small fleet that managed to best a larger, costlier fleet will reap the benefits in the form of more XP from the confrontation.

Example: Your fleet moves into an enemy system and engages an enemy fleet. Your fleet is comprised of 1 Dreadnought (cost 12), 3 Heavy Cruisers (cost 8), 6 Light Cruisers (cost 5) and 6 Frigates (cost 3). The enemy's fleet is comprised of 2 Battleships (cost 13), 1 Heavy Cruiser (cost 7), 13 Destroyers (cost 4), and 2 Corvettes (cost 2).

After the scenario is resolved, your fleet has taken the following damage: 1 Dreadnought crippled, 2 Heavy Cruisers destroyed, 3 Light Cruisers crippled, 1 Light Cruiser destroyed, 6 Frigates destroyed. The enemy fleet has taken the following damage: 1 Battleship crippled, 1 Battleship destroyed, 1 Heavy Cruiser destroyed, 5 Destroyers crippled, 3 Destroyers destroyed, 2 Corvettes destroyed.

Calculate Experience for Your Fleet

$$(89 / 84) * 45 * (36 / 84) = 20 \text{ XP earned}$$

Calculate Experience for Their Fleet

$$(84 / 89) * 48 * (44 / 89) = 22 \text{ XP earned}$$

10.1.4.1.2 Ground Combat Experience

Use the following formula to calculate the XP earned as a result of a ground combat engagement:

(Total Enemy Attrition / Total Friendly Attrition)

x

Enemy Attrition Damaged/Destroyed

x

(Surviving Friendly Attrition / Total Friendly Attrition)

x

5

= XP Earned

Round Down

Total the Attrition of all enemy and friendly ground units at the beginning and end of the engagement and use these totals to figure the experience gained by either or both forces.

Example: Your ground forces are engaging those of an enemy combatant on a distant world. Your ground forces are comprised of 4 Regulars (Attrition 2) and 1 Heavy Regulars (Attrition 3). The enemy has 3 Marines (Attrition 2). In the fighting, your forces lose 2 Regulars and take 1 Attrition damage to a third Regular. In return, you kill two of the enemy Marine units.

Calculate Experience for Your Forces

$(6 / 11) * 4 * (6 / 11) * 5 = 5 \text{ XP earned (RU)}$

Calculate Experience for Their Forces

$(11 / 6) * 5 * (2 / 6) * 5 = 15 \text{ XP earned (RU)}$

10.1.4.1.3 Diplomatic Action Experience

Diplomats assigned to a successful attempt to either sign, break, or declare generate XP based on the level of the treaty. The XP generated by these diplomatic actions are one-time bonuses; they are not cumulative for all officers participating in the negotiations.

Multiple officers assigned to the same diplomatic action will not each receive a diplomatic XP bonus.

No XP are earned for signing, breaking, or declaring when Diplomats are not assigned to the attempt.

Armistice: 10 XP

Tribute Treaty: 15 XP

Declaration of Hostilities: 5 XP

Declaration of War: 10 XP

Non-Aggression Treaty: 5 XP

Trade Treaty: 5 XP

Peace Treaty: 10 XP

Naval Appropriations Treaty: 10 XP

Co-Belligerency Pact: 15 XP

Mutual Defense Pact: 15 XP

Research Treaty: 15 XP

Alliance: 25 XP

Example: You assign two Diplomats to assist in breaking a Peace Treaty with another power. The attempt succeeds, earning the player 10 XP.

10.1.4.1.4 Intel Mission Experience

Diplomats (spies) assigned to successful Intel missions generate XP equal to five times the difficulty level of the mission performed. The XP generated by these successful Intel missions are not cumulative; multiple officers assigned to the same mission will not each receive the XP bonus.

No XP are earned for Intel missions where Diplomats are not assigned to the mission.

Mission Difficulty x 5 = XP Earned

Example: One of your spies is assigned to complete an Espionage: Tech mission in an enemy star system. The spy completes the mission successfully. This Intel mission has a difficulty level of 3, so 15 XP is earned as a result of the mission's success.

10.1.4.1.5 Experience Points from Military Institutes (Optional)

CMs may decide to allow their players to build special planetary facilities to provide a constant influx of XP for their empire. Military institutes are described in 7.2.8 Military Institute and provides the owning empire with an amount of XP per turn equal to one-third its location's Census statistic (round up). Military institutes require an initial investment in resources to build along with a continuing maintenance expense, but they can provide a valuable resource for players looking to improve their force's overall experience level.

10.1.4.2 Spending Experience Points

XP expenditures and purchasing take place during the Update Asset Phase of the turn. Unless otherwise noted, XP *must* be spent at the time that they are earned unless there are not enough XP available to purchase/improve an officer or increase the grade levels of any units. Any XP remaining after all possible experience-related purchases are made are placed in the Military Experience Pool for later use, at the player's discretion. A power cannot choose to place XP into the Military Experience Pool if it could still purchase one or more officer or crew upgrades.

By default, it costs 10 XP to create a new officer (see 10.1.4.3 Creating New Officers), or improve an existing officer's level in an existing class. Granting an officer Level 1 in a class he or she does not currently have a level in costs twice this amount, or 20 XP. See 10.1.4.4 Improving Existing Officers for more information on upgrading elite officers. Elite officer may only receive one new level/ability per campaign turn. Officers created on the current campaign turn cannot be improved on the same turn. The XP cost for crew and army grade levels are listed under the 10.2 Personnel Grade Levels section of these rules.

10.1.4.3 Creating New Officers

New officer abilities are purchased during the Update Asset Phase after all other turn actions have been completed. Certain events during the turn can result in XP being earned. Refer to 10.1.4.1 Earning Experience Points for more details. In general, combat, diplomacy, and intelligence gathering during a turn can result in XP. Players may use the XP earned during the turn in conjunction with XP currently in their Military Experience Pool to purchase new abilities for officers under their control. They may also use spare XP from their Military Experience Pool to purchase new officers at this time. It costs 10 XP to create a new officer.

