

VBAM: Galaxies



Overview: develop new optional rules and combat system for VBAM, compare to existing 2E and see best course forward with the rules.

(2016-09-26: I am thinking that I'm going to treat this as a "community edition" of the game to some degree, so that we can pool input and see what improvements we can collectively make to the game.)

FEEL FREE TO ADD COMMENTS OR MAKE SUGGESTIONS IN THE TEXT! I WANT THIS TO BE AS COLLABORATIVE A PROCESS AS POSSIBLE.

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Chapter 1 ► Introduction

The universe is a vast, mysterious, and dangerous place. These "billions and billions" of stars are home to an untold number of alien civilizations, each of them reaching out into space to fulfill their birthright of galactic domination. Some empires may use peaceful exploration, expansion, and diplomacy to achieve their goals. Other civilizations may seek to forge an empire of blood and iron, relying on their military forces to subjugate an unprepared galaxy. This is the battleground upon which players pit their empires against one another in a battle for supremacy and victory by any means.

1.1 ► About the Game

Victory by Any Means (VBAM) is a 4X science fiction strategy game that lets you guide an interstellar empire to victory by exploring the galaxy, meeting strange new alien civilizations, and fighting epic wars to determine the fate of the universe. The **Campaign Guide** includes all of the basic rules that you'll need to run a successful VBAM campaign.

But what is a campaign? A campaign is defined as a strategic gaming experience in the classic 4X style in which players command their forces to eXplore, eXpand, eXploit, and eXterminate in order to achieve victory. The term 4X was coined by Alan Emrich in his September 1993 preview of the classic game *Master of Orion*. Since then it has come to refer to any strategy game that offers a detailed, multi-layered experience that requires players to take command of a faction and manage its resources while trying to meet a series of victory conditions or other objectives as specified by the scenario. Combat, diplomacy, research, and spying are all common elements of the 4X genre.

VBAM is a modular campaign system that allows players to scale the complexity of the game to meet their needs. You should think of it as a toolbox that contains all of the rules that you'll need to run a complete science fiction strategy game in any imaginable campaign setting. A number of optional rules are included later in this book that add extra depth to the basic rules, and experienced players can make large-scale changes to the basic rules if they think it will improve their game experience. This modularity is especially useful when players want to integrate VBAM with their favorite tactical combat game. For example, if the tactical game already includes rules for unit construction and tech advancement you can have them effectively replace the respective rules from this book. In most cases this just requires a few spot rules to cover how the two sets of rules interact with each other.

There are two ways that players can approach a VBAM campaign. The first is to play the game like it's a classic freeform 4X space strategy game where the players are openly competing with one another to achieve predetermined victory conditions. This provides a very traditional strategic gaming experience akin to what you would find in games like *Master of Orion*, *Galactic Civilizations*, or *Endless Space*. These rules can also be used to run traditional wargame scenarios that provide players with a "historical" snapshot of a collection of empires at a specific point in time. These scenarios often attempt to replicate events that occurred in that particular setting but give the players enough control to "change history" with their actions. This is similar to how historical wargamers will replay major land or sea battles, like Waterloo or Leyte Gulf, to see how closely their results align with the historical outcome of those battles.

1.2 ► What You Need to Play

Players must have a copy of this book (which you already have) and a collection of polyhedral dice. You will need several six-sided (d6), ten-sided (d10), and twenty-sided (d20) dice to play this game. At least two d10 dice are required because many rules require the player to roll a d100 (percentile die) against a target number. When asked to roll a d100 or percentile die, the player should instead roll one d10 die for the tens place and the other d10 for the ones place. For example, if the tens die rolls a

4 and the ones die rolls an 8, then the final result on the d100 roll is 48. Rolling two 0's produces a result of 100.

Players will also need pencils, paper, and all of the other paraphernalia required to record and track information during the game. Some sample forms are included in the appendices, but players shouldn't feel obligated to use these forms in their own games if they don't want to. You can create new versions of these forms or use other methods of tracking campaign and empire information in whatever way is the easiest or most intuitive for you and your gaming group.

Perhaps the most important asset players will need to have available is time. Campaigns can take days, weeks, months, or maybe even years to run to completion depending on how often the players can meet or otherwise submit and process their turn orders. Players should consider how much time they have available when deciding on the size and scope of the campaign they are going to participate in.

While a campaign can be successfully run using nothing more than pen-and-paper, it is obviously much easier to track campaign information and make calculations on the fly using electronic aids such as word processors and spreadsheets. This is especially true for players that find themselves overwhelmed by the concept of running a campaign completely by hand. Players that have access to a laptop, netbook, or tablet can easily bring these electronic aids to the gaming table to help automate certain aspects of running the game.

An effective approach to electronic campaign data management is to create a text document for each player that contains their economic and military organization information (e.g., things that are updated each turn that can be more easily stored in a word processor) and then use a spreadsheet to generate a list of the players' colonies, along with how much they're producing for their owner each turn, and calculate maintenance costs for their military units. These forms can then be converted into PDF files and distributed to the players at the beginning of each campaign turn so that they can draft their turn orders for that turn.

1.3 ► Campaign Moderator

One player usually takes on the role of the Campaign Moderator ("CM" for short) who is responsible for organizing and running the game. The main job of a CM is to collect and resolve the turn orders that the players submit every turn and then let the players know what happened so that they can prepare for the next turn.

Before each game, you should decide if your campaign is going to be run with or without a CM. The main advantage to having a CM run the game is that he can control what information each player has access to, adding a fog of war element to the game. This forces players to gather intelligence on their opponents

or risk being left in the dark. This added uncertainty can make the game more exciting for the players, especially those that thrive on the social aspect of the game that comes from conducting diplomacy with their friends and enemies around the gaming table.

Another perk of playing with a CM is that he can string together otherwise unrelated campaign events to form an overarching campaign storyline, plot, or narrative. This infusion of imagination can increase the tension and intensity of action within the campaign and make disparate events all seem like they are part of an interwoven story. For example, let's suppose that several players have begun finding mysterious ancient ruins scattered throughout the galaxy. Normally these random discoveries would be just that: random. However, the CM can craft a story that connects these disparate ruins and provide hints or clues as to what happened to the vanished civilization that built them. The culmination of that storyline might be that the force that wiped out these colonies is returning... or maybe it was a complex alien bio-weapon, a deadly contagion that will infect the populations of the empires now exploring through the ruins? The CM has broad liberty to incorporate these kinds of game play elements into a campaign.

When resolving turn orders and generating new campaign turns the CM should adhere to the written campaign rules except as modified by any special scenario or house rules that are being used in the campaign. Players should feel free to query the CM when they feel that a rule isn't being applied correctly, fairly, or uniformly. There are enough "moving parts" within these rules that it's easy for either the player or CM to make a mistake, and these kinds of challenges are a healthy part of the gaming experience. However, the CM is the final arbiter of the campaign rules in his game and once he has ruled on an issue — hopefully after polling his players for feedback and consulting the relevant campaign rules — the issue should be considered settled. That being said, CMs should be careful to avoid capricious, off-the-cuff decisions as it will almost certainly alienate their players and can ultimately derail the game.

1.4 ► Playing Without a Moderator

Players can choose to run a campaign without the aid of a neutral moderator. In this case, most (but not all) fog of war aspects are eliminated from the game and the campaign is run in an "open-handed" fashion in which very little information is actually kept secret. This lack of secrecy is a necessary evil because the players need to know what each other are doing so that they can make sure that everyone is following the rules. This is not to say that you should suspect that your opponents are actively cheating when playing without a CM — we would hope that you're gaming with trustworthy players — but honest mistakes are possible and even likely, especially when players are first learning the rules. By making game play and turn resolution as transparent as possible the players will be able to catch any rules errors quickly enough to prevent them from having a major effect on the game.

Players secretly draft their turn orders during the Turn Orders Phase just as they would in a moderated campaign. However, rather than handing these orders over to a CM to be processed, the players will get together and process them as a group by stepping through the Sequence of Play. During each phase the players will take turns revealing and resolving their actions that occurred in

that phase. Turn generation continues until all of the players' turn orders have been resolved, at which point the players will be ready to begin drafting orders for the next campaign turn.

In the event there is a debate about the interpretation of a rule or the legality of an order, it is up to the players to collectively decide what to do about it. In most circumstances the easiest way to resolve these disputes is to put it up to a player vote. The option that receives a simple majority of the player support in the vote is then adopted as the solution to the problem until such time as an official ruling can be procured that contravenes the players' own ruling.

Please be aware that arguments between players in an unmoderated campaign can be even more destructive than in a moderated campaign because all of the players are involved in the resolution process in the former, while in the latter a neutral CM is responsible for making the final decision. It only

takes one extremely contentious rule dispute for a campaign to fall apart. Players should attempt to be as impartial as possible when making these decisions, and they should be prepared to vote against their

own empire's best interests if doing so will enforce the "correct" interpretation of a rule.

In the event of a "no-win" argument, the players should at least consider finding a compromise that will satisfy the majority of the players, even if it doesn't satisfy everyone completely. For example, consider that a rule has been misinterpreted for a large part of the campaign, and one or more players planned their strategy around either exploiting or defending against this rules misinterpretation. This rule change might even be "game ending" in that their military force might be completely nullified by the correct interpretation of the rules. At this point in the campaign correcting the rule will put these players at a distinct disadvantage compared to their opponents whose decision making processes weren't affected by the ruling. In such a situation, especially if the mistake was made by multiple players in the same campaign, the players may want to give the affected players the opportunity to retroactively alter their existing fleet compositions so that they can remain competitive even after the rules change goes into effect in order to keep the campaign alive. For example, the player could exchange a certain construction cost of units for the same cost of other units.

1.5 ► Basic Terms

Every game system ends up with a considerable amount of jargon that players have to become familiar with in order to read and understand their rules. This section provides a list of the most commonly used terms in the book (arranged alphabetically) that players can refer to later on when they need to quickly look up what a term means. New players should feel free to skip this section and come back later when they need to look up a specific term.

Allied: The empires are members of the same Alliance.

Anomalies are strange phenomena that are sometimes found in star systems (nebulae, ruins, etc.). Their presence adds additional complications to how players interact with these systems. See @@ Anomalies for a list of anomalies and their effects.

Anti-Fighter (AF) encompasses all of the active point defense and anti-fighter weapons that units can use to protect themselves against flights of fighters. This includes such things as anti-fighter batteries, flak cannons, counter-missiles, and sand casters.

Anti-Ship (AS) is a measure of a unit's offensive firepower that quantifies the lethality of the beam, kinetic, and/or missile weapons that are part of its standard arsenal. The more heavily armed a unit is, the higher its Anti-Ship value will be.

Attack (ATK) represents a ground unit's offensive firepower. This statistic is the basic Attack bonus that is added to an attacking unit's combat roll. The target takes Attrition damage if its modified Attack roll exceeds the target's modified Defense value.

Attrition (ATR) is the amount of damage that a ground force can take before they are neutralized. Ground forces don't cripple and are simply destroyed when their Attrition reaches zero.

Base

Campaign Turn

Campaign Year

Carrying Capacity

Census is an abstract representation of a system's population size. Uninhabited systems always have a Census value of zero, but any system whose Census value is greater than that is inhabited by anywhere from a few thousand colonists on the low end to several billion on the high end. These Census are used to utilize Productivity and turn local RAW into economic output. A colony is destroyed when its Census value is reduced to zero.

Colony

Control: A player has control of a system his empire has a colony, outpost, or a total of at least 12 construction cost of bases (not minefields) present. This represents a significant enough presence for them to claim ownership of the system.

Construction Capacity

Command Cost (CC)

Command Rating (CR)

Convoys

D Factor (DF)

Defense Value (DV)

Enemy

Flagship

Fleet: A fleet is a collection of one or more military or civilian units that are operating together. Movement orders are issued to fleets during the Movement Phase to move them across the map.

Flight

Friend

Homeworld

In-Service Date (ISD)

Intel represents an empire's intelligence network that is used to carry out offensive and defensive missions. Intel can be used to gather information about other systems, sabotage enemy assets, or incite rebellion on alien worlds.

Jump Lane

Minefield

Morale represents how loyal the system is to its empire. Unhappy colonies are less productive and extreme discontent can even lead to open rebellion! **Morale can be affected by a number of factors, including everything from X to Y.** A system's Morale value cannot exceed its current Census value.

Outpost

Output: economic output of the system

Productivity

RAW; resources, accessibility, wealth

Readiness Modifier

Reinforcements

Sequence of Play

Shipyards

Ship

Special Ability

Starting Forces

Supply Depot

System

System Importance

System Output is a system's economic contribution to the owner's empire and is equal to its Raw x Utilized Productivity. This is the amount of income that the system produces for its owner each turn and the construction capacity of any shipyards.

Surprise

Task Force

Tech Investment

Tech Pool

Tech Year

Treasury

1.8 ► Campaign Strategic Combat Resolution (CSCR)

Space and ground combat in VBAM are normally resolved using the included Campaign Strategic Combat Resolution (CSCR) rules found in @@ Encounter Phase and @@ Ground Combat Phase later in this book.

You can also use your favorite tactical combat system to determine the outcome of some or all of the battles as they occur during the campaign. Players should discuss their combat resolution options before the start of the game and decide if they're going to exclusively use the strategic combat resolution rules or if they're going to be using a separate tactical rules system for space or ground combat battles. The default option is to use the CSCR to resolve all battles in the campaign.

If you're using these rules in conjunction with another tactical combat system, you'll need to decide upon guidelines for deciding which battles are going to be resolved strategically or tactically. Playing out each and every battle using a tactical system can become quite tedious. It's strongly recommended that you use the CSCR to resolve smaller engagements or those where one side is completely outmatched by their opponent. These battles are less important and their outcomes are often foregone conclusions. Gaming time is typically at a premium as it is, so it just makes more sense

to resolve these minor battles strategically and reserve the use of your preferred tactical system for the resolution of only the most important, climactic battles in your campaign.

You should try to integrate as many of the strategic combat concepts into your tactical rules as possible when using a tactical system to resolve combat. In particular, you should find a way to translate surprise, readiness modifiers, and scenario length into your tactical battles.

1.9 ► Changes in Galaxies

1.10 ► Your First Game

The focus of your first game of VBAM should be on learning the rules and getting better acquainted with how the campaign system works. It's recommended that new players start out by running a game using the Classic Duel scenario from Chapter 5: Source Materials. This is a small two-player game that places extra emphasis on combat and will let you get some experience with how the rules work before you try to tackle a larger campaign. You can play through a year or two of the Classic Duel scenario (12 to 24 turns, as each turn represents about a month of game time) before taking a break to take stock of where you're at in the game and review the rules to see what mistakes you might have made or if there are any rules that you're still unclear on. If things seem to be going well you can continue playing the game, but if you found that you made some particularly egregious errors you might consider restarting the scenario to see how those corrections affect play.