The situation in which a new officer is generated and where the XP originated determines what type of new officer can be created. The following is a list of common circumstances that can result in the earning of experience that can in turn be used to create a new elite officer. Each of these situations was described under 10.1.4.1 Earning Experience Points and have restrictions as to what types of officers they can benefit.

- Officers created at the end of a space combat encounter using Space Combat Experience will be either a Fleet or Flight Officer (player's choice).
- Officers created at the end of a ground combat encounter using 10.1.4.1.2 Ground Combat Experience will be new Ground Officers.
- Officers created as the result of diplomatic actions using 10.1.4.1.3 Diplomatic Action Experience will be new Diplomats.
- Officers created as the result of successful Intel missions using 10.1.4.1.4 Intel Mission Experience will be new Diplomats.
- Officers created by spending spare experience out of the empire's Military Experience Pool can be of any type.

As first stated in 10.1.4.2 Spending Experience Points, the player must spend as many XP as possible to purchase new officers

or improve existing ones following each event that earns XP. Any points remaining less than the cost of the cheapest officer/crew purchase are then transferred into the empire's Military Experience Pool for later use.

Officers created using XP from the Military Experience Pool are typically of a random type, and will likewise receive a random ability upon creation. Roll on the New Officer Class Table (see next page for all related charts) to determine the class in which the new officer will receive its first level and ability. Non-military powers (civilians, pre-independence rebels, etc.) do not roll on this chart, as they are limited to creating officers of the Rogue class exclusively.

An officer of a specific class and area of emphasis can be created using XP from the Military Experience Pool, but the cost to do so is twice that of normal officer creation (20 XP vs. 10 XP).

After rolling on the chart, roll on the chart for that officer class to determine what area of emphasis this new Level 1 officer will receive its first ability in. Once an area of emphasis has been determined, randomly assign one Level 1 officer ability from that area to the new officer.

10.1.4.4 Improving Existing Officers

XP can be spent to improve the abilities of existing elite officers. There are many reasons a power would want to improve existing officers instead of purchasing new ones. The most apparent reason is that the best officer abilities in a class are only available to officers with a high level in that class. Creating large numbers of new officers will give an empire a quantitative benefit, but cultivating a few quality officers can oftentimes be more advantageous and "cost-effective" for the experience spent to purchase them.

It costs 10 XP to purchase an additional level in a class the elite officer already holds one or more abilities in. It costs twice this, 20 XP, to purchase a Level in a class the officer does not currently have abilities in. For this reason, players are encouraged to focus their

officer's abilities rather than create "super characters" with high levels in multiple classes.

Example: A Level 1 Ground Officer is due for a promotion. The officer has Level 1 in the Ground Officer class, so it would cost 10 XP to purchase Level 2 in that class, or 20 XP to purchase Level 1 in any other officer class.

After an officer purchases a class level, his or her effective level in that ability is increased by 1 (ex: a Level 1 officer becomes a Level 2 officer, a Level 2 officer becomes a Level 3 officer, and so on). The player must then select one ability from the selected class in which the level was purchased, with a level prerequisite equal to or less than the officer's new level, to apply to the elite officer. Level prerequisite for officer abilities are given after their name, using the notation "Level X", where 'X' is the minimum level at which the ability can be purchased.

As indicated in 10.1.2 Officer Abilities, an officer can purchase one class level improvement in a single campaign turn. This limits the officer to receiving no more than one new ability per turn. New elite officers created on the current campaign turn cannot be improved until the Update Asset Phase of the following campaign turn.

It will take an average officer many campaign years to reach truly heroic capabilities. It is far more likely that the officer will be killed or incapacitated long before reaching this point. For this reason, players are encouraged to balance their efforts between improving existing officers and creating new ones. In most situations it will be better to have three Level 3 officers of a type than it is to have a single Level 9 officer. That one Level 9 officer might be incredibly powerful, but the three lower level officers can be assigned throughout an empire's territories and are less prone to being taken out in one unlucky battle or planetary assault.

New Officer Generation Charts

New Officer Class Table (Roll d6)

Result	Effect
1	Fleet Officer
2	Flight Officer
3	Ground Officer
4	Administrator
5	Diplomat
6	Scientist

Administrator Result Table (Roll d10)

Result	Effect
1-3	Environmental
4-7	Infrastructure
8-10	Combat

Fleet Officer Result Table (Roll d10)

Result	Effect
1-2	Defense
3-4	Anti-Ship
5-6	Anti-Fighter
7	Command
8	Basing
9	Miscellaneous - Combat
10	Miscellaneous - Non-Combat

Diplomat Result Table (Roll d10)

Result	Effect
1-6	Diplomacy
7	Spycraft - General
8	Spycraft - Espionage
9	Spycraft - Sabotage
10	Spycraft - Insurgency

Scientist Result Table (Roll d10)

Result	Effect
1-4	Exploration
5-7	Medicine
8-10	Engineering

Flight Officer Result Table (Roll d10)

Result	Effect
1-3	Defense
4-6	Anti-Ship
7-9	Anti-Fighter
10	Miscellaneous

Rogue Result Table (Roll d10)

Result	Effect
1-2	Fleet Officer Ability
3	Flight Officer Ability
4	Ground Officer Ability
5	Administrator Ability
6-7	Diplomat Ability
8	Scientist Ability
9-10	Rogue Special Ability

Ground Officer Result Table (Roll d10)

Result	Effect
1-3	Attack
4-6	Defense
7-9	Attrition
10	Miscellaneous

Elite Officer Generation Integrated Example:

To illustrate this more clearly, let's suppose that your empire has earned 42 XP from a recent space battle. One of your elite officers, a Level 2 Fleet Officer, was present in the battle. You could improve this existing officer's level in the Fleet Officer class one level for 10 XP, or purchase him a level in another unrelated class for 20 XP. In any event, only one level of ability can be purchased for this officer, the maximum any elite officer can receive in a single campaign turn. We pay 10 XP and increase the officer's level in the Fleet Officer class to 3, and then select an ability for this existing officer. This ability must be a Fleet Officer ability, as that is the class in which we purchased the additional level. The level prerequisite for the new ability is Level 3 or less. We choose Anti-Fighter: Squadron, a Level 3 ability in the Anti-Fighter area of emphasis under the Fleet Officer class. 32 XP remain to be spent.

Because this is enough to purchase a new officer, improve an existing officer, or improve a unit's crew grade level, we must continue purchasing/improving officers or crew levels until we cannot buy anymore. Ignoring crew grades (a separate, though related, optional rule), we opt to create three new elite officers, costing us a total of 30 XP. Because these officers are created using XP earned from a space combat scenario, we can only purchase new Fleet or Flight Officers, not officers of any other type. If our empire was a non-military organization these would be Rogues instead, but we are a true empire and not some pirate organization. We decide to create two new Fleet Officers, and one new Flight Officer to add to our fleet. All three officers begin with one level (Level 1) in their class.

Now that we have determined how many new elite officers we are going to create and what class each belongs to, we must roll twice on the Fleet Officer Result Table and once on the Flight Officer Result Table. We roll on these tables to determine

which areas of emphasis our new officers will receive their initial officer abilities in.

For the Fleet Officers, we roll two d10 dice and get results of '4' and '9'. A result of '4' on the Fleet Officer Result Table is 'Anti-Ship'. We must select an ability from this area of Fleet Officer emphasis that has a level prerequisite of Level 1. Only one such ability exists: Anti-Ship: Ship. For the second officer, '9' results in a 'Miscellaneous – Combat' ability being applied. As before, we must find an ability with a level prerequisite less than or equal to our level in the class (Level 1) to apply to the officer. Of the options available, we will select Security Specialist.

The Flight Officer rolls d10 with the die coming up a '1', which corresponds to 'Defense' on the Flight Officer Result Table. There is only one applicable Level 1 trait available in this area, Defense: Wing, so we will apply it to the new Flight Officer.

We are now finished generating our new elite officers and we have 2 XP remaining, which is not enough to make any additional purchases/improvements. These 2 XP are transferred into our Military Experience Pool and we will be able to use them on future campaign turns.

10.1.5 Officer Assignments

After an elite officer is created, the officer must be assigned to a posting. If the new officer is generated as the result of XP earned in combat, then the officer will begin play in the fleet or ground combat location that produced those XP. In all other instances, the officer enters play at a location of the player's choosing.

Elite officers are assigned to locations where their abilities can be used. Fleet Officers for instance would be assigned to ships or bases, while Flight Officers would be assigned to a flight based from a specific carrier unit. Officers can technically be assigned to postings at which they have no effects, but there is no reason to do this.

Multiple elite officers can be assigned to the same unit or mission, but this is rarely done. Elite officers represent the great movers and shakers of your campaign universe and, especially in a military environment, officers of the same type would not be assigned to the same location. The possibility does exist however that such postings could occur, so these rules do not constrain the player's ability to assign more than one officer to the same location, mission, or other purpose.

10.1.5.1 Fleet Officer Assignments

Fleet Officers are assigned to a specific base or ship. Fleet Officers will generally take command of the largest or most powerful vessel in their fleet, taking it as their task force flagship. The more impressive the unit, the more likely it will be taken as their flag. If you are unsure of what vessel is the most prestigious in a fleet, add the units' DV, AS, AF, CR, and Basing values. The higher the total, the more affluent the posting. It is important to note that bases by their very nature will have higher values, but assignment of an officer to a fixed defense point is always at the player's discretion. You will never be forced to assign an officer to a base.

If more than one Fleet Officer is assigned to a fleet, they will take command of warships in the fleet in order of their officer rank. When assigning these officers, preference is given first to the prestige of the posting and second to the command ship's squadron placement. Officers will prefer to be placed in command of their own squadron within the task force rather than serving under another elite officer. However if a single squadron should contain three battleships in want of an elite officer and all other squadrons contain at most a heavy cruiser, then the Fleet Officer will of course take the battleship posting since it is the most prestigious. Alternatively, if there was only one battleship in the fleet and it already had been assigned to the highest-ranking officer at the location, then additional officers would vie for the captaincy of the available heavy cruisers instead.

Fleet Officers should be assigned to fleets commensurate with their rank. Any task force commanded by a Fleet Officer should have at least 1 squadron for every level of the Fleet Officer class the officer possesses. In the case of starbase appointments, the base must have a DV value equal to two times the officer's Fleet Officer level. If none of an empire's task forces are large enough to support their highest-ranking Fleet Officer, then that officer should be assigned to the largest fleet that the empire controls. During peacetime this stipulation is to be followed closely, but during wartime the players will have some flexibility in officer assignments. However, players are still not allowed to rotate a high-ranking admiral to command fleets beneath their station. They may however keep their officers stationed at worlds while their fleets are repaired or replenished, which may effectively keep them out of the war for some time.

Multiple Fleet Officers can be assigned to the same unit and all of their bonuses, barring non-cumulative (Restricted) ones, shall stack normally. This can create some especially powerful statistics for these vessels. The disadvantage to assigning multiple officers to the same location is that all of your eggs will be in one basket, and the destruction of that one ship could spell doom for most if not all of the officers!

10.1.5.2 Flight Officer Assignments

Flight Officers are assigned to a specific flight on a planet, ship, base, or any other unit with available Basing Capacity. Once assigned, Flight Officers begin interacting with their fellow pilots and help to increase the proficiency of flight operations at their location.

Rank has less meaning for Flight Officers, though assignment preferences still exist. A Flight Officer should be assigned to a location with a number of flights present equal to the officer's Flight Officer level divided by 2 (round up). Unlike with Fleet Officer, this is not a hard and fast rule but more of a general guideline for players and CMs to follow. Some powers do not field dedicated carriers and may

choose to keep their best Flight Officers on casual carriers out of practicality.