Part of the difficulty that you'll run into when you run your first game is trying to learn how the rule system works when so much of the terminology and game concepts are still foreign to you. This is a problem inherent with learning any new game, but it's made worse with pen-and-paper rules like this because there aren't any outside visual cues that you can use to help you out. Reading through the basic terms at the end of this chapter should give you a good idea of what the basic building blocks of a campaign look like, the problem is figuring out how they all fit together. **Chapter 3: Playing the Game** tries to bridge that knowledge gap and explain in order how everything relates to one another and how you step through and resolve events during a campaign turn. While it might be obvious, you really need to read through that chapter before you play your first game.

Once you've run a Classic Duel you should understand enough of the fundamentals of the game to set up and play through one of the other included campaign scenarios. The Small Empires scenario is a good starting point for players that have played other 4X strategy games in the past, but there's no reason why you couldn't choose to run any of the other available scenarios.

While it might be tempting for a group of four or more players to just jump right into a campaign together, at least one of the players should set up and run through a sample campaign first so that they will have a better idea of how the game works. That player can then help bring everyone else up to speed. Otherwise, if none of the players have any experience with the rules prior to the first game, there's a good chance that a misinterpreted rule will end up derailing the game before you get very

far. This can still be a great learning experience, of course, but it also means that the players might have to go through campaign setup a second time if the rules mistakes they made can't be corrected on the fly during their first game.

Chapter 2 ► Getting Started

This chapter walks you through all of the steps required to set up and run a VBAM campaign. **When starting a game you must pick your empires, set a time period, and finish setting up the game.** Once these steps are completed you'll be ready to sit down and start playing the game.

// possibly make game simpler by making basic game a 4x start from scratch and move other scenarios to options rules?

- This would allow the rules to be written more tightly and make it easier to determine what players need to do to set up and start a new game

// would a more detailed overview of the unit types and sample empires be worthwhile in this section to clearly define what a ship or flight is and give a quick explanation that is more in depth than just a basic term entry?

2.1 ► Empire Selection

Players take turns selecting which empires they are going to play in the campaign. This book includes eight different alien factions that players can choose from. The empire that you choose determines which types of units you'll have available during the game. Each empire has its own unique tech tree and no two empires are the same. This forces players to adopt different tactics and strategies depending on the empire that they're playing as — and who they are playing against.

The following is a brief overview of the empires that are included in this book. Complete descriptions for

each of these factions are provided in @@ Sample Empires. Force lists for each of these factions can be found in the appendices at the end of this book.

- Choose which empire to play
- Background on the aliens
- Should there be art for each alien?
 - If Yes, the creature themselves, or just ship art?
 - Do you want faction emblems and stuff, too?
 - What would make these factions more immersive or interesting, or is there anything that can be done in that regard?

2.1.1 ► Brindaki Empire

2.1.2 ► Graal Kingdoms

2.1.3 ► Human Commonwealth

2.1.4 ► Jain Khanate

2.1.5 ► Kili Republic

2.1.6 ► Loran Imperium

2.1.7 ► Seniorian Federation

2.1.8 ► Tirelon Theocracy

2.2 ► Starting Tech Year

Players need to agree on a starting Tech Year for the campaign. This Tech Year establishes which units are available at the beginning of the game based on the In-Service Dates (ISD) provided on their respective force lists. Any unit that has an ISD that is less than or equal to the starting Tech Year is immediately available. Meanwhile, units that have an ISD greater than the selected Tech Year will only become available after an empire increases its Tech Year by successfully researching new technologies during the campaign.

The force lists that are included for the sample empires contain unit classes that range in Tech Year from 3000 to 3024. The default starting Tech Year is 3000. In the event that a campaign lasts long enough that an empire increases its Tech Year beyond 3024, the players can use the @@ Creating Your Own Empire rules to add new unit classes to their force lists at those higher tech levels. Advanced force lists for the sample empires will appear in future supplements.

- choose Tech Era to play in
- This determines units that are available at the start of the game
- Choose starting Tech Year, which tells you at which point in the era you are, and what units you have left to unlock
 - Established ISD system for historical scenarios, but leaves tech era open for more freeform rules.

2.3 ► Choose Optional Rules

Now is the time to decide whether or not you'll be using any optional rules in your campaign. You can use one or more of the rules found in Chapter 4: Optional Rules or else you can create and use your own house rules. You must make a list of all of the optional rules that are being used in your campaign before you start the game. That way everyone will know which optional rules are being used.

New players should stick to the basic campaign rules until they are more comfortable with VBAM, then they can start playing with the advanced or optional rules that are found later in this book.

- Is this necessary here? Or is it implied by the existence of the Optional Rules chapter that you can use them? And have the commentary about picking them all be in that chapter? Was this ever confusing to new players?
- Could still use old ring system, but if we're doing a start from scratch I think we just want players to pick a map size, place their homeworlds, generate systems, and then decide how many other systems they get at the start of the game if they want a quick start
- when creating a map at the start of the game, do you prefer the entire map to be hidden and uncovered as you play, or would you rather have the importance of all systems and jump lane positions be revealed and then only roll for special traits as maybe jump lane classes as you explore?
- Choose the size of map from Tiny, Small, Medium, Large, or Huge as per the 2E templates
- Include option to use a floating map, where you keep adding hexes -- but that would be an optional rule, wouldn't it?

Map Iconography

2.4 ► Map Size

The players must choose the size of map to use for their campaign. There are five different map sizes: Tiny (2 player), Small (3 player), Medium (4 player), Large (5 player), and Huge (6 player). Each map is comprised of a single "hub" system that is surrounded by a number of rings of extra systems equal to the number of players in the game. For example, a Huge map has a central hub system plus six rings of systems around it. Blank map templates for each of these sizes are also included in the appendices so that players can easily print out a copy and starting creating their own star maps.

Players that would like to eschew exploration and jump right into the action can use the @@ Random Galaxy Generator to pregenerate a complete star map. A pregenerated map of each map size can be found at the back of this book to make campaign setup even easier.

2.5 ► Place Homeworlds

The players take turns choosing a hex to place their homeworlds in. The minimum distance between homeworlds is equal to the number of systems in the last ring divided by the number of players in the game, dropping any fractions. This is how many hexes apart the homeworlds must be from each other. This forces players to spread out their homeworlds and space themselves more evenly around the outer edge of the map. A player cannot place their homeworld in a hex if it would prevent any of the remaining players from being able to legally place a homeworld on the map.

Each player's homeworld is automatically a major system with the Homeworld special trait (see @@ System Generation). The two special traits that the system receives during system generation then apply their bonuses to the system's base statistics. Some players may prefer for everyone to start with the same special traits to secure a more balanced starting position. In that case, each homeworld should be given the *Rare Metals* and *Fair Biosphere* traits.

2.6 ► System Generation

The following system generation rules and tables are used at the start of the game to create statistics for the player's homeworlds and again during the game to generate statistics for any new systems that the players explore.

2.6.1 ► System Importance

Roll on the System Importance Table to find the system's importance. System importance describes a system's base value. There are three different levels of importance: unimportant, minor, and major. The greater a system's importance, the more resources and living space are available to accommodate alien colonies. Important systems also tend to have more jump lanes connecting to them.

System Importance Table (d6)

Roll	Importance	Cap	RAW	Cen	Mor	Prd
1-2	Unimportant	4	1	2	2	1
3-4	Minor	6	2	4	3	2
5-6	Major	8	4	6	4	3

Unimportant System

Minor System

Major System

Systems with more than two traits contain *garden worlds* that have Earth-like planetary conditions and are best suited for alien life as we know. Garden worlds are extremely rare and valuable, and empires often go to war to fight over control of their abundant resources. All alien homeworlds are garden worlds because they always have at least two special traits.

2.6.2 ► Special Traits

Each system rolls once on the Special Traits Table to determine what special characteristics set it apart from other systems. Player homeworlds automatically receive the *Homeworld* special trait and get to roll twice on the Special Traits Table, ensuring that these worlds start with at least two special traits. Player Homeworlds also receive a +2 bonus to their Census, Morale, and Productivity at the start of the game to represent the large populations in these systems.

Special Traits Table (2d6)

Roll	Special Trait
2	Roll Twice
3	Ultra Rich (+2 RAW, +1 Productivity)
4	Mild Climate (+1 RAW, +1 Census, +1 Morale)
5	Fair Government (+1 Capacity, +1 Morale)
6	Robust Economy (+1 Capacity, +1 Productivity)
7	Rare Metals (+1 RAW, +1 Productivity)
8	Heavy Industry (+1 RAW, +2 Productivity)
9	Expanded Population (+1 Capacity, +1 Census, +1 Morale)
10	Fair Biosphere (+2 Capacity, +1 Census)
11	Anomaly (Roll Again)
12	Homeworld (Roll Twice)

2.6.3 ► Homeworlds

- Home system for an empire
- Homeworlds get an extra special trait
- Player Homeworlds get +2 Census, +2 Morale, +2 Productivity at the start of the game
- For a balanced Homeworld start, have each player Homeworld start with Precious Minerals and Fair Biosphere. This gives these systems +2 Capacity, +2 Raw, +1 Census, and +1 Productivity

- When a Homeworld system is encountered during the game as the result of exploration, the system is the Homeworld for a minor power. This can be a Non-Aligned World (neutral system) or a Non-Player Empire (CMs refer to the Companion for rules).
- Randomly choose an empire; this neutral system uses that empire's force list
- Neutral current tech era is found by rolling d6-1
 - Or have it be based on highest player era, or the campaign year like in 2E; any preference? 2d10-12 would give us a +-10 year span, and then use the tech year of the most advanced player empire
- This makes it so you don't need to do activation checks, and finding multi-system NPE is left as a VERY optional rule that I can cover in a later book.
- Adds a natural way to introduce neutral systems into a campaign. The chance is low (1 in 36), but just common enough that you might find some new neutral powers to interact with.

2.6.4 ► Anomalies

Many star systems have extraordinary characteristics that have special effects on play. Any system that rolls a *System Anomaly* on the Special Traits Table must roll on the System Anomaly Table to discover what kind of anomaly is in the system. In rare cases, a system may continue more than one anomaly. However, a system can only receive each anomaly once. If the same anomaly is rolled a second time, re-roll until a different anomaly result is rolled.

System Anomalies Table (d10)

Roll	System Anomaly
1	Abandoned Colony
2	Dense Asteroids
3	Derelict
4	Nebula
X	Splinter Colony
X	Strategic Resource
9	Ruins
10	Mysterious Encounter (or CM's Choice)

2.6.4.1 ► Abandoned Colony

This system contains the remnants of an abandoned alien colony that covers most of the planet's surface. It's impossible to tell how long this world has been deserted, and there are no clues left behind to explain why the original colonists disappeared. While nothing of technological interest remains at the colony, the colonial infrastructure itself is in remarkably good shape. Future

inhabitants will be able to move into the empty halls of this vast planetary city and take up residence there, reducing the need to move in expensive modular habitats to accommodate the colonists.

This system retains its starting Productivity even if it is an @@ Uninhabited System when it is generated. This Productivity represents the surviving structures on the planet that remain intact. There are extensive ruined sections of the colony that can be repaired. This reduces the cost of all Productivity increases in this system to half that of normal (round fractional costs up).

2.6.4.2 ▶ Dense Asteroids

Many star systems contain dense asteroid belts that dwarf our own familiar asteroid belt. These asteroids are more akin to the types of asteroid fields depicted in popular science fiction, where ships have to actively maneuver to avoid hitting debris as they pass through the belt. These asteroid fields are extremely rich in precious metals and radioactives, which is a boon to industry in the system. **These resources are easily exploitable by local industry and increase the system's construction capacity by 50% (round up).**

If a space combat scenario is generated in a system that contains dense asteroids, task forces 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 any units in his task force are hiding within the asteroids. Units hiding within the asteroid field reduce their AS and AF values to half that of normal (round up) because the high concentration of asteroids prevents a clear firing solution. However, these asteroids effectively reduce the enemy's ability to hit them, increasing their DV by 50% (round up). The unit's base formation level is reduced to zero because the asteroid prevent the fleet from assuming a defensive formation. This demonstrates that hunting down individual ships in an asteroid field is easier than pursuing a full fleet action in that environment.

2.6.4.3 ▶ Derelict

Routine system surveys sometimes uncover the presence of alien derelicts drifting in deep space or crashed and abandoned on the surface of distant worlds. Many of these derelicts show obvious signs of battle damage, indicating that they survived a battle only to later be deserted by their crews. Other wrecks show no apparent signs of damage and offer few clues as to why they were cast off. In any event, alien derelicts are lasting monuments to the empires that built them so many years ago.

The discovery of an alien derelict can be a major boon for an empire. Derelicts tend to be more advanced than the vessels that the empire that discovers them could build themselves. For instance, an ancient alien frigate could have the same firepower as one of the power's own heavy cruisers!

Roll on the Derelict Ship Table to determine the type of derelict that has been found in the system. Statistics for these derelict units are provided on the following table. For those ships that have a CV greater than zero, roll on the Derelict Flight Table for each point of CV to find out what abandoned flights are still aboard the derelict (if any).

Alien derelicts are always in a crippled state after they are discovered. Time has not been kind to these spacecraft, but their engines are still intact and the engineering teams sent to reactivate them

can at least get the engines restarted so that the derelict can return home under its own power. Derelicts are alien ships and are subject to the @@ Operating Alien Units rule.

Once the derelict is found, you must decide what to do with it. The first order of business is usually going to be to move the derelict back to a friendly system for repair. Alternately, an empire may choose to simply scuttle (destroy) the derelict. Unless you're using the @@ Derelict Encounters optional rule, the only reason to voluntarily destroy the derelict would be if your empire is not in a position to recover the starship and you wish to keep it out of the hands of a rival power. Before scuttling the ship, your teams are able to scavenge some of the ship's systems in order to transfer them back home for study. This earns your empire a tech investment reward equal to 2 times the ship's Construction Cost (round up).

Derelict Ship Table (2d6)

Roll	Ship	TL	Class	Cost	Maint	DV	AS	AF	CV	CR	CC	Special Notes
2-3	Roll Twice											
4	Corvette	TL6	CT	3	2/8	3	3	3	0	3	1	Atmospheric, Fast
5	Destroyer	TL6	DD	5	2/6	5	5	4	0	4	1	Fast
6	Light Cruiser	TL6	CL	6	2/4	7	6	5	1	5	2	
7	Heavy Cruiser	TL6	CA	8	2/3	9	8	5	2	6	3	
8	Battlecruiser	TL6	CB	10	2/2	10	9	6	3	8	4	
9	Battleship	TL6	BB	12	3/2	12	10	6	4	10	5	
10	Dreadnought	TL6	DN	14	4/2	13	11	7	5	12	6	
11	Superdreadnought	TL6	SD	18	6/2	16	15	9	6	14	8	
12	Titan	TL6	TN	24	8/2	20	20	14	8	16	10	

Derelict Flight Table (2d6)

Roll	Flight	TL	Class	Cost	Maint	DV	AS	AF	Special Notes
2-5	No Flight Present								
6	Shuttle	TL6	MF	3	X	5	0	0	Atmospheric, Supply 1
7	Light Fighter	TL6	LF	1	X	2	2	2	Atmospheric

8	Medium Fighter	TL6	MF	2	X	3	3	3	Atmospheric
9	Heavy Fighter	TL6	HF	3	X	4	4	4	Atmospheric
10	Super-Hvy Fighter	TL6	SHF	4	X	5	5	5	Atmospheric
11	Heavy Bomber	TL6	HF	4	X	6	5	1	Atmospheric, Strikefighter
12	Superheavy Bomber	TL6	SHF	5	X	8	6	1	Atmospheric, Strikefighter

2.6.4.4 ► Nebula

Nebulae are vast interstellar clouds of dust and gas that give birth to new stars. Occasionally, a nebula may be found in close proximity to a star system. Space battles within these systems take place in or on the periphery of the nebula. The ionized gasses in the nebula interfere with their sensors and targeting controls. To represent this, fleets in a nebula system receive a -4 penalty to their surprise rolls, which increases the chances that they'll start at lower readiness states.