Multiple Flight Officers cannot be assigned to the same flight unit, but multiple Flight Officers can be assigned to the same carrier or other Basing location. In these cases, all of the officers' bonuses, barring non-cumulative (Restricted) ones, stack normally. As noted with Fleet Officer assignments, stationing more than one Flight Officer off of a carrier is not generally recommended.

10.1.5.3 Ground Officer Assignments

Ground Officers are assigned to a specific ground unit. The highest-ranking Ground Officer at a location should be assigned to the most expensive military unit at the location, unless their abilities are better served by assignment to tertiary support 'ground units,' such as Supply Depots. When conducting invasions, the senior Ground Officer may join any ground unit he or she sees fit to command.

Multiple Ground Officers cannot be assigned to the same ground unit, but they may be assigned to different ground units at the same location. All of the officers' bonuses, barring non-cumulative (Restricted) ones, stack normally.

10.1.5.4 Administrator Assignments

Administrators are assigned to planets or bases only. The seniority (rank) of the Administrator is very important in determining where he or she can be assigned. Administrators can only be assigned to planets with a Census equal to or greater than half their Administrator class level (round up). When being assigned to a base, the fixed defense installation must have a DV equal to two times the officer's Administrator level. Administrators assigned to either a planet or base at the same location provide their bonuses to both the planet and all fixed defenses (bases, satellites, mines) at that location.

Multiple Administrators can be assigned to the same location. All of the officers' bonuses,

barring non-cumulative (Restricted) ones, stack normally.

10.1.5.5 Diplomat Assignments

Diplomats can be assigned to planets, bases, or ships. They may also be assigned to deal with specific foreign powers, either by moving the officer into a foreign system owned by that power or else stationing them at an embassy at the foreign empire's capital system (see 7.2.7 Embassy). Unless stationed at an embassy, the foreign power may contest the officer's assignment and have them expelled from its territories.

Diplomats acting in an intelligence gathering capacity (e.g., performing Intel missions) can be assigned to any planet, base, or ship belonging to the officer's empire. These officers can participate in any mission that traces its route through their current location. The officer's location does not need to be the origin of the mission, or pay an Intel surcharge to assist in the mission; simply being along the Intel mission's route is enough to allow them to assist.

The seniority (rank) of Diplomats determines who is heading up a negotiating or intelligence team, but has little effect past that formality. Diplomats should typically be assigned to posts of an importance commensurate with their diplomatic skill level, but this is not always the case. These rules do not enforce any limitations on the deployment or assignment of Diplomats.

Multiple Diplomats can be assigned to the same location. All of the officers' bonuses, barring non-cumulative (Restricted) ones, stack normally.

10.1.5.6 Scientist Assignments

Scientists are special in that they can be assigned to any location that other elite officers could also be assigned. Rank is not a factor for Scientists. Scientists typically serve in support roles, providing valuable assistance to other officer types.

Multiple Scientists can be assigned to the same location. All of the officers' bonuses, barring non-cumulative (Restricted) ones, stack normally.

10.1.5.7 Rogue Assignments

As with Scientists, Rogues can be assigned to any location that other elite officers could also be assigned. Rogues might be renegades or rebels, but they still adhere to a well-defined pecking order and obey in spirit the concept of officer rank. However this class does not carry any special assignment restrictions based on rank, and it is up to the player or CM to interpret the interactions between Rogues of differing officer ranks.

Multiple Rogues can be assigned to the same location. All of the officers' bonuses, barring non-cumulative (Restricted) ones, stack normally.

10.1.6 Reassignment of Elite Officers

Any elite officer may be reassigned between units or locations as long as both are in supply and the route connecting the two is not cut off by enemy forces. This route can pass through foreign territory belonging to allies or mutual defense partners without incident, but otherwise it cannot be traced through the territory of a power that you have less than a mutual defense treaty with.

Reassigning an elite officer to another unit or location in the same system takes effects immediately. Otherwise it takes one complete campaign turn for the officer to travel to the destination. During this turn, officers in transit between posts are in limbo and do not provide any of their normal bonuses to either their previous or intended locations.

In the event that the officer's intended destination is captured or destroyed before his/her arrival, the officer's reassignment orders are cancelled and the officer is returned to a system of the player's choosing the is under his or her empire's control. The player may then choose a new location to assign the officer to on the following campaign turn.

10.1.7 Officers and the Results of Combat

The galaxy is a dangerous place, even for the most remarkable of elite officers. There almost always exists the possibility that each confrontation with the enemy will be the officer's last. Odds are that more seasoned officers will survive these encounters intact, but many promising captains, generals, and planetary leaders will be lost along the way.

The chance of survival for each situation is provided below. Multiply the officer's rank by the applicable modifier to determine the officer's *survival chance*, then roll a percentile die. If the die result is greater than the survival chance, then the officer has perished.

10.1.7.1 Surviving Space Combat

Officers assigned to space units (ships, fights, bases, etc.) are often placed in jeopardy. There is always the chance that an officer will be killed during battle as a result of damage to his or her command ship, or even its outright destruction!

Officer Survival Chart: Space Combat

Command Ship Crippled:
25% times the officer's rank.

Command Ship Destroyed:
15% times the officer's rank.

Squadron Destroyed:
10% times the officer's rank.

Task Force Destroyed:
5% times the officer's rank.

10.1.7.2 Surviving Ground Combat

Ground combat is particularly deadly, oftentimes more so than space combat. Generals have a chance of surviving combat, even if their assigned ground unit is destroyed in battle.

Officer Survival Chart: Ground Combat

Ground Unit Damaged:
25% times the officer's rank.

Ground Unit Destroyed:
10% times the officer's rank.

**All Defending/Invading Ground
Units Destroyed:**
5% times the officer's rank.

10.1.7.3 Surviving Orbital Bombardment

Planet-based officers can come under fire from orbital bombardment. Most notable officers have the luxury of retreating to reinforced armored bunkers to weather the rain of destruction from the skies but even then there is a chance that the officer will be killed by the bombardment.

Unlike space or ground combat, the chance of an officer surviving orbital bombardment is proportional to the amount of bombardment points used against the planetary target. The greater the bombardment saturation, the lower the chance that an officer will survive it. However, if a colony is completely

Officer Survival Chart: Orbital Bombardment

1-12 Bombardment Points:
25% times the officer's rank

13-24 Bombardment Points:
20% times the officer's rank

25-36 Bombardment Points:
15% times the officer's rank

37-48 Bombardment Points:
10% times the officer's rank

49+ Bombardment Points:
5% times the officer's rank

Colony Destroyed:
Officer Killed

destroyed (e.g., call Census killed), then the officer will have no chance of survival.

10.1.7.4 Surviving Diplomatic Seizures

Diplomats are lucky in that they are not often placed in circumstances where their lives are really in danger. However, there is still a threat that they will be captured should diplomacy fail.

When a foreign power declares hostilities or war against an empire, that foreign power has the option of attempting to capture any Diplomats operating in its systems. If the foreign power decides to attempt to take their enemy's diplomatic staff hostage, a roll will be made for each of these threatened Diplomats. The chance of evading capture is 10% times officer's rank. If stationed at an embassy, the Diplomat receives an additional +20% bonus to this chance.

If the officer's roll fails, then they were captured by the foreign power. Those that successfully evade enemy attempts to apprehend them remain under their owning power's control. Usually these Diplomats will require retrieval by friendly starships.

Diplomats stationed on foreign planets when the foreign power makes its declaration may find it difficult (or even impossible) to extricate themselves from the planet. Such cases will usually end in the Diplomat eventually being captured by the opposition.

Diplomat Evasion Chance

Officer's Rank x 10%

Modifier:

Embassy: +20%

10.1.7.5 Surviving Intel Missions

Spies can be killed or captured as a result of botched Intel missions. After each failed Intel mission, Diplomats (spies) assigned to the mission must make a special saving roll. Using the failed mission's MFP as a target value, roll

d100. If the value is less than or equal to the MFP but still greater than half the MFP, then the officer was captured by the opposing power. If the value is less than half the MFP, then the spy was killed while performing the mission.

If an elite officer successfully completes her Intel mission, then there is no chance that she was captured or killed in the mission.

Failed Mission Effects

Saving roll less than or equal to MFP, but greater than half MFP:

Officer Captured

Saving roll less than or equal to half MFP:

Officer Killed

10.1.8 Capturing and Rescuing Enemy Officers

Elite officers can be captured by enemy forces in many different ways. For example, a victorious empire captures enemy officers that survived combat but were abandoned on the battlefield (whether accidentally, or by choice); an empire can attempt to capture diplomatic personnel following a declaration of hostilities/war; and spies can be captured following a failed Intel mission. Elite officers can also be captured as a result of a Sabotage: Capture Officer Intel mission (see 10.1.9.2 Sabotage Missions for more information).

Once captured, the capturing empire cannot force these officers to serve them, and captured officers do not provide any of their normal benefits while incarcerated. The capturing empire can use a special Officer Subversion Insurgency mission to attempt to break their prisoner's will and turn them to their side, but such missions are extremely difficult and rarely succeed. However captured officers make valuable hostages that can be ransomed or executed as the capturing player sees fit.

An empire has several options for recovering its captured officers.

The first is to deal directly with the opposing power, trading something of worth for a release of the hostages.

Another option is to lead a frontal, military assault against the location where the captured officer is being detained. This runs the risk of killing the officer, but it might be the fastest method of retrieval. If the assaulting empire wins the battle and the officer survives combat (and is not ferried away by retreating ships or excluded vessels), then the officer is rescued.

Perhaps the best option for recovery of a captured officer is the use of a Rescue Officer Intel mission. This special Sabotage mission attempts to rescue a particular officer at a known location.

Finally, Direct Assault units can be used to either capture or rescue officers during battle. It takes a number of Direct Assault attrition points equal to three times an officer's rank to capture them, or two times an officer's rank to rescue them. Attrition damage points used to capture/rescue an officer do not damage the ship or unit they are applied to; they instead apply solely to the capture/rescue attempt. Captured/rescued officers are transferred to the Direct Assault unit (or its carrier, in the case of Direct Assault flight units) following any successful attempt.

10.1.9 Elite Officer Intel Missions

The inclusion of elite officers in a campaign opens the doors for the inclusion of several additional Intel missions tailored specifically towards elite officers. Through the use of Intel, players can potentially uncover the location and specifics of an elite officer, and then assassinate, capture, or rescue them using Intel points alone.

10.1.9.1 Espionage Missions

Several existing Intel missions can be used to provide an empire with information on the presence of elite officers at specific locations (as indicated by the mission type). These pre-

defined missions should be used when players desire to find out the names and locations of enemy elite officers. Note that these missions will not betray the statistics or abilities of these elite officers, only the name of the officer and his or her location. To find out more detailed information about an officer you must use an Espionage: Officer Intel mission.

System (Difficulty Level 1): Reveals the presence, names, and locations of all elite officers assigned to planets and fixed defenses in the system.

Fleet (Difficulty Level 1): Reveals the presence, names, and locations of all elite officers assigned to space combat units (including fixed defenses) in the system.

Trade (Difficulty Level 1): Reveals the presence, names, and locations of all elite officers assigned to Trade Fleets in the system.