Ships that start the turn in a nebula system and remain in the system during the Movement Phase automatically move into the nebula to conceal their presence. These units are then treated as Stealth 1 units for the remainder of the turn. Units that already have the Stealth special ability instead receive a +1 Stealth bonus. Hiding in a nebula makes it easier for fleets to avoid contact with any opponents that might enter or pass through the system later this turn and makes it harder for opposing Scouts to detect them.

2.6.4.5 ► Mysterious Encounter

Mysterious Encounters offer CMs an opportunity to introduce rare or one-of-a-kind anomalies into a campaign. For example, the system might contain a galactic wonder or be the site of some famous event that is integral to your scenario setting. These special anomalies add character to a campaign, and players can use them as plot hooks to advance the overarching story of their campaign setting.

2.6.4.6 ► Splinter Colony

This system is home to a long-lost splinter colony founded by the crew of a generation ship that launched from your homeworld prior to the advent of faster-than-light travel. The colony's inhabitants are happy to have been rediscovered by their starfaring cousins and will automatically join your empire. The first empire to discover this system immediately gains control of the system. The system keeps all of the Census, Morale, and Productivity that it receives during system generation to represent the size and extent of the existing colony.

The splinter colony receives a number of economic points equal to five (5) times its economic output to spend on starting forces when it is activated. These are the assets that the colony controlled before it was rediscovered. The splinter colony has a Tech Year that is 2d6 years lower than that of the empire that found it (to a minimum of Tech Year 3000 in the default scenarios). They may purchase units off of the discovering empire's force list, or you can create a unique force list just for the splinter colony that represents the different military forces that it developed in isolation. Creating a new force list means extra work for the CM, and it's unlikely that the discovering player will want to build any

more of these units; however, it does help give the splinter colony its own unique character that sets it apart from the empire that found them.

The empire that discovered the splinter colony now takes ownership of the system and all of its units, adding them to its own forces. All of the unique classes that the splinter colony starts out with (if any) are added to the discovering empire's force list.

2.6.4.7 ► Strategic Resource

2.6.4.8 ► Ruins

The planets in this system are littered with the crumbling remnants of some advanced alien civilization that lived here millennia ago, but which has apparently long since disappeared from the pages of history. Glittering cities, shrouded in darkness and abandoned for eons. Hidden grottos, silent except for the slow but steady pulse of dormant machinery. Psychic echoes lingering like wraiths in the great halls of forgotten empires that rose and fell before the dawn of recorded history. These mysterious reminders of ancient empires can be of significant archaeological and technical interest to those empires that encounter them.

The first empire to discover a ruins system with ruins present receives a tech investment bonus equal to five (5) times the system's Carrying Capacity. After this initial system survey, all relics of any import are removed from the system and future visitors won't find anything of value, thus only the first empire to visit the system gets a tech investment bonus.

Once colonized, a system containing ruins provides a persistent tech investment bonus to its owner equal to its Utilized Productivity. This makes colonizing and developing these systems a priority for empires that want to accelerate their tech advancement.

2.6.5 ► Jump Lanes

Roll on the Jump Lanes Table to determine the number of jump lanes that connect to a system. Every system will have at least one jump lane connecting to it. ~~The jump lanes already connected to the system count against the system's total number of jump lanes. If the number of jump lanes rolled for a system is less than the number already connected to it, add no further lanes but don't remove any of the existing lanes, either. A system may end up having more jump lanes connect to it later on if future systems generate new jump lanes that link back to it.~~

Jump Lanes Table (d6)

<i>Roll</i>	<i># of Jump Lanes</i>
0	1
1-2	2
3-4	3

5 4

6 5

7 6

Modifiers:

-1 Unimportant

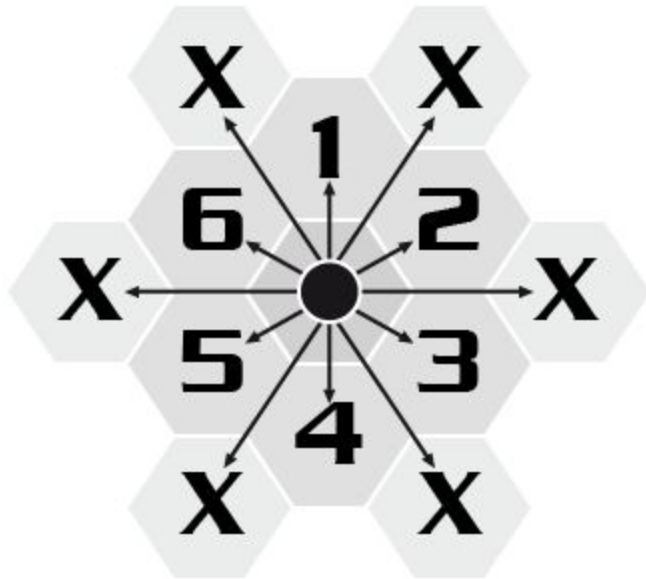
+1 Major

- Roll d6 for which hex the jump lane should connect to as shown on the diagram.
- Cannot connect a jump lane to a system that has already been generated (only unexplored systems)
- If no valid targets remain adjacent to the system, then you can connect to a system up to 2 hexes away via a hex spine (X systems).
- Re-roll destination if it is outside the boundaries of the map; exception if we include off map systems (see next section)

The system's jump lanes must now be connected to other systems. ~~The first jump lane in the system will always connect to a system in the next ring up. If no system exists in that ring, create a new system and connect the jump lane to it. This ensures that the system will have at least one jump lane connecting to the next ring.~~

~~For each remaining jump lane, roll on the Jump Lane Position Table to determine where the jump lane should connect to. Depending on the die result, a jump lane will either connect to a random system in the previous ring, the same ring, or the next ring. Jump lanes should connect to the nearest applicable neighbors, if at all possible. When a jump lane connects to a system in the previous ring it will increase the number of jump lanes connecting to these already resolved systems.~~

~~If a system has already linked to all possible targets of a Jump Lane Position Table result, simply re-roll until you can legally position the jump lane.~~



- That is how I've been doing it on my freeform maps. Does that seem fairly straightforward? I'll want to have an integrated example here, obviously, but any improvements that you can see?

2.6.6 ► Jump Lane Class

// all jump lanes start as unexplored lanes, but as they are explored you must roll to determine the class

// Roll on the Jump Lane Class Table for every jump lane on the map. Apply modifiers to the roll based on both systems that the jump lane connects to. For example, if both the systems that a jump lane connects to are Unimportant then the lane would have a -2 modifier to its roll on the Jump Lane Class Table (i.e., -1 for each Unimportant system).

Jump Lane Class Table (d6)

Roll Jump Lane Class

2- Restricted

3-5 Minor

6+ Major

Modifiers:

-1 Unimportant

+1 Major

+1 Homeworld

2.6.X.1 ► Unexplored Lanes

2.6.X.2 ► Restricted Lanes

2.6.X.3 ► Minor Lanes

2.6.X.4 ► Major Lanes

2.6.7 ► Disconnected Regions

If during the course of the campaign players find that one or more regions of the map are cut off from one another because there are no jump lanes connecting them together, they should add a new unexplored lane between the disconnected regions to allow travel back and forth. This unexplored lane should run between two unimportant systems if at all possible as the remote nature of these two systems better explains why the jump lane wasn't discovered by previous scout expeditions.

Similarly, if there is ever a time that a map hex remains empty despite all of the surrounding hexes having been explored, players are encouraged to add a single unexplored lane to the map leading from one of the adjacent systems (preferably the least important) to this isolated system. This ensures that every hex on the map will contain a star system, and that every hex will still be accessible to the players.

***CM's Note:** This spot rule ensures that all empires will be able to interact and you don't end up with areas of the map that are completely inaccessible. This usually only becomes a concern once most of the jump lanes in the galaxy have been explored and it becomes clear that some regions have become disconnected from the rest of the map.*

2.6.8 ► Uninhabited Systems

Uninhabited systems have their Census, Morale, and Productivity values reduced to zero to represent their lack of population and colonial infrastructure. Newly-explored star systems always begin in an uninhabited state unless they are a Homeworld or Splinter Colony.

2.7 ► Political Situation

- Empires are not in contact with each other at the start of the game
- Upon making first contact, the empires will be in a state of Non-Intercourse

2.8 ► Starting Forces

2.8.1 ► Military Units

// overview of the ship types here, maybe?

2.8.1.1 ► Ships

- Primary military unit

- Can move from system to system

Corvette (CT)

Destroyer (DD)

Light Cruiser (CL)

Heavy Cruiser (CA)

Battlecruiser (CB)

Battleship (BB)

Dreadnought (DN)

Superdreadnought (SD)

Titan (TN)

2.8.1.2 ► Flights

- Small combatants that typically can't travel across jump lanes
- Rely on carriers to bring them into battle
- Can be based from friendly colonies (but not outposts)
- Can be crippled in combat, but surviving flights are automatically repaired at the end of combat
- Flight fire considers units to be in a formation 1 level lower than normal; allows for freer use of directed damage against an opponent

Light Fighter (LF)

Medium Fighter (MF)

Heavy Fighter (HF)

2.8.1.3 ► Bases

- bases are stationary ships
- Can only be included in Defensive scenarios
- Can control an uninhabited system if you have 12+ Cost or greater of bases there
- Get +50% CP, making them more powerful than comparable ships

2.8.1.4 ► Minefields

Minefields are strategic defensive weapons that are primarily used to interfere with enemy fleet movement.

- minefields match size of flights
- +50% CP

- do not earn out of supply levels or else earn them at a highly diminished rate
- special combat deployment rules
- don't cripple
- fired upon using AS
- typically used to soak up damage meant for other units
- Stops units from moving by counting as a ship for the purposes of contested movement

2.8.1.5 ► Ground Forces

Light Ground

Medium Ground

Heavy Ground

2.8.2 ► Civilian Units

// Shipyards, Supply Depots, and Convoys -- explain what they are in a bit more detail

All civilian units are considered to be non-combatants and they will automatically surrender to an enemy fleet if there are no friendly fleets present at their location to defend them. Civilian units are crippled when they are captured, just as is the case with @@ Captured Ships & Bases. This represents that the civilian crews are sabotaging key control systems or other important machinery before the enemy takes control. This prevents the enemy from getting any useful benefit out of them until the captured units can be repaired.

2.8.2.1 ► Shipyards

- Orbital base used to build new ships and flights
- 20 EP, 2 EP per turn

2.8.2.2 ► Supply Depots

- Orbital base used to resupply friendly units
- 20 EP, 2 EP per turn

2.8.2.3 ► Convoys

- Civilian convoy fleets, selection of merchant ships
- Have a single convoy to replace all of the rest
- 20 EP, no maintenance
- Makes transports more expensive, colonies cheaper, and trade the same
- ~~Cost based on type of convoy-20 EP~~
- ~~Can carry but NOT deploy flights, minefields, troops~~
- ~~Still should be limited to 1 ground force regardless of size, otherwise it is hard to track~~
- ~~If automatic strategic redeployments of flights/minefields is removed from the rules (which seemed to be the preference among one subset of players), how much other cargo should a ship be able to hold? Or should rules change so that they can just carry a flat 10 EP of units regardless?~~

- Can carry 1 Census

Civilian Bases (tentative)

- My recommendation for a way to represent commercial infrastructure without a separate stat
- Would have three separate sizes (Small, Medium, Large). Start with one for 20 EP, then upgrade for 40 EP (Medium) and 60 EP (Large)
- Increases system trade value by +2, +4, and +6 respectively

2.8.3 ► Purchasing Starting Forces

Each player receives 150 economic points to spend on starting forces for their empires before the game. This is enough economic points to field a respectable number of military and civilian units at the start of the game. These points can be used to purchase available units from the player's empire force list or the universal list that contains a selection of basic units that are available to all factions. If your empire seems to be lacking a certain type of unit, you'll probably find a unit on the universal list that can serve in that mission role.

Unit availability is based on the Tech Year that the empire is beginning the campaign at. All units that have an In-Service Date (ISD) less than or equal to the empire's starting Tech Year are currently available at the start of the game. For example, a campaign with a starting Tech Year of 3005 allows player to purchase units off their force lists that have an ISD of 3005 or earlier. A player won't gain access to any of the more advanced units until his empire earns a tech advance and increases its Tech Year increases during the game.

It's recommended that a player purchase at least one shipyard, supply depot, and convoy with their starting funds. This ensures that the empires will start with a certain level of basic civilian infrastructure already in place regardless of how they spent their remaining starting points.

Any starting points that a player doesn't spend on starting forces are placed into his empire's Treasury and will carry over to the first campaign turn. It's best to spend as many of your starting points as you can during campaign setup. Spending fewer starting points gives you more purchasing flexibility once the campaign begins, but you'll likely be placed at a disadvantage compared to any of your neighbors that spent all of their starting points on military forces or civilian infrastructure.

CM's Note: *Players are free to adjust the number of economic points their empires have available to spend on starting forces before the game. Increasing the number of economic points that players are given to purchase starting forces is an easy way to jump start a campaign. Purchases made with these extra economic points are purchases that the players would normally have made during the first few dozen turns of the campaign. Also, because these starting points are usually spent on extra military units, each player is going to be in a better position to start early wars with their opponents. Just be aware that the larger your starting military forces are the more they will cost to maintain, which can be a problem for empires that can't generate enough income to cover those extra maintenance costs.*

2.8.4 ► Placing Starting Forces

After purchasing your empire's starting forces you have to decide where to place them on the map. You can place your starting forces in systems that are at most one jump away from a system that your empire already controls (i.e., at your homeworld or initial colonies), but you cannot place starting forces in systems that are controlled by other empires. An exception is made for Trade Fleets, and you can place them in an opponent's systems as long as your empire already has a Trade relationship with them.

The initial placement of your military forces is typically not a major concern because most of them can be redeployed to other systems during the game. For example, fleets of starships can use jump lanes to move to other systems as needed, and most other types of units can be loaded on to transports and then moved to other locations where they can be disembarked. If a fleet gets placed in the wrong system by mistake at the start of the game, you can always just move it to another location on a future turn. This kind of movement is routine.

On the other hand, fixed defenses (including orbital system improvements like Orbital Shipyards) usually can't be moved after they are built. There are a few ways that you can move defenses from one system to another, but it's not very common. This makes it more important for you to pick the right system to place them in at the start of the campaign.