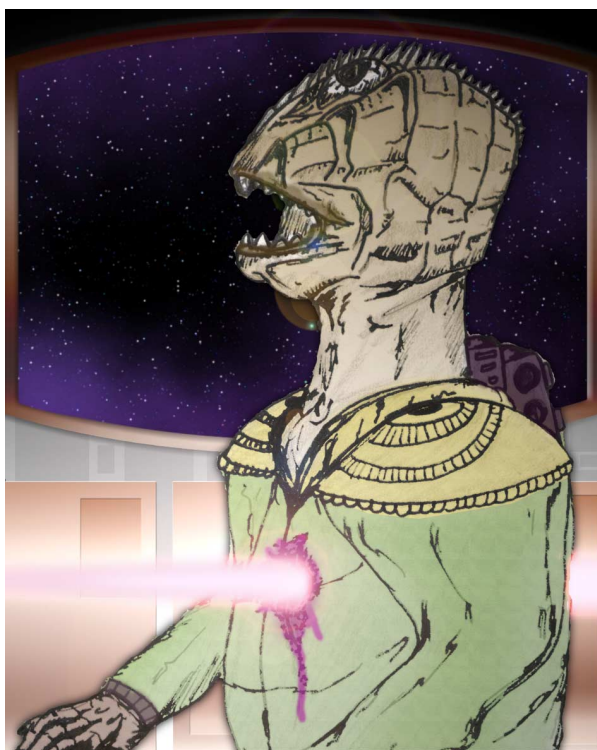
Troop (Difficulty Level 1): Reveals the presence, names, and locations of all elite officers assigned to ground combat units in the system.

Officer (Difficulty Level 2): This mission is an attempt to gather information on a specific elite officer in the target system. A successful Espionage: Officer mission will give the launching player full class, ability, and rank information on the specified elite officer. The officer must be in the target system in order for this mission to succeed.

10.1.9.2 Sabotage Missions

Empires can use sabotage missions to attempt to remove 'inconvenient' elite officers from the game, either by capturing them or simply killing them in cold blood. Powers may also use Intel to attempt to rescue captives that have been imprisoned by an opposing power.

Assassination (Difficulty Level: Varies): This mission is an attempt to assassinate a



specific enemy elite officer. The target of this mission should be noted before it is performed. For this reason the power will need to have gained sufficient intelligence as to the officer's location, such as through a successful Espionage: Officer mission, before a mission of this type is launched. The mission's difficulty is equal to the target officer's rank. The specified elite officer must be in the mission's target system in order for the mission to have any chance of success. If the mission does succeed, then the targeted officer will be killed and removed from play.

Empires are allowed to launch Assassination missions against systems without specifying a specific assassination target. In this case, the mission will target one random enemy officer in the system. Without a known target to hone in on though, the difficulty of the mission is increased by 2.

Whether or not the attempt is successful, if the target power learns who launched the assassination mission against its officer then that target power will receive a non-cumulative +50% bonus to breaking treaties and declaring hostilities or war on the

campaign turn following the assassination attempt. Attempting to murder an enemy officer (or foreign leader of any sort) in cold blood will cause a major diplomatic incident.

Capture Officer (Difficulty Level: Varies): This mission is an attempt to capture an enemy officer. You must know the enemy officer's location in order for a Capture Officer mission to be performed. The difficulty of this mission is equal to the enemy officer's rank. If successful, the enemy officer will be captured and returned to the system that launched the Intel mission.

Rescue Officer (Difficulty Level: Varies): This mission is an attempt to rescue a captured friendly officer. You must know your captured officer's location in order for a Rescue Officer mission to be performed. The difficulty of this mission is equal to your officer's officer rank. If successful, the captured officer will be returned (intact) to the system that launched the Intel mission.

10.1.9.3 Insurgency

Elite officers are not often affected by insurgencies, though some exceptions to this rule do exist (see 10.1.10 Elite Officers and Rebellions). The most common form of officer insurgency mission is the attempt to subvert the loyalty of an opposing empire's officers.

Officer Subversion (Difficulty Level: Varies): This mission is an attempt to force one of your enemy's elite officers to defect to your side! This is an extremely difficult proposition, but it can potentially play to an empire's favor. The Officer Subversion mission must target a specific enemy officer whose position is known. The difficulty of this mission is equal to *three* times the officer's rank.

Please note that captured enemy officers are legitimate targets of an Officer Subversion Insurgency mission. In fact, players might find it beneficial to try to "turn" enemy officers in their custody.

10.1.10 Elite Officers and Rebellions

The loyalties of elite officers are often challenged in the face of planetary rebellions. On one hand are their sworn obligations to protect an empire; on the other are the demands of their conscious. Trapped between Scylla and Charybdis, these officers must make a fateful choice as to which side their loyalties truly lie. Their decision can sway the minds of their subordinates. A pledge of support from a disaffected officer can sometimes determine the success or failure of a rebellion.

10.1.10.1 Basic Rebellion Effects

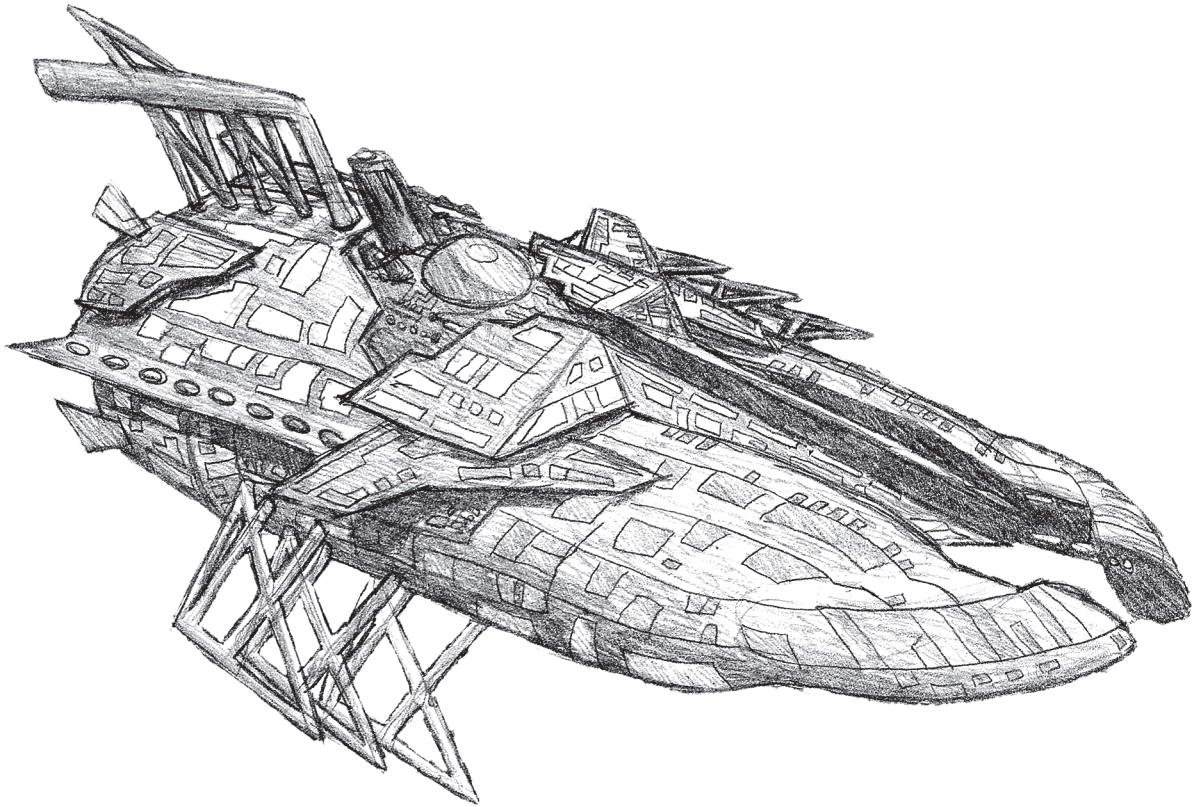
In campaigns that use the basic rebellion rules found in the Campaign Guide, elite officers have a 10% chance of joining any rebellion that takes place at their location. Roll d10; on a roll of '10', the officer and his or her unit (if applicable) – such as a ship, flight, base, or ground unit – will join the rebellion!

10.1.10.2 Advanced Rebellion Effects

The true impact of elite officer loyalty comes into play when using the 9.1 Rebellion rules. These advanced rules make rebellions more threatening, and it is in this sort of volatile environment that the loyalties of an empire's elite officers can be of extreme importance.

When a system or planet goes into rebellion, make a loyalty check (see 9.1.3 Secession) against each elite officer at that location. To perform this check, roll a d10 for each officer. Subtract 1 from die roll if the government is of a Confederate or Decentralized type. Add the officer's rank divided by 3 (round down). If the result is equal to or less than the system's Census, then the officer has joined the rebellion! Rebellious elite officers are joined by their unit (ship, flight, ground unit, etc.).

Additionally, a rule of '1' and '10' is also in effect for elite officer loyalty rules. A roll of '1'



will always result in the officer rebelling, while a roll of '10' will always result in the officer remaining loyal.

An officer's prestige may convince other units at the location to follow their lead. Officers that join a rebellion will provide a further, cumulative -1 modifier to unit loyalty checks for every full three levels of officer rank (e.g., officer rank divided by 3, round down). Example: An officer with a rank of 5 would only offer a -1 modifier, while a rank 6 officer would result in a -2 modifier. Officers that refuse to join the rebellion conversely provide a cumulative $+1$ modifier to unit loyalty checks for every full three levels of officer rank (e.g., officer rank divided by 3, round down).

Elite officer loyalty checks should always be performed prior to any other loyalty checks at the location when a system rebels because the success or failure of these rolls will influence other unit's chances of defecting.

10.2 Personnel Grade Levels

Just as individual elite officers can earn special distinction as a result of combat experience, so can entire ship crews or ground armies. Personnel experience is broken down into six different grades: Green, Novice, Regular, Veteran, Elite, and Legendary. Each of these grades signifies a general level of training and experience. The greater its experience, the more effective the unit will be in battle.

A unit's statistics are modified by its current grade level; however, a statistic can never be reduced to below half of its original value (round down), nor can it be increased beyond twice its original value (round up). Additionally, in the case of ship crews, a unit's Command Cost can never be reduced below 1.

It costs 5 XP to increase the grade of a unit from Green to Novice, 10 XP to increase from Novice to Regular, 15 XP to increase from Regular to Veteran, 25 XP to increase from Veteran to Elite, and 40 XP to increase from Elite to Legendary. Any one unit can only increase its grade by one level during a single campaign turn. No unit can exceed a crew training level of Legendary.

There are two types of personnel grade levels: crew grade levels that affect space units; and army grade levels that affect ground units.

All units begin with a grade level of Regular unless the CG 4.1 Wartime Economies optional rule is in use. If CG 4.1 is in effect, all units begin with a grade level of Regular during Peacetime, Novice while Gearing Up, and Green during Wartime.

Use the experience models described under 10.1.4 Experience Points to calculate the amount of XP earned from space or ground combat engagements, even if your campaign is not using the 10.1 Elite Officer System. These experience calculations are designed for use with both elite officers and crew/army grade levels.

10.2.1 Crew Grade Levels

Green Crew: -2 DV, AF, AS, CR, + 1 CC

Novice Crew: -1 DV, AF, AS, CR

Regular Crew: No modifiers

Veteran Crew: +1 DV, AF, AS, CR

Elite Crew: +2 DV, AF, AS, CR, - 1 CC, ignores the first out of supply level

Legendary Crew: +2 DV; +3 AF, AS, CR; -2 CC; ignores the first two out of supply levels; +1 formation level bonus

10.2.2 Army Grade Levels

Green Army: -2 Attack, Defense, Attrition, affects of OOS levels doubled

Novice Army: -1 Attack, Defense, Attrition

Regular Army: No modifiers

Veteran Army: +1 Attack, Defense, Attrition

Elite Army: +2 Attack, Defense, Attrition, ignores the first out of supply level

Legendary Army: +2 Attrition; +3 Attack, Defense; ignores the first two out of supply levels

10.2.3 Crew/Army Grade Reassignments

Over the course of time, it is natural for even the most legendary of crews or army units to go their own ways. As members of the crew are promoted they will inevitably take new assignments elsewhere within the fleet, while others simply retire to a life of quiet solitude back home.