Orbital defenses (bases and minefields) should be placed in a player's more strategically important systems to guard them against enemy attacks. Jump lanes tend to constrain movement on the star map, which means there are usually a few natural choke point systems that an empire can fortify and protect that will prevent an opponent from gaining access to his other systems. The wise deployment of mobile and static forces allows an empire to maintain a safe border against aggressors as they expand.

You should consider where your opponents are likely to place their starting forces when you are deciding where to place your own starting forces. You don't want to be caught flat footed on the first turn of a campaign when an opponent declares war on your empire and moves a powerful armada into your territory from an adjacent star system. Look at the campaign map and see if there are any strategically valuable systems that you may need to secure with your starting forces. If these systems are within a jump of your existing systems you can place some of your starting forces there now. Otherwise, you should instead plan on putting your forces as close to them as you can so that they can make a beeline for the systems at the start of the campaign.

2.8.5 ► Starting Force Considerations

As a player, there are many things you have to take into consideration when you're purchasing your empire's starting forces. Your first concern is to make sure that you purchase enough military units to adequately defend your homeworld and first few colonies at the start of the game. This means purchasing enough defenses to protect all of your colonies while still having ships available that you could move into nearby neutral systems to stake a claim for your empire and keep them out of your

opponent's hands. You also have to make sure that you have enough shipyards and Supply Depots available to meet your empire's immediate ship construction and logistics needs, respectively.

In most cases, you won't have enough starting points to purchase everything you want. This leaves you in a position where you must decide to either purchase fewer but more powerful units or a greater number of cheaper, less capable units. This is the classic philosophical question of quantity versus quality. Usually it's better to diversify your military so that you will have enough light ships to properly escort your capital ships and still have enough leftover to use as system pickets once you start discovering new star systems.

Another issue that players often wrestle with is when and where to invest starting points into fixed defenses (bases, minefields) instead of mobile fleet units. These kinds of defenses can be quite effective because they are more powerful than a ship or flight of comparable size and cost. A strong fixed defense presence in a system is often enough to dissuade an opponent from launching an attack into the system. Unfortunately, fixed defenses by their very nature are immobile and most players prefer to spend their resources on mobile fleet elements that they can redeploy as needed.

The best use of fixed defenses is to place them in strategic choke point systems. These are the systems that an enemy must break through in order to gain access to the jump lanes that lead to your empire's other colonies. Similarly, star systems that have large numbers of jump lanes connecting to them also tend to be good candidates for fixed defense investment.

When you're planning the defenses for your starting systems it is worth considering using flights and minefields to protect worlds that don't warrant a major fleet presence. These planetary defenses are cheap to build and maintain and can be easily replaced should they be eliminated by an alien fleet.

Players must also remember to spend some of their starting points on ground forces to protect their colonies against alien invasion or insurrection. Because this game focuses so much on space combat it's easy for players to forget that they need to garrison their planets. A good rule of thumb is to have at least one ground force for every Census in the system. If you don't have enough troops guarding your systems you'll leave them vulnerable to invasion by even a token enemy assault force.

2.9 ► Victory Conditions

2.10 ► Imperial Asset Sheets

Victory by Any Means uses a number of different forms to record and track the current state of an empire's assets. These are collectively referred to as imperial asset sheets. A player receives updated asset sheets at the start of every Turn Orders Phase that shows the location and disposition of all of his empire's various assets. The empire's name, the current campaign turn, and economic activity for the turn are shown at the top of the imperial asset sheet for ease of reference. This lets the player

know exactly which turn this record sheet applies to and what resources his empire has available to spend when he references the sheet to draw up his turn orders for the turn.

Sample versions of the basic imperial asset sheets are included with this book. Players are encouraged to create their own versions of these forms to tailor them specifically to their group's own unique play style, altering them as necessary to make it easier for them to resolve turns in a timely manner. For example, a player could list all of his colonies on one form and then use a separate form to track his military forces. It's ultimately up to the players to determine what format is best for their group and adjust their imperial asset sheets accordingly.

2.X ▶ Starting the Campaign

Once everyone has finished purchasing and placing their starting forces, you can begin playing the first turn of the campaign. Good luck, Admiral!

Chapter 3 ► Playing the Game

// it may be possible to restructure the sequence of play to eliminate the turn orders phase entirely and instead just talk about how you would literally walk through the sequence of play phase by phase performing actions.

// Sequence of Play

Once you've finished setting up your campaign, it's time to start playing the game. Each campaign turn is divided into different phases, and the order in which these phases are resolved is called the Sequence of Play. All orders within a phase are resolved simultaneously, and players must completely resolve their actions in the current phase before they can advance to the next phase of the campaign turn. Play advances to the next campaign after the End of Turn Phase.

The rules in this chapter are presented in the same order as they appear in the Sequence of Play. This makes it easier to learn the rules because you can read through the book phase-by-phase and resolve turn orders as you go. It also gives new players a better sense for the flow of a campaign turn while at the same time helping veterans to find and reference rules as they go through a turn.

3.1 ► Economic Phase

// How are players liking the change to the Trade/Commerce system in 2E?

// As a question for players: is having an economic phase every turn still preferable, or would you rather only have an economic phase to occur every 3-6 turns? Do you find that calculating income and expenses each turn slows down play too much? Some games use a split time frame where you have one economic phase and then a number of movement phases. The downside is that you have to remember on which turn an economic phase occurs, and you have less ability to react to changing economic conditions (loss of systems, need for more units, etc.).

// maybe move all economic activities to the Economic Phase? So you get that out of the way at the start of the turn, and can then progress through the rest of the turn without any issues?

- Calculate income and add it to treasury
- Calculate and subtract maintenance
- Spend economic points
 - Reinforces that construction is beginning at the start of the turn, and EP spent are lost if something happens later this turn.
- Update Treasury

Empires live and die by the strength of their economies. Players begin the campaign turn by calculating their income and expenses. Income is derived primarily from two sources: colonies and trade routes. Other miscellaneous income can be earned via random events or from payments made

to your empire from other players. Expenses typically are limited to maintenance costs, although certain incidental miscellaneous expenses can also be incurred.

The number of economic points that an empire earns each turn is calculated using the following formula:

$$\begin{aligned} &\text{System Income} + \text{Commerce Income} + \\ &\text{Miscellaneous Income} - \text{Maintenance Cost} - \\ &\text{Miscellaneous Expense} = \text{Total Income} \end{aligned}$$

In short, we take the economic points generated by a player's colonized systems (@@ System Income), add income from any other sources (@@ Commerce Income and @@ Miscellaneous Income), and then subtract from this total the costs associated with operating the empire's infrastructure (@@ Maintenance and @@ Miscellaneous Expense). The result is then added to the player's Treasury to determine how many economic points they have to spend this turn.

3.1.1 ► System Income

Earn income from Systems

- Systems generate income each turn equal to their RAW x Utilized Productivity
- Unrest reduces system to 1/2 Utilized Productivity (round up), Rebellion reduces system to 0 Utilized Productivity

3.1.2 ► Commerce Income

Earn income from Trade Fleets

- Each Trade Fleet in a system that you can trade with earns income equal to Utilized Productivity
- Trade saturation: only one of an empire's trade fleets in each system can generate commerce income
- Can't trade at an opponent's system unless you have a Trade treaty

3.1.3 ► Miscellaneous Income

Occasionally, a random event or other one-time payment will provide your empire with an extra income or expense on the following turn.

3.1.4 ► Maintenance

Nearly every unit that a player purchases demands upkeep in the form of a maintenance cost in order to keep them operational. All maintenance costs are provided in fractional notation, such as 1/6, where the numerator (1) is the number of economic points that are required to maintain a number of units equal to the denominator (6). In this example, it costs 1 economic point to maintain a maintenance group of up to 6 units of this class.

Maintenance Costs are evaluated for each specific class of unit in service. For example, if you have an Atlantic light cruiser that has a maintenance cost of 2/4 and your empire has 24 active units of this

class in service the total maintenance cost for this class would be 12 economic points because you have 6 full maintenance groups of Atlantic cruisers in service and each group (including partial groups) costs 2 economic points to maintain. Building an additional Atlantic light cruiser would cause the total maintenance cost of the class to increase to 14 economic points as you'd be paying to maintain an extra maintenance group for the class as partial maintenance groups of this class still cost the full 2 economic points to maintain.

Should you end up building a new heavy cruiser class, the Pacific, maintenance would be calculated separately for this class. If the Pacific has a maintenance cost of $\frac{2}{3}$, it would cost 2 economic points to maintain each maintenance group of 3 units of this class. Building your first Pacific would then increase your total maintenance by 2 economic points per turn. The maintenance cost would remain steady at 2 economic points per turn until the fourth ship of the class was built, at which point the maintenance for the class would increase to 4 economic points per turn.

This maintenance system encourages players to produce units in groups, and to only build unit classes that they actually need. It discourages using several different classes of destroyer, for instance, because you're more likely to have more partial maintenance groups that you still must pay full maintenance for.

Units can be placed into special maintenance states that can halve (@@ Reserve Status) or eliminate (@@ Mothballed Status) their maintenance costs. Calculate the maintenance costs for units in different states independently. For instance, if you have 2 active Atlantic, 4 reserve Atlantic, and 1 mothballed Atlantic, your maintenance cost is 2 for the active, 1 for the reserves, and 0 for the mothballs.

There is also a maintenance cost for Intel points at a rate of 1 economic point per 10 Intel points (or any fraction of 10 Intel points). Add up all Intel points that your empire controls before calculating the maintenance cost for all of them.

The paying of maintenance costs is not optional. If a player is unable to pay for the maintenance of all units, the player must choose which units will be immediately removed from play. The units are considered destroyed for all purposes.

3.1.5 ► Miscellaneous Expense

3.1.6 ► Spending Economic Points

Players may choose to spend economic points from their respective Treasuries to make purchases for their empires this turn. Economic points that are left unspent in the Treasury carry over to the next campaign turn. You won't be able to make any purchases this turn if your Treasury balance is currently a negative value.

3.1.7 ► Update Treasury

// update Treasury with the amount of EP leftover after making purchases

Subtract the total number of economic points that you spent in your turn orders this turn from your Treasury to update it and get your empire ready to start advancing through the remainder of the turn.

3.2 ► Intel Phase

3.1.X ► Purchase Intel

- New concept: purchase Intel as per 1E, at a cost of 1 EP per Intel point
 - Max Intel is equal to Carrying Capacity instead of Census
 - You must specify where Intel is being purchased; it is no longer placed into an Intel Pool like in 1E. This retains the 2E concept of Intel being primarily system based
 - Can only purchase Intel in systems that your empire controls OR where you have a trade fleet.
 - This was recommended by aelius on the forums; that way you can build out spy networks in friendly territory
 - Another option is to still be able to buy Intel in other systems, but at a cost equal to 1 plus the number of jumps to the nearest friendly system. My question here is if that is too much hassle? Or do you want to keep the ability to purchase Intel in other systems?
-
- Another effect is that, if orders are given phase-by-phase (unlikely) then you could gather intel on a system before actually issuing movement orders. But then you wouldn't know what moved into the system this turn, which is probably a greater argument in favor of leaving Politics after Movement...

Intel

// I'm still not terribly happy with the Intel system in the game and would prefer a more active system; I'm working on some prototypes along those lines. I think 2E was a good first step with Intel as a system-level asset, but I need to iterate on it some more. I think having it be based on Carrying Capacity instead of Census so you can expand Intel everywhere will be beneficial, but I'd enjoy any feedback that people might have

// hybrid model could be for intel to be localized and consumed when used but be cheaper; that gets you cheap Intel (possibly with maintenance again?) like 1E, but being purchased and placed in specific systems. Then you would spend the Intel as a currency. Example: I have 4 Intel in a system and I want to do an Espionage (difficulty 1) mission. I spend 3 Intel from that system, giving me a 1/3 MFP. I

- It makes Intel very cheap again, but you can have Intel anywhere and not just in systems you control
- Maybe allow Intel purchases in any system you control, or where you have a Trade Fleet? And then some mechanism for sneaking Intel into another system?
- Still allow Intel from other systems to perform missions? So systems can work together, but spend Intel based on distance? 1 Intel spent per jump? Ex: I have Intel at Epsilon (3) and Sirius (4) which are both a jump away from Indi (1). I can have Epsilon and Sirius spend 1 Intel to then use some or all of their Intel to support the mission in Indi. So I could end up with a total of 6 Intel (3 from Epsilon, 4 from Sirius, 1 from Indi) on this mission.
 - This is very similar to 1E, with cheap Intel, but without the extra aiding penalty.
 - It would force you to constantly use and refresh Intel, which might not be a bad thing; after this mission, all of that Intel would be gone if it was all used.
 - Maximum amount of Intel available for missions would be lower because it would depend heavily on proximity, but chances are you could still overcome range penalties in many cases. Much harder against homeworlds, however. Ex: If I have 12 Intel in my system, it would take 3-4 systems with about 8+ Intel working together to conduct a mission there. But this is aided if you maintain the 2E concept of being able to purchase Intel in other player's systems. Then I could have 12 Intel in their system, too, to cancel them out.
- Another alternative is to have Intel missions have a fixed cost to perform, and then the chance of success/failure is instead balanced.
- The MOO model of rolling a die and adding the attacker's Intel and subtracting the defender's Intel to determine the outcome is also a possibility. This makes missions generally easier, but makes it a bit harder to scale difficulty (as it ends up being a linear modifier that is just added to the defender's Intel score).
 - Example: I have 6 Intel on the mission and you have 3 Intel defending. I roll a die (d10 or d20) and add 6 (offensive Intel), subtract 3 (defensive Intel) for a total of a +3 bonus. Starting with a 50/50 chance of success, this would give me either a +30% or +15% (d10 vs d20) bonus to my mission success. Beating mission by +10 would give an auto-success.
- We do have a quandary here about which should go first, Movement or Politics, and that has to do with Espionage and Sabotage missions that are targeting specific ships.
 - If you do Politics (and Intel) BEFORE Movement, then you know what units were there at the start of the turn but not at the end of the turn. However, you are able to Sabotage units BEFORE they move, which makes it more practical to allow directed attacks.
 - If you do Politics (and Intel) AFTER Movement, then you know what units were there at the end of the turn, but not at the start of the turn. However, you are not able to Sabotage targets that you know where in the system from the previous turn.
 - A patch would be to keep it as it is now, but have the Espionage mission results be somewhat delayed until the end of the turn.
 - Alternatively, if I am completely explicit with my order of operations and expect face-to-face players to play out each Phase without doing the turn orders step (which

seems more agreeable), then this order of operations is fine; players get to conduct Intel before they move, and can use the information they gather to plan their movement orders.

- This represents a fundamental change to how the VBAM rules flow. Before you would draft all of your orders first, then resolve the turn. In this system, you are stepping phase-by-phase through the sequence of play and letting players make their decisions in more bite-size pieces. I wonder if that would actually work better for PBEM play, so that you could keep a game running and as the CM only have to update a limited number of things at a time? Get economics out of the way, then proceed to Politics, and then Movement, etc.

New Intel Concept

//Here is a new concept to try that attempts to marry elements of 1E/2E:

- Intel missions have difficulty level as before
- Defensive Intel is equal to $1/3$ Intel (round down) + Difficulty Level
 - This allows Defensive Intel saturation to be less of a problem. If I have 8 Intel in a system, I am only getting a +2 Difficulty bonus effectively, which keeps the missions doable.
- When performing offensive missions, you spend Intel from the system (still counts for defense this turn). Effective offensive Intel is reduced by 1 per jump
- Multiple systems can coordinate on the same mission at no penalty
 - If this proves problematic, the solution is to adjust the Defensive Intel modifier to $1/2$ Intel instead.
- Keep the MFP system, with $\text{Defensive Intel} / \text{Offensive Intel} = \text{Mission Failure Percentage}$
- If you roll less than half the MFP, then the mission not only fails but the target empire learns the mission and who attempted it. If the roll is greater than the MFP, but not greater than twice the MFP, the mission succeeds but enough clues are left behind to tip off the target as to who was responsible.
- Alternative to the above system is of course to convert the MOO rules over which gives a table like the following. Add Offensive Intel and subtract Defensive Intel (use full Intel value of system in this case, and Difficulty would have to be scaled appropriately):

Intel Mission Table (d20)

Roll	Success	Discovered	Frame
5-	No	Yes	No
6-10	No	No	No
11-15	Yes	Yes	No
16-19	Yes	No	No

20+ Yes No Yes

Example: The Kili are performing an Intel mission against a Brindaki world that has 5 Intel. The Kili have 3 Offensive Intel on the mission. The Kili player rolls a d20 and gets a 12. He adds his Offensive Intel (3) and subtracts the Brindaki's Defensive Intel (5) to get a modified die result of 10. The Kili mission failed, but they were not discovered.

- As pure commentary, I would be fine with the above solution, but we'd need to then change mission difficulty to be a fixed modifier. For example, an Espionage: System might be a +0 mission, but the difficulty on Sabotage: Base might be -X where X is the unit's CC.

Example: The Seniorians are trying to destroy a Loran base (CC 4). The Lorans have 5 Intel in the target system, but the Seniorians have 7 Offensive Intel on the mission. The Seniorians roll a 17 + 7 Offensive Intel - 9 Defensive Intel (5 Intel, 4 CC) = 15 for the mission roll. The mission was a success, but the Seniorians were discovered.

Intel Missions

Espionage

System (Difficulty Level X)

Fleet (Difficulty Level X)

Troop (Difficulty Level X)

Intel (Difficulty Level X)

Tech (Difficulty Level X)

Diplomacy (Difficulty Level X)

Sabotage

Ship (Difficulty Level Varies) destroyer a random ship in the target system; mission difficulty is equal to half the unit's construction cost

Troop (Difficulty Level Varies)

Convoy (Difficulty Level X)

Base (Difficulty Level Varies): destroys a random base in the target system; mission difficulty is equal to half the unit's construction cost

Counterintel (Difficulty Level X)

Productivity (Difficulty Level X)

Piracy (Difficulty Level X)

Tech (Difficulty Level X)

Population (Difficulty Level X)

Propaganda

Labor Strike (Difficulty Level 2)

Insurgency (Difficulty Level 4)

Counter-Insurgency (Difficulty Level 4)

Coup (Difficulty Level X)

Fabricate Claim (Difficulty Level X): fabricates a claim on an enemy empire; bonus to declaring war equal to 5% x Census value of target system; as with other diplomatic modifiers, this modifier is reduced by 5% per turn starting next turn

// proposed mission difficulties

Sabotage: Fleet $\frac{1}{2}$ x Construction Cost (round down)

Propaganda: Insurgency $\frac{1}{2}$ Census x (round down)

Propaganda: Counter-Insurgency 1 x Census

Propaganda: Coup 2 x Census

Defensive Intel

Conducting an Intel Mission

Mission Success or Failure

Operational Support

- Option: spend Intel to gain initiative bonus in upcoming Encounter; so instead of allowing Surprise or Scenario Length modifiers, you would spend Intel to improve your chances of being the one to choose scenarios first.

3.3 ► Diplomacy Phase

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

// Moving Diplomacy Phase to before Movement Phase works better without a turn orders phase, as you are progressing through the turn and won't be able to conduct diplomacy with empires that you haven't met, or that you aren't currently in contact with

- As a consequence, a Diplomatic unit would effectively need to be in range of the other empire since last turn to carry out diplomacy, which works well enough
 - Possibly require Diplomatic ships to be at the same location as an opponent's colony or one of their own Diplomatic units? Diplomatic units would then need diplomatic immunity to cross the border without Trade treaty, or move Trade before Non-Aggression but I think Non-Aggression makes more sense as the first “friendly” diplomatic state. I wouldn't want to trade with an empire that hasn't promised not to blow me out of the sky!

First Contact

First contact takes place when an empire moves a fleet into a system that contains fleets or other assets belonging to another power. Empires always start in a state of Non-Intercourse upon making first contact. It is up to the players to decide how their relationship develops from here. One side or the other can try and start a “first contact war” by attacking the newly-discovered opponent during the @@ Encounters Phase this turn, or they could pursue normale relations and open up negotiations to advance their relationship.

Diplomatic Contact

Powers can only negotiate with one another if they have sustained diplomatic contact. This requires that the empires can trace a path of jump lanes between two of their systems that doesn't pass through any systems that contain an enemy fleet or that are controlled by an enemy empire. Diplomatic couriers can safely move back and forth between two empires without being interdicted by hostile forces as long as these conditions are met. Control of adjacent systems guarantees sustained diplomatic contact, but it is obviously not required.

Sustained contact between two empires is lost if they can no longer trace a path of jump lanes between their systems due to an enemy presence. This loss of diplomatic contact means that the empires will no longer be able to sign treaties or conduct other diplomacy together until the diplomatic link is restored.

Empires often employ dedicated Diplomatic cruisers that can be dispatched to faraway systems to carry out diplomatic negotiations with distant nations that they are not otherwise in contact with. This keeps the lines of communication open between their worlds and lets them continue to conduct

diplomacy, albeit in a more restricted fashion. Diplomatic ships must be in a system that is controlled by the opposing empire in order to establish and maintain diplomatic contact in this manner.

Diplomatic States

Diplomatic states define the current level of diplomatic relations between two powers. These diplomatic states represent an advancement of relations from the most dire (War) to the most harmonious (Unification). Empires begin in a state of Non-Intercourse immediately after first contact and the actions that players take during the game will adjust their diplomatic state up or down from there. Each positive diplomatic state (Non-Aggression and higher) builds upon the last. For example, empires that have a Military treaty also benefit from the effects of Non-Aggression and Trade.

War

- Unrestricted warfare. Shoot to kill, shoot to kill.

Non-Intercourse

- Cold war, you both hate each other and aren't afraid to attack each other
- Cannot invade systems or conduct general bombardment, but can attack each other without limit and don't have to respect borders
 - Exception: you can use Troop Bombardment to destroy enemy outposts.
- The goal for this "default" diplomatic state is to let you be a jerk to whoever you want without directly attacking their colonies.
 - And maybe that is the limit, just word the limit so that you can't attack enemy COLONIES, but you can attack them anywhere else. So colonies are safe, but outposts and units in other systems are fair game. Sound good?

Non-Aggression

- Cannot attack each other
- Agree to retreat back if you move into one of their systems
 - Violation of the border should probably be a diplomatic modifier that would make it easier to break/declare

Diplomatic vessels are given diplomatic immunity and may remain in another empire's territories even if they would normally be compelled to leave by the terms of the Non-Aggression treaty.

Trade

- Allows Civilian units (or units pretending to be civilian units) to move in and remain in an opponent's systems.
- Allows trade fleets to establish trade routes to the opponent's colonies.

Military

- Allows military units to cross the border
- You can use the Supply Depots of your Military partners to resupply your ships
- Can buy and sell unit class designs and actual units, but with alien units penalty

Mutual Defense

- If an enemy declares War on your Mutual Defense partner it's like they declared War on you, too.

Alliance

- If you declare War on someone, all of your allies declare War on them, too.
- If one of your Allies declares War on another Ally, you will join the War on the side of the Ally that War was declared against (defensive alliance).
- Alliance member that controls the most systems is the Alliance leader and is in charge of negotiating the armistice to end the war.
 - To sign a separate peace, an empire would have to break its alliance first

Partnership

- Close relations, can build each others designs without the alien ships maintenance penalty
- Junior partner gives diplomatic control to its partner; cannot conduct diplomacy independently
 - Still rolls for diplomatic shifts with its partner, in case the relationship sours and they want to return to a simple Alliance

Unification (NAW Only)

- NAW merges with the player empire and is officially removed from play

Friends & Enemies

Empires that are in a state of Non-Aggression or above are *friendly*, while those that are in a state of War or Non-Intercourse are *enemies*. These two terms are used throughout the rules to determine if an opponent is potentially hostile to your empire.

Diplomatic Actions

Signing Treaties

Breaking Treaties

Declaring War

Diplomatic Modifiers

Caught running an Espionage mission (+10%)

Caught running a Sabotage mission (+20%)

Caught running a Propaganda mission (+30%)

Generated a space battle this turn (+20% per battle)

Violated border by moving military units into a system without a Mutual Defense treaty (+10% per incursion)

Armistices

Co-Belligerency Pacts

Covert Diplomacy

Covert Treaties

Covert Declarations

Uncovering Covert Diplomacy

Non-Aligned Worlds

- Make these standard, and a consequence of a roll on the special traits table
- This gives a clear mechanism for adding neutral systems to the map. The chance is still very poor (1 in 36) but creates the chance of systems being populated with neutral populations
- Non-aligned worlds only have defensive forces, aren't interested in exploring or expanding.
- Tech Year automatically advances by 1 each campaign year
- Automatically has Trade relationship with any empire that isn't at war with it.
- Attacking a non-aligned world puts you in a state of War (no declaration required)
 - Makes it trivial to attack Non-aligned worlds
- Armistice requires a payment to the non-aligned world based on its income and the amount of military units it lost (or use more involved calculation from 2E CG?)
- Could make these a basic version of the NPE rules instead, which might be more interesting.
 - NAW is run by the player whose empire has the highest relationship with them (on a tie, the empire with the smaller income wins)
 - Diplomatic shifts cause checks for breaking, declaring, treaty offer
 - Each NAW has a MOO-style personality that gives a modifier
 - NAW receives a "mission" similar to WAP that mirrors MOO strategies to a large degree. The mission would give the NAW something to achieve and then a bonus for completing it, to give the NAW something to do.
 - Alternatively, give them strategy that defines what they are going to try and do, and a basic play plan for automating them.

Exploring the simplified NPE variant here:

- Relations: 0-10
 - Only one relations value per pair of empires, instead of separate like 1E
- AIX on a 1-10 scale
 - (could restore to 1-100, but I don't think we need that granularity?).

- First Contact: $2d6-2$ = starting Relations
- Each turn, roll d10 for diplomatic shift; on 1 there is a hostilities check, on a 10 there is a treaty check
 - Hostilities: If above Non-Intercourse, attempt to declare war; if Non-Aggression or above, try to break treaty
 - Declare: $AG - REL = \text{target}$; roll \leq and roll successful
 - Break: $10 - (REL + IN) = \text{target}$; roll \leq to break highest level treaty
 - Treaty: $REL - XE = \text{target}$; roll \leq to offer/sign next highest treaty
- Biggest 2E Companion change is to collapse diplomatic rolls to a diplomatic shift, which makes maintaining NPE easier.
- I had a 2E Tension system that removed AIX and worked slick, but no one liked it :(
 - They wanted their AIX values, damn it
- At that point we'd maybe be best just making NAW/NPE be the same thing, and put them here? But in a basic version, with more advanced rules in the Companion
- Treaty delay still need to be included, acting as a penalty to REL
- Breaking modifier based on current level of treaty -- make it a bit harder for them to pull out unless they are dishonorable scum?

Example: The New Earth Alliance has discovered the Trata Kamans (AG 9, IN 6, XE 8). Their starting Relations is at 10 (!). On the first diplomacy phase after contact, the Trata Kamans roll a 10 and attempt to offer a treaty. REL goes up 1, but is at max. The target is $10 (REL) - 8 (XE) = 2$. The roll is 6, which is a failure. If they had rolled a 1-2, they would have offered the NEA a Non-Aggression treaty, as that is the next highest diplomatic state.

On the next turn, the Trata Kamans roll a 1 on their diplomatic shift. REL goes down by 1 to 9. They are in a state of Non-Intercourse, so they will attempt to declare war instead. The chance is $9 (AG) - REL (9) = 0$. No chance. They grumble and recall their ambassador more than likely, adding to the treaty delay [define why]