Players can elect to reassign their crews any time during a campaign. The decision to do so is recorded in the player's turn orders and is performed during the Update Asset Phase. When a crew/army is reassigned, it cannot be simply moved to another unit. The crew is instead broken up and moved throughout the empire. For instance, a player cannot move an Elite frigate crew to a Regular-crewed dreadnought in order to give the dreadnought an Elite crew. Instead, refer to the Unit Grade Equivalency Table to determine the number of lesser crews created from the reassignment of the higher trained crew.

In most cases, only legendary crews will truly benefit from reassignment. However, in instances where the empire's crew training level is abysmal with starting crews being of inept or poor grade, the reassignment of crews can dramatically increase empire-wide crew/army grade levels.

Unit Grade Equivalency Table

Green: None

Novice: None

Regular: 2 Novice

Veteran: 2 Regular or 4 Novice

Elite: 2 Veteran, 4 Regular or 8 Novice

Legendary: 2 Elite, 4 Veteran, 8 Regular or 16 Novice

10.3 Alternate Experience System

More experienced crews tend to fight better than green ones. In order to represent this fact, every base, ship, and flight unit is assigned an experience rating once it has completed construction. This rating is a measurement of how many experience points (XP) the unit has earned over its lifetime.

All newly constructed units receive 2d3 XP. If using the CG 4.1 Wartime Economies rules, units that are constructed during a peacetime economy get 2d3 XP, and units that are constructed during a gear up or wartime economy start with 1d4 XP. This represents the need for additional crews, which suffer from rushed crew training and do not perform at the same levels as their peacetime equivalents.

Crews can be brought up to standard (Regular) performance through additional training. Each campaign turn, a unit's XP total will be increased by 1 (up to a maximum of 6).

Mothballed units should be treated as new construction when they are reactivated, and units in reserve status lose 1 XP per turn until they reach a minimum of 5 XP.

The circumstances that can modify a unit's XP total are given on the Unit XP Modifiers Table (see above). All modifiers are cumulative.

The unit's stats will be modified according to its current XP. However a statistic will never go below half or above twice its original value.

Unit Experience Modifier Chart

Result	Crew Grade	Modifier
0-2	Green Crew	-2 DV, AF, AS, CR +1 CC
3-5	Novice Crew	-1 DV, AF, AS, CR
6-10	Regular Crew	<i>No Modifiers</i>
11-20	Veteran Crew	+1 DV, AF, AS, CR
21-40	Elite Crew	+2 DV, AF, AS, CR -1 CC, ignores the first OOS level
41+	Legendary Crew	+2 DV +3 AF, AS, CR -2 CC, ignores the two OOS levels +1 Formation Bonus

Unit XP Modifiers Table

- 2 XP Unit crippled
- +1 XP Survives a battle
- +1 XP Wins a battle
- +2 XP Wins a battle while outnumbered more than 2:1 (by economic cost)
- +1 XP Loses a battle while outnumbered more than 2:1 (by economic cost)
- +2 XP Loses battle while outnumbered more than 5:1 (by economic cost)
- +1 XP Per month of training (until EXP reaches 6)
- +1 XP Outstanding performance (CM Only; may be assigned by the CM for a single unit per side after the battle is finished for outstanding performance)

11.0 Acknowledgements & Credits

The Victory by Any Means Universe is constantly growing, both in printed form and through online support. Please visit our site at <http://www.vbamgames.com> for VBAM discussion, updates, battle reports, game ideas, and new source material. Feel free to drop us a line and join in the community discussion with game questions or comments.



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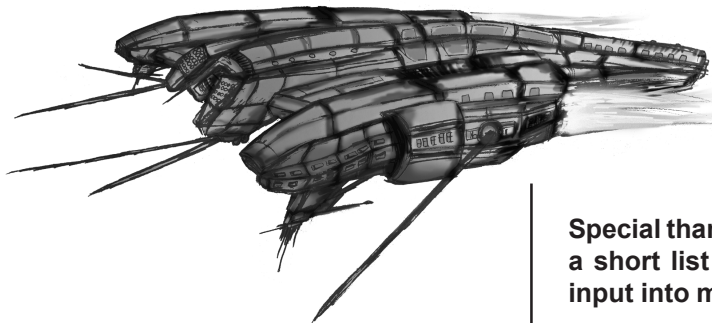
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Special thanks to all of our playtesters. This is only a short list of those that have provided valuable input into making VBAM what it is today.

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11.1 Author's Note

The Companion was a long time in the making. The project began shortly after the Campaign Guide was first released. It took nearly a year to write, re-write, and finally compile all of the rules that you can find within these pages. The amount of optional rules that can be written for this game are nearly endless, but hopefully this book and its contributors will have provided you with an even stronger foundation from which to run your own Victory by Any Means campaign.

Finally, thanks to all of the contributors that helped to make this book a success. From those that submitted rules to those that provided final editing, your services were invaluable in making this book a reality.

11.2 Submission Guidelines

As you or your gaming group develops their own, unique Victory by Any Means source materials and campaign rules you may decide to submit these materials for consideration by the Victory by Any Means in anticipation of future inclusion in the campaign or other derivative rule sets.

Any unsolicited submissions become the property of VBAM upon arrival. This includes all possible submission mediums, including e-mail, fax, and postal mail. Previously copyrighted material will be automatically rejected. You may however submit a conceptual summary or outline of your work (but not the work itself) to facilitate future discussions on terms of inclusion. This is to protect us from being accused of "stealing" your material.

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New rules submissions will be evaluated to gauge their usefulness and modified as necessary to suitably meet the needs of the VBAM campaign system. New rules may appear in either online, electronic rules updates or in actual VBAM campaign guides or source books. In the case of source material, all accepted

source material submissions will be presented in electronic format on the VBAM website.

11.3 Contact Victory by Any Means Games

Internet: Visit the VBAM Games website at www.vbamgames.com for more information on this and other products, including new rules, maps, and materials to extend your gaming experience.

E-Mail: You can contact the VBAM Games developers by sending an e-mail to vbam@vbamgames.com.

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MSRP \$32.95