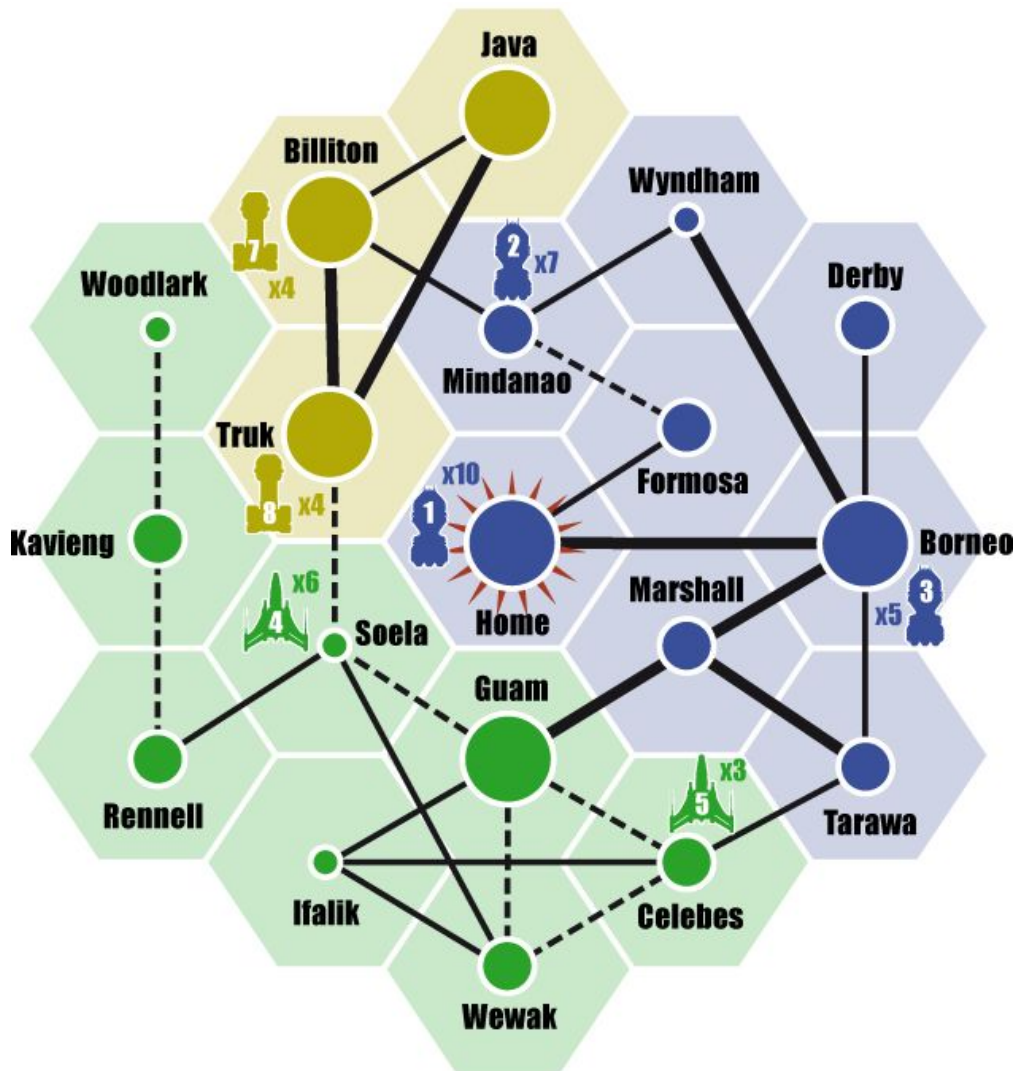
- Okay, that example shows why the % system is probably best, as it gives us a little more room to maneuver for chances because otherwise a XE 10 alien is never going to sign treaties with anyone (not that there's anything wrong with that, it's just boring).
- Demonstrates why I have diplomatic shifts being on a 2d6 and critical shifts only on 2/12. There's still a ~20% chance of REL changing each turn, but it's not as severe as this less granular approach.
- The calculations for the declaring/breaking/treaty offer are still relatively simple, even if they aren't consistent. Grumble.
- The treaty delay needs to be fleshed out again here. Every failed treaty should add a delay based on the XE of the empire. Maybe $d6 \times XE / 10$ (round up)? So a XE 85 empire that rolls 6 would get a $6 \times 85 / 10 = +51$ treaty delay? That is bit severe, but just something to reduce their REL but slowly bleed of at a fixed 10 per turn or so.
 - Then if treaty delay > REL, they have recalled their ambassador and will now even attempt to offer or accept any treaties. They're just mad and took their ball home to rethink the relationship.

- For a simplified NAW only version, the diplomatic shifts could automatically move diplomatic states up and down, if we decide that a concise version/hybrid of the NPE rules don't work here.

3.4 ► Movement Phase

3.4.X ► Ship Movement

- Crippled/Slow/Out of Supply = 1 jump
- Normal = 2 jumps per turn
- Fast = 3 jumps per turn
- Can move jump one major lane each turn in addition to other movement
- Restricted lanes are difficult to navigate and a fleet must contain at least one Scout or Explorer in order to move across a restricted lane during the Movement Phase
- When resolving movement, each fleet performs one jump at a time
 - Movement orders are going to need to be drafted at the start of the Movement Phase and then processed, but should the order in which fleets move be handled differently so that you can perform all of a fleet's moves at once instead of doing one jump at a time?
- Movement ends if fleet ends up in a system that contains fleets that are owned by an opponent that you are at War or Non-Intercourse with.
- Stop moving if you enter a system that is controlled by another power
- You can continue moving when you encounter an enemy if you leave behind an equal number of your own units. For example, you move 17 ships in and the enemy has 5 ships. You can keep moving as long as you leave at least 5 ships behind. Covers situations where you run into a single corvette but want to keep moving.
- Flights with Strikefighter ability can move like Slow ships; only type of flights that can move across jump lanes without being carried aboard a ship
- Zone of Control: ships exert a zone of control (ZOC) in a system, preventing enemy fleets from moving past them;



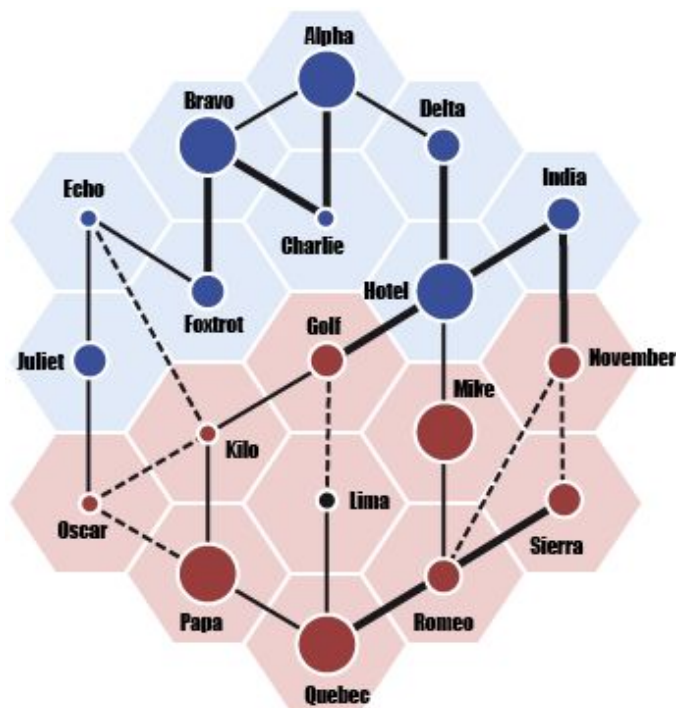
Second round of movement examples with new system

- Blue Fleet #1 in the Home system is not crippled and is comprised of 10 ships. It does not contain any Scouts. I could move from Home to Borneo, then Borneo to Marshall, and then finally Marshall to Guam in one turn. The fleet has two normal jumps, plus it can jump across one major lane per turn in addition to its other movement.
 - Blue Fleet #1 could not jump to Formosa and then on to Mindanao because it doesn't contain any Scouts.
- Blue Fleet #2 comprised of 7 ships in Mindanao can move to Billiton where it will encounter Yellow Fleet #7 that is comprised of 4 ships. The Blue player could stay and have the encounter, or else leave 4 ships behind and proceed to Java or Truk (depending on what his movement orders were). Blue Fleet #2 does not have enough ships, but if it had more than 4 ships and one of them was a scout it could leave 4 ships in Truk and then make one last jump to Soela. That would be two jumps, plus the one free major lane jump for the turn.

- Green Fleet #3 in Celebes is crippled, Slow, or out of supply and is limited to 1 jump per turn. It does not have a Scout. It could jump from Celebes to Ifalik or from Celebes to Tarawa. If moving to Tarawa, it would still get its free major lane move as an option and could jump to Marshall as there are no Blue fleets in Tarawa to impede its movement.
- Green Fleet #4 in Soela is Fast and contains a Scout. It can be given orders to jump from Soela to Guam, Guam to Marshall, Marshall to Borneo, and Borneo to Home. This is a total of four jumps. Green Fleet #4 is Fast and gets 3 jumps normally, plus the 1 free major lane. Green Fleet #4 will encounter Blue Fleet #3 in Borneo at which point the Green player can choose to either stop moving or leave behind 5 or more units (matching the number that the Blue player has in the system). Green Fleet #4 only has 6 ships, so their movement would stop at that point.

// out of supply ships move as if they were crippled? Would represent a lack of fuel

// Minefields = should they attack any enemy units that enter the system? A free attack that can't be defended against? Or should they just stop all movement and act as a "speed trap" to prevent enemies from pushing forward? The speed trap option would be easiest to implement, and would make mine warfare more interesting when fighting a defensive strategy, especially along a series of major lanes that the invader would otherwise be able to use to quickly access the interior of your empire.



Movement Example Testing:

#1) A fleet is currently in Alpha. It could jump from Alpha to Bravo (one jump) and then move to Foxtrot (free major lane) and then to Echo (second jump).

#2) The fleet in Alpha could jump to Charlie and then to Bravo in one jump (one major lane, then your normal jump), then jump from Bravo to Foxtrot (major lane) and on to Echo (second jump).

#3) If the fleet from #2 was Fast, then upon arriving at Echo it could make another jump to either Juliet or Kilo.

#4) A fleet is in Kilo. If it jumps across the restricted lane to Echo or Oscar it would immediately end its movement (it wouldn't get a second move). It could jump from Kilo to Golf and then on to Hotel on its first move (one jump plus a major lane), and then on its second move it could jump from Hotel to Delta and on to Alpha (major and then normal jump).

// Another way of handling this that might make it cleaner is to have fleets make one jump at a time until they run out of movement, but then major lanes would have to cost 0 to move, and you would be able to fly down them like they didn't even exist.

3.4.X ► Mine Warfare

- Each minefield count as a 1 ship for the purposes of stopping enemy movement.
- Makes mines an excellent defensive weapon for limiting enemy movement into your territory

3.4.X ► Stealth & Concealment

// works like 2E, with Scout cancelling out Stealth, and hidden ship being able to continue moving unimpeded

// is it problematic that ships can remain hidden unless Scouts find them?

- A better solution might be to have Stealth ships be able to "slip by" enemy ships and continue moving, or else get the option to retreat, but I still like the Scouts vs. Stealth metagame, especially when you add in things like Nebulae which will make Scouts less effective
- Add note about Nebulae effects here

3.4.X ► Carrier Strikes

Flights may conduct independent attacks against enemy forces in a system one jump away and then return to base after the attack run is complete. These carrier strikes may be launched across a major or minor lane, but never a restricted lane due to a flight's limited life support capacity. The flights leave their carriers and move to the target system during the Movement Phase. The flights remain in the target system for the @@ Encounters Phase and don't turn to their carriers until the @@ Strategic Redeployment step of the @@ Supply Phase. The carriers that these flights are based off of cannot move this turn as they are too busy supporting the ongoing carrier strike operations.

Flights sent on a carrier strike start the battle in a crippled state to demonstrate that they don't have the operational stamina of flights that are based off of carriers in the same system. They don't have

anywhere to land to be repaired or rearmed, and this lack of support reduces their overall combat effectiveness. Strikefighters are specially built for the carrier strike role and they begin the battle in an undamaged state.

Flights with the Strikefighter ability always can perform carrier strikes, even if this optional rule isn't otherwise used in a campaign. This can open up new possibilities in scenarios where only one faction has access to Strikefighter technology, making it the only empire that can perform carrier strikes against its opponents.

3.4.X ► Jump Lane Exploration

Scouts are routinely sent out on exploratory missions to chart previously unexplored jump lanes and discover strange, new alien worlds.

3.4.X.1 ► Scout Fleets

A scout fleet is an exploratory force that goes out into the unknown to map unexplored jump lanes and try to find new star systems. Any fleet that contains one or more Scouts can serve as a scout fleet and make exploration attempt rolls this phase.

3.4.X.2 ► Exploration Attempts

Scout fleets that did not perform any other movement this phase may now roll on the Exploration Attempt Table to try to explore any unexplored jump lanes that are present at their system locations. Exploration attempts cannot be made in systems if fleets belonging to empires that you're at War with are present. The maximum number of exploration attempts that each empire can make in a system this phase is equal to the number of unexplored lanes connecting to that system.

The scout fleet receives a bonus to the attempt equal to the highest Scout value in the fleet, and an additional bonus of +1 per 2 Scout functions provided by other Scouts in the fleet (round fractions down). Scout or exploration bonuses provided by outstanding leaders or random events are added to units prior to calculating this bonus. A natural result of "1" on the Exploration Attempt Table always puts the Scout Force in Peril regardless of the die roll modifier.

Exploration Attempt Table (d10)

<i>Roll</i>	<i>Effect</i>
-------------	---------------

1-3	Scout Fleet in Peril
-----	----------------------

4-10	No Effect
------	-----------

11+	Jump Lane Explored
-----	--------------------

Example: A scout fleet contains a Scout 3 cruiser, a Scout 2 light cruiser, and three Scout 1 corvettes. The highest rated Scout in the fleet is the cruiser (+3). The remaining 5 Scout functions provides an additional +2 bonus to the roll, for a total die modifier of +5.

The fleet rolls on the Exploration Attempt Table and the result is a 5. While the fleet's modifier increases this to a 10, this isn't enough to successfully explore the jump lane. The scout fleet spent the turn exploring but simply came up empty. The fleet will have to hope for better luck next turn.

3.4.X.3 ► Exploring a New System

After successfully exploring a jump lane, pick an unexplored lane at the scout fleet's current location and move the fleet across to the unexplored system on the other end of that lane and then use the @@ System Generation rules to generate statistics for the new system. The scout fleet has performed a planetary survey in this new system, revealing these statistics to their empire as well as the number and position of any additional jump lanes connect to the new system. It is likely that one or more of these jump lanes will be unexplored, offering the scout fleet an opportunity to continue exploring next turn.

Finally, roll on the Jump Lane Class Table (pg X) to determine the class of the jump lane that the scout fleet has just explored. This step is saved for last because you need to know the system importance of the systems at both ends of the lane to make this roll.

3.4.X.4 ► Scout Fleet in Peril

Exploration is inherently dangerous, and there's always a chance that an expedition will find itself in peril. Affected scout fleets find themselves in danger of becoming hopelessly lost in hyperspace. All ships in the fleet immediately gain 1d6 out of supply levels as they race to find a safe path back home. Explorer ships are better prepared for the realities of being lost out on the fringes of known space and they only earn half as many out of supply levels (round down) when they are in peril. Any ships that have their Defense Values reduced to zero as a result of these out of supply levels are lost. Any flights or other units they were carrying are also lost.

3.4.X ► Trade Routes

// rules for ordering a convoy to trade in a system

3.5 ► Space Combat Phase

When diplomacy fails, it's up to an empire's military forces to hold the line against the night, no matter the cost. An encounter occurs when two or more non-friendly fleets are in the same system after @@ Fleet Movement or the fleets stumble across each other in deep space between systems. Encounters may lead to space combat scenarios being generated, but they don't have to. A combat scenario will only occur if at least one player in the encounter wants to generate a scenario.

Space combat in VBAM are resolved using the Campaign Space Combat Resolution (CSCR) system included in this chapter or your favorite tactical space combat system, whichever you prefer. The

CSCR is designed for quick resolution of space battles. The players act as fleet admirals and have significant control over the outcome of these engagements.

Play proceeds to the Orbital Bombardment Phase once all encounters and space combat scenarios have been resolved.

// the current encounter system is not very intuitive and leads to confusion and should be cleared up

// many other 4X games don't allow ships to remain in the same system after a battle is over. Forcing the "losing" side to retreat at the end of the battle would remove quite a bit of ambiguity

- Blockades would only occur in undefended systems if this change is made, as only one side or the other would still have forces in the system; traditional blockades could remain if you added the condition that system owners that still have starbases (not including supply depots or shipyards) left at the end of the battle are being blockaded if the total Construction Cost of enemy ships is greater than their own. That starts getting is convoluted rules that I would rather remove from the rules, however
- Having a single space battle would get rid of rules but limit battle variety unless other factors were introduced (terrain?)

// another element that VBAM does but other games do not is force a finite scenario length on players. This is an artificial limit, and may not be the best option, especially if a new encounter resolution model is used

- The Stars Divided inspired optional retreat rule in 2E could be made standard, so that players could actively decide if they are retreating. At that point retreating could become another command action (see later) that a player could use. For example, a flagship with 6 CR could retreat up to 6 CC ships per round.
- You could combine the 2E retreat rule with the scenario length, making retreat/disengagement automatic once the "scenario timer" has been met, but allow ships to attempt to jump out early but at significant risk.
- As a counterpoint, the scenario length in VBAM is a good way to represent that two fleets are committed to a fight for a time before they can successfully disengage. Without this limit or too lenient of retreat rules, too many battles would end up boiling down to one fleet jumping out as soon as they felt they were at a disadvantage; having a CR/CC limit helps to address this issue in larger battles, but in smaller engagements it would be nigh on impossible to force an engagement.
- reintroducing the d6 die to the scenario length from 1E is probably necessary to randomize scenario length and keep it more dynamic
 - Tying into the previous point, a battle's length could be wholly random by rolling 2d6 + Readiness Modifiers. For example, I roll 2d6 and get a 9. The players roll Poor (-1) and Superb (+2). These modifiers are added to the base scenario length for a total of 10 rounds of combat. If they had both rolled Bad (-2), then the scenario length would have actually dropped to 5 rounds.

- ⊖ With the above, it becomes possible for scenario length to go negative. At that point, I would be inclined to say that the commanders were out of position and mutually chose to avoid combat.
- ⊖ Scouts could still be used to adjust scenario length, with Scouts used in this way being required to start in the Reinforcements Pool at the start of the battle. It is currently 4:1 to adjust scenario length, which is expensive.

Situations that Encounters may need to represent:

- ◆ Attacker enters system, Defender goes out to meet them to prevent them from reaching planet
 - ⊖ “Outer system battle”—attacking a fleet before it can get too far into the system
 - ⊖ Deep Space Battle?
 - ⊖ Player that refuses must retreat from the system or else demand a Defensive scenario
- ◆ Attacker and Defender fight in the system
 - ⊖ Must the Attacker engage the Defender’s fixed defenses (if present)? There is some fictional precedent in the form of B5 and DS9, but the Attacker shouldn’t be compelled to crack the defenses; however, in that case should they be forced to retreat?
 - ⊖ Forcing players to engage the enemy’s fixed defenses makes those defenses much more useful.
 - ⊖ Refusing Defensive battles like this causes most of our problems, and is why I’m inclined to just lump defenses in to a normal battle. That way there isn’t any ambiguity over how the battle is going to shake out. Then we can use whatever standard retreat rules we come up with to handle the defensive fleet trying to retreat.
- ◆ Fleet pursued another retreating Fleet

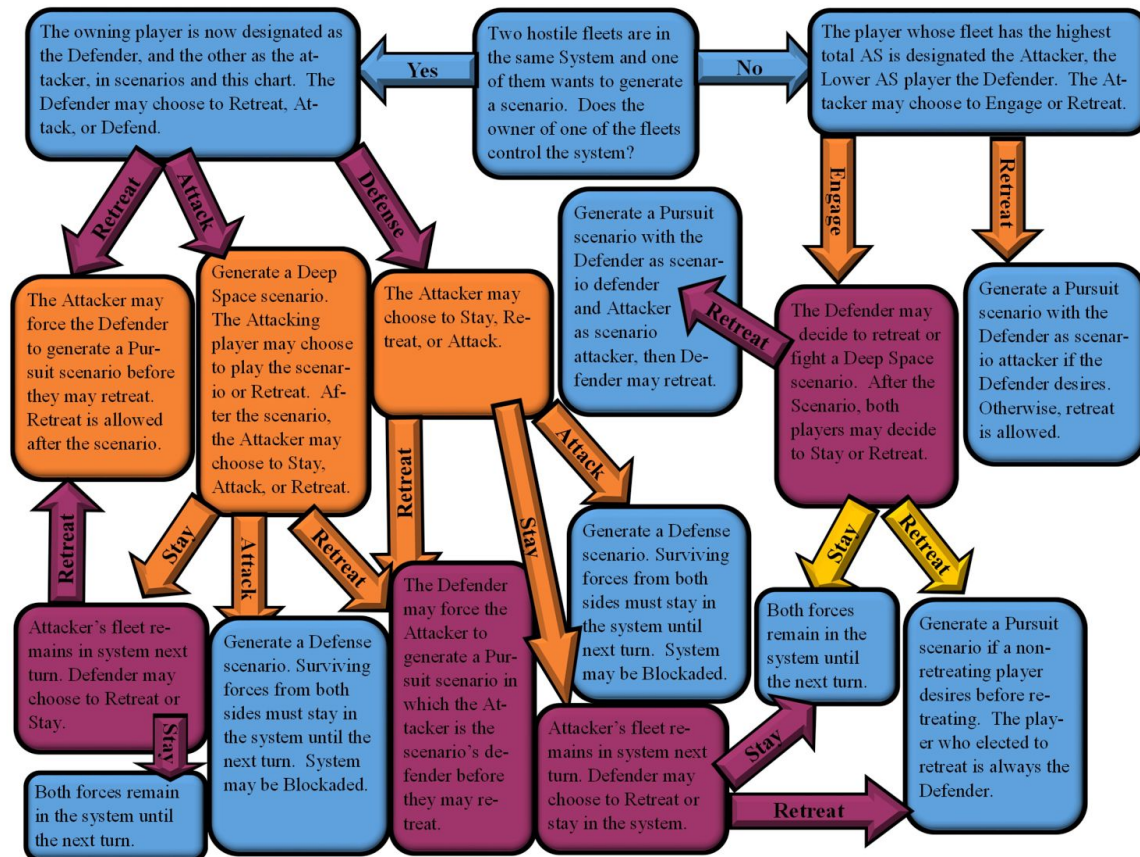
3.5.1 ► Encounters

3.5.1 ► Jump Lane Encounters

Jump lane encounters occur when fleets meet in the middle of a jump lane. This is a chance encounter in deep space in between two star systems. The players take turns deciding whether or not they want to demand a Deep Space scenario against any of their opponents, starting with the fleet that has the highest Anti-Ship total in the encounter and continuing in descending order. Remember to take into consideration any modifiers that might affect a fleet’s Anti-Ship values, such as the effects of being crippled or out of supply, when calculating your fleet’s total Anti-Ship value.

A fleet can refuse a Deep Space scenario by choosing to withdraw from the encounter. The fleet is trying to retreat back to the last system that it visited before the jump lane encounter was generated. However, the attacking fleet may immediately demand a Pursuit scenario against the withdrawing fleet. This scenario cannot be refused.

Fleets that don't engage in combat during a jump lane encounter can choose to either proceed to their original destination or move back to the last system they visited before the encounter. Retreating fleets don't have an option and they must return to the last system they visited. These fleets will arrive at their destinations during the Update Phase this turn. The encounter ends once all the fleets have decided where they are going to move, and you can proceed to the next encounter.



3.5.2 ► System Encounters

System encounters take place in a star system. They are more complex than a jump lane encounter because players have more options when it comes to how these encounters are resolved. As with jump lane encounters, the order in which players demand scenarios in a system encounter is determined highest-to-lowest by their total Anti-Ship values. A fleet can demand either a Deep Space or Defensive scenario against an opponent. A Deep Space scenario is a battle in open space, while a Defensive scenario takes place near a planet or other strategic point in the system and allows the defender to add fixed defenses to its Task Force.

A fleet can refuse a Deep Space scenario by choosing to withdraw from the encounter. The fleet can withdraw to friendly fixed defenses if there are any in the system, otherwise it will attempt to retreat back to an adjacent star system. However, the attacking fleet may immediately demand a scenario

against the withdrawing fleet. A Defensive scenario can be demanded if the target withdrew to fixed defenses, or a Pursuit scenario can be demanded if it is trying to retreat from the system. Neither of these scenarios can be refused by the withdrawing player.

An attacking fleet can refuse a Defensive scenario that the defender demands against it by choosing to pull back outside the range of the planetary defenses. The fleet remains in the system but it won't be able to perform orbital bombardment or conduct planetary invasions there this turn. The attacker is also prevented from loading or unloading units or cargo from the system during the Movement Phase of the following turn.

A defender meanwhile cannot refuse a Defensive scenario, however they can choose to have some or all of its fleet try to retreat from the system while the rest stay behind to protect the system's fixed defenses. After the Defensive scenario is complete, the attacker can demand a Pursuit scenario against the defender's retreating units. This Pursuit scenario cannot be refused.

If a system is currently blockaded (see 3.6.5 Blockades), then the only type of scenario that the defender can demand is a Breakout scenario. This scenario cannot be refused. The blockaded fleet successfully runs the blockade if all of the ships in the blockading fleet are crippled or destroyed. They may then retreat from the system without fear of enemy pursuit.

If your fleet moved into a system that is controlled by an opponent that you're not at War with, then you must order them to retreat; you aren't allowed to take any other action because you accidentally crossed the border and must leave their territory at once! However, there's nothing stopping your opponent from demanding scenarios against your own fleet.

- 9/27: I'm really leaning towards making the Defensive scenario the standard for any system encounter where one player has fixed defenses of any type. In other words, if you fly your fleet into a system where the enemy has a starbase or shipyards, then if you fight that is going to be a Defensive scenario, full stop.
 - The invader in this scenario can still refuse the Defensive scenario, but by doing so they are retreating from the system; the defender can then target them with a Pursuit scenario that still CANNOT be refused.
 - Removes ambiguity over when or where fixed defenses can be used, and makes them more useful and worth investing in.
 - This does have the negative side effect of the invader being forced to either engage the defenses in the system or retreat. That might not be a great option, but it's better than having it utterly confusing as to what type of battle is being fought.

3.5.2 ► Encounter Resolution

3.5.3 ► Encounter Initiative

At the start of the encounter each player rolls a d10 to determine their fleet initiative. A player may use Scouts to spend Intel points from the system to gain a +1 bonus to this roll per Intel point spent.

The total Intel that a player spends cannot exceed the number of Scouts in his fleet. Scouts used for this purpose have their Scout values reduced to zero for the rest of the encounter.

The player with the highest modified die roll has won initiative in this encounter and gets to choose an action to perform. The player's fleet can choose to demand a scenario against an opposing fleet, retreat from the system, or pass initiative to the player with the next highest die roll.

An encounter ends once no opposing fleets remain in the system or all remaining players have consecutively passed initiative.

Scenarios are generated only so long as at least one fleet demands a scenario be generated. Once all demanded scenarios are resolved, the encounter is resolved and you can move on to resolve the next encounter.

- Randomly roll to determine who goes first
- Current player can choose to Attack, Retreat, or Pass
- Attack: choose scenario to demand against an opponent
- Retreat: order fleet to leave the system; retreated units can only be targeted by a Pursuit scenario until they disengage from the encounter

3.5.4 ► Attacker vs. Defender

There are always two sides in every scenario. The Attacker is the fleet that demanded the scenario, and the Defender is the fleet that is being attacked.

- Attacker or Defender may choose to disengage and leave the system at the end of scenario

3.5.2 ► Space Combat Scenarios

3.5.5 ► Interception Scenario

- Attacker is trying to stop an incoming fleet as it moves into or through the system
- Can only be demanded by system owner
- Both the Attacker and Defender's command limits are halved (round up) to represent that this is a running battle on the edge of the system
- +2 surprise to Attacker
- -2 scenario length
- *This becomes a Defensive/Pursuit hybrid that a system owner can use to give themselves a surprise bonus in the battle. It is low intensity and is not going to be decisive in most cases.*

3.5.6 ► Deep Space Scenario

- Standard pitched fleet battle
- No modifiers

3.5.X ► Convoy Raid Scenario

- Attacker chooses 1 enemy convoy to include for free in scenario; unit does not count against the Defender's command limit but cannot be moved to the reinforcements during the scenario
- No ship larger than a CA can be fielded in either task force unless they have the Fast ability; must be able to keep up with the fleet
- +2 surprise to Attacker
- -4 scenario length
- *The standard raider scenario, expanded and made standard so any fleet can use it to target enemy convoys. The limit on ship size makes this a smaller battle.*
- *Raiders automatically generate one of these when they first appear in the Supply Phase; after that, they will attack during the Encounter Phase normally => but I still think raiders should not be targetable by military craft or be treated like normal hostiles, otherwise it's too easy to send a battle fleet out to get them*

3.5.X ► Defensive Scenario

- Cannot be demanded by system owner
- Can only be demanded against the system owner (or any empire that has a base here?)
- The Defender may include bases, minefields, and system-based flights in its task force
- Can substitute the system's Productivity value for the flagship's CR if it is higher
- +2 surprise to Attacker
- +2 scenario length
- *A coordinated strike against a system's defenses; the only way to attack enemy bases; minefields are not compelled to be included, and not automatically added like bases; this lets players hide their minefields and keep them around as strategic weapons if they don't want to use them tactically in a battle.*

3.5.X ► Pursuit Scenario

- Defender must use crippled units in task force to fill non-flagship slots
- Only scenario that can be demanded against a retreating fleet
- Attacker command limit is halved (round up)
- +2 surprise to Attacker
- -4 scenario length
- *A way to do some damage to a fleet that is running away from you*

3.5.3 ► Task Forces

Space combat occurs between opposing task forces. Each task force is made up of task force flagship and a number of additional ships or flights up to the flagship's CR. For example, a task force with a CR 9 command cruiser as its flagship would consist of the flagship and up to nine other ships or flights. All remaining fleet units are placed in the @@ Reinforcements.

A Defender has the option of using a base as its task force flagship when fighting a Defensive scenario.

If no ships or bases are present to lead the task force, then a flight will assume the role of task force flagship with an effective CR equal to twice its DV. For example, a Graal Beak medium fighter flight (DV 3) would have CR 6 for the purpose of commanding a task force. This would allow the Beak to include itself and up to six other flights in its task force. Any flights beyond the number that can be commanded by the task force flagship are placed into the Reinforcements.

// Base and minefield inclusion? In Defensive scenarios, I am thinking the system's Productivity should be the number of free defenses that a player can add? Maybe extend to flights based from the system, too? That way heavily populated systems have better coordination of their defense grids.

All ships and flights start in a level 1 formation bonus. Convoys, bases, and minefields do not receive a formation bonus because they either are not designed for combat (convoys) or are immobile and unable to maneuver with the fleet (bases and minefields).

- Task force is a group of units fighting together
- Task force is comprised of a task force flagship and a number of additional ships or bases equal to the flagship's CR
- Flagship must be the ship with the highest CR in the fleet
 - a ship may be excused from the role if it is crippled; i.e., can't be forced to use a crippled ship as the task force flagship
 - in case of a tie, the player chooses which ship is his flagship

3.5.X ▶ Flagship

3.5.X ▶ Command Limit

3.5.X ▶ Fixed Defenses

3.5.X ▶ Reinforcements

Additional units beyond those placed in the task force are moved to the reinforcements. These units are simply set aside in their own pool. At the start of each combat round, a player may move reinforcements into his task force to bring it back up to full strength. Reinforcements may only enter the battle if your task force flagship has enough CR to control the new units in addition to those that are still left in its task force. Additionally, new defenses can be added (rule).

- Any units that aren't included in the task force are placed into the reinforcements.
- Reinforcements cannot be attacked during the combat round (outside of Overkill Damage), and units can move in and out of the reinforcements during the battle

3.5.X ► Multiple Combatants

3.5.X ► Formations

Task forces use fleet tactics to provide covering fire, point defense protection, and other vital combat defenses to protect themselves against enemy attacks. This natural integrated defense bonus is collectively known as a formation bonus. Formations make it more difficult for an opponent to use directed damage against a target. The Formation Level Table shows the differing directed damage modifiers at different formation levels. Multiply a unit's DV by the directed damage modifier to determine how much directed damage is required to cripple/destroy the unit. Flights treat all units as if they were in a formation level one level lower for purposes of directed damage.

All ships start in a level 1 formation, while flights, bases, and minefields start in a level 0 formation. The task force flagship receives a +1 formation bonus by merit of the task force's organization. Some ships have the ability to raise or lower formations to either offer a friendly unit better protection against directed damage or to lower an enemy's formation in order to make directed damage against it more effective. Rules for altering formation levels are found in @@ Scout Mission Assignments. A unit's formation level cannot be raised greater than 4.

Formation Level Table

<i>Formation Level</i>	<i>Directed Damage Modifier</i>
0	1x
1	1.5x
2	2x
3	3x
4	4x

3.5.4 ► Surprise

Before the battle begins, each task force rolls on the Surprise Table to determine its readiness state on the first round of combat. Empires that have completed a successful Espionage: System mission in the system this turn receive a +2 bonus to their rolls on the Surprise Table.

The number in parenthesis after the name of each readiness state is the task force's readiness modifier. This value is added to the player's d6 combat rolls when making attacks during the round. This readiness modifier can't decrease a die roll below a minimum value of 1.

Depending on your starting readiness state, your task force may begin the scenario positioned to ambush the enemy, or it might be your task force that is being ambushed!

Surprise Table (d10)

Roll Readiness State

1-	Disastrous (-3)	Task force is completely unready for combat
2	Bad (-2)	Task force has just been ordered to battle stations
3-4	Poor (-1)	Most but not all of the task force is at battle stations
5-7	Normal (+0)	Task force is at battle stations
8-9	Good (+1)	Task force is fully prepared for the battle
10+	Superb (+2)	Task force knows exactly what to expect in the battle

3.5.5 ► Scenario Length

Scenario length is the number of combat rounds that combatants must remain in the battle before the interception window closes and one side or the other breaks off. Roll 2d6 and add the readiness modifiers from both task forces and any scenario specific scenario length modifiers to determine the scenario length for this battle.

Each task force may spend a point of Intel from the system for each unused Scout to extend or shorten the scenario by one round per Intel point spent. Scouts used to alter scenario length with Intel points must begin the battle in the Reinforcements. Players should secretly record their scenario length change and then simultaneously announce it when they're done.

Space combat has a minimum length of 2 rounds and a maximum length of 12 rounds.

Example: The Jains and Lorans are fighting a Pursuit scenario. The Jains rolled a readiness of Superb (+2) and the Lorans rolled Poor (-1). This is Pursuit scenario, which has a -4 scenario length modifier.

The players roll 2d6 and the result is a base scenario length of 7 rounds. Adding the readiness modifiers (+2 and -1) change this to 6 rounds, and the Pursuit scenario modifier (-4) reduces this to 2 rounds. The Jain player uses 2 Scouts to spend 2 Intel to extend the scenario by an additional 2 rounds.

The final scenario length is 4 rounds. The players may now finish setting up their task forces to begin the first round of combat.

3.5.6 ► Scout Use in Scenario Setup

3.5.X.1 ► Includes/Excludes

Scouts may be used to include or exclude units from either task force in the current battle. To exclude your own units costs 1 Intel point per unit. To include or exclude an opponent's unit costs 2 Intel

points. If a unit is included or excluded, any units based from them are automatically included or excluded as well. Includes take precedence over excludes. Excluded units cannot be included in the task force or reinforcements. The unit has effectively disengaged from the scenario.

The total Intel that a player spends on includes/excludes cannot exceed the number of Scouts in his fleet. Scouts used for this purpose have their Scout values reduced to zero for the rest of the encounter.

- Cannot include/exclude task force flagships

3.5.X.2 ▶ Change Scenario Length

3.5.X.3 ▶ Change Surprise

3.5.7 ▶ Scoring Damage

The CSCR uses a standard system for scoring damage.

3.5.X.1 ▶ Standard Damage

- Standard damage process of $\text{Total Stat} \times \text{d6} + \text{Readiness} / 10 = \text{damage}$ (**ROUND UP**)
- Undamaged units take damage equal to DV and become crippled; crippled units take damage equal to DV and become destroyed
- Ship damage is scored by the defender unless the attacker uses directed damage;
- Crippled flights have “dropped out” and have their AS/AF reduced to zero; they are repaired by their carriers and restored to an undamaged state at the end of each combat round

3.5.X.2 ▶ Directed Damage

- Directed damage requires more damage to damage targets, but is assigned by the attacker and not the defender.
- Flight damage is scored by the attacker, and formations are at -1 penalty;

3.5.X.3 ▶ Leftover Damage

- any damage beyond that required to cripple/destroy a unit will auto cripple/destroy the weakest unit in the enemy task force as long as the damage remaining is greater than 1/2 the unit's DV

3.5.X.4 ▶ Overkill Damage

- If all of the units in a task force have been destroyed, any remaining damage is scored as free directed damage against ships in that player's reinforcements
 - This is kind of a passive/aggressive kill switch to guard against players that send waves of weak ships against an opponent to intentionally stall a battle until it “times out” at the end of the scenario. We've had a few of them. This rule makes it so that such attempts accomplish nothing more than let the opponent kill their reinforcements without any hope of reprisal.

3.5.X.5 ► Lucky Hits

If a task force has partial damage leftover that is insufficient to cripple or destroy the weakest target in the enemy task force (@@ Leftover Damage), roll 2d6 and on a 12 the attackers managed to score a lucky hit against the target. The blast hit the enemy in a vulnerable spot (perhaps a shot down a thermal exhaust port that led straight to the reactor?) and is successful in crippling or destroying the enemy's weakest unit after all.

CM's Note: This rule exists to cover situations where a task force simply cannot put out enough fire in a single Fire Phase to damage even the weakest target in the enemy task force. The chance of scoring a kill with a lucky hit is remote, but at least it still gives them a chance without resorting to assigning partial damage to individual units which would become tedious in larger battles.

3.5.8 ► Combat Sequence of Play

Once the scenario is chosen, the task forces built, reinforcements population, surprise (fleet readiness) and scenario length determined; Scenario resolution proceeds

3.5.X.1 ► Command Phase

In the Command Phase, players may assign a new task force flagship. A task force that lost its flagship must be assigned a new flagship. A ship can only be assigned if it has the highest CR of any ship in the task force. If more than one ship is tied for highest CR, the player may choose which ship will become the new task force flagship.

If the current number of ships already exceeds the command rating of the task force flagship (for example, because the previous flagship was destroyed and its replacement has a lower command rating) then ships must be removed to the reinforcements until the number of ships is equal to the current task force flagship's command rating. These can be any ships, including crippled ships and fixed defenses.

(Minefield assignments)

Ramming: Unit rams during appropriate fire phase

Retreating: Unit retreats during End of Round Phase

3.5.X.2 ► Special Missions Phase

Once all task force units are in their final assignments, players may order ships on special missions.

Defensive: +1 formation, AF and AS to 1/2.

Anti-Ship: AS bonus equal to 1/2 AF (round up), AF to 0

Anti-Fighter: AF bonus equal to 1/2 AS (round up), AS to 0

Scouting: +1 Scout, AS and AF to 0

Each player may issue “command actions” at the start of each combat round, with the number of command functions available to spend equal to the flagship CR. The cost to assign a unit a mission is equal to its Command Cost. Missions include Defensive (+1 formation level, 1/2 AS/AF), Antiship (add 1/2 AF to AS, AF reduced to 0), Antifighter (add 1/2 AS to AF, AS reduced to 0), and Scouting (+1 scout function). Flights are CC 1 for the purposes of the rule.

- These missions give players more control over the battlefield and can help in situations where a player wants to protect a certain unit or maximize firepower.
- At start of round, player can designate a new flagship; new flagship only has half the normal CR for purposes of command actions
- Crippled units cannot be assigned missions; they have sustained too much damage and can no longer coordinate with the fleet

3.5.X.3 ► Electronic Warfare Phase

Scout functions are assigned during the Scout Phase of each combat round.

Your total Scout functions are reduced by the enemy’s total Jammer functions; does not affect specialized units such as Guardians, Disruptors, Suppression, or Fire Control.

Guardian: +1 formation

Disruptor: -1 formation

Suppression: -50% AS/AF

Fire Control: +50% AS/AF

The cost to perform a Scout mission is equal to the target’s command cost.

3.5.X.4 ► Fire Phase One: Ships vs. Ships

3.5.X.5 ► Fire Phase Two: Ships vs. Flights

3.5.X.6 ► Fire Phase Three: Flights vs. Flights

3.5.X.7 ► Fire Phase Four: Flights vs. Ships

3.5.X.8 ► Special Operations Phase

Boarding

3.5.X.9 ► End of Round Phase

Players make modifications to their task forces at this time. A task force flagship may move a total command cost of ships equal to its own command rating back to the reinforcements. Towing ships may move an additional command cost of ships back to the reinforcements equal to their number of Towing functions.

After ships have been moved back to the reinforcements, you must now add ships to your task force from the reinforcements until the number of non-flagship ships in the task force is equal to the flagship's command rating or you have no ships left in the reinforcements to add.

If this is a Defensive scenario ...

You are now ready for the next combat round! Start the next round at @@ Command Phase. The number of rounds

3.5.X ► Capturing Ships & Bases

- Boarding ships can capture units during a battle
 - Boarding points scored as directed damage to attack ships, bases, or convoys during Fire Phase One after other weapons fire is resolved
 - Units that are “destroyed” using Boarding damage are captured instead, and are added to the capturing player's task force.
 - Captured units don't count against the task force's command limit and remain in the task force until they are moved to the reinforcements during task force reorganization.
- If only Civilian units are left in the enemy task force (including reinforcements) then a battle is over and all of the Civilian units automatically surrender.
 - Civilian units are crippled if they weren't already, as the crews sabotage key systems before the enemy gets there.
- Question: Could Assault ships fulfill the role originally held by Marines in the Ship Security Detachment optional rule? So that Assault lets you raise the effective formation level of a friendly unit for the purposes of Boarding attacks? That seems like it would be pretty straightforward and eliminate an optional rule.
- Units with the Suicide ability cannot be captured; they are destroyed instead if they are captured

3.5.X ► Ramming

- Keep ramming SIMPLE
- Declare that a unit is ramming before rolling for damage during the appropriate Fire Phase
 - Ships and flights can only ram when they are crippled
 - Ramming unit is automatically destroyed
 - Ship adds its DV to its AS (can't ram flights)
 - Flights add DV to AS or AF depending on fire being conducted

- This makes sure that ramming can't be used too often and that the ramming unit is going to be destroyed in the attempt, but gives a definite bonus without adding another step to combat
- Kamikaze units can ram even if they aren't crippled, and they receive 2x DV when ramming
 - Ex: Delegor CT (DV 4) has the Kamikaze ability. It would get +8 AS when ramming this turn. This attack would destroy still destroy the ship.

3.5.X ► Retreating From Combat

- Scenario length typically shows the time in contact between the two forces before one or the other retires from the field or is destroyed, but sometimes players want to be able to retreat their ships
- The 2E optional rule (converted from Stars Divided) is a great starting point for this rule, but I have some other possible wrinkles
 - The first is to only allow ships with the Jump special ability to retreat. This would likely need to be a +1 Maint ability due to the ability.
 - It seems a bit draconian to restrict emergency retreats to only ships with the Jump ability. Instead, Jump could instead give a bonus to the retreat and/or allow the Jump ship to retreat a total CC of units equal to its own CR.
 - Example: An Omega destroyer (CR 6, CC 5) is performing a jump to retreat from combat and it has a Jump drive (and isn't crippled, which would make it lose the advantage of that special ability). It could get a +1 to its retreat roll, and be able to take up to 6 CC of other ships with it when it goes.
 - That CC amount seems excessive, but in B5 ships were able to open jump points for other units and several of them leave at once. They are also able to open a jump point for other ships while remaining in the system themselves. I'm not sure how best to represent that.
 - With the 4.15 Emergency FTL Retreat, I would change the rule as follows:
 - Choose which lane you are retreating across, then roll a d6 and on a 3+ the ship successfully disengages from combat, on a 2 or less it takes damage
 - +1 if retreating ship has Jump drive
 - -1 if retreating ship is crippled
 - -1 if retreating across a restricted lane
 - +1 if retreating across a major lane
 - Question: would adding a Sublight ability (-1 Cost) for units that can't do an emergency retreat under any circumstances?
 - I'm thinking this kind of ability could be used to represent ships that simply don't have warp, jump engines, or whatever that are required to disengage from a fight. I'm not sure I'd ever use it, though. It seems like it is just adding rules for the sake of rules.
 - I also just realized that the game isn't explicit that NEGATIVE special traits always apply, even when a unit is crippled. That is a bit of an oversight! Whoops!

- Retreating from a battle disengages your ships and they cannot be attacked for the remainder of the encounter. They are leaving the system and must proceed to the target system, arriving during the Update Phase

3.5.X ► After the Battle

Once all combat rounds in a scenario have been resolved, the units in your task force and reinforcements are returned to their original fleets. Flights must now find basing. Any flights that cannot be based in the system are lost.

- Crippled flights are repaired
 - I'm no longer thinking this is necessary, except at the end of the battle. Having flights cripple like ships seems to work just as well, and is more consistent; repairing at the end of the battle makes sense from a bookkeeping perspective.

Crippled convoys have their transport capacity reduced to half that of normal (5 transport capacity) and must destroy any cargo that they are no longer capable of carrying. The convoy's owner chooses what cargo is lost from this damage. Cargo that was being carried on convoys that were destroyed in the battle are removed from play.

Any fleets that survived the scenario may disengage from the encounter and retreat, and they cannot be pursued or have any other scenarios generated against them at this location for the rest of the Encounter Phase. A fleet may still choose to stay and fight or otherwise contest the system, but the choice of to stay or disengage must be made now before resolving the rest of the encounter.

3.5.X ► Integrated Space Combat Example

3.X ► Orbital Bombardment Phase

Once a fleet has achieved orbital superiority in a system by either destroying or driving off the defenders it may commence orbital bombardment against targets in the system. These attacks are used to weaken a colony's defenses before troops can be landed. In extreme cases, orbital bombardment can also be used to wipe out alien populations and leave a system completely uninhabited.

Orbital Superiority

// might be able to simply that if there are no fleet units (ships or bases) left to defend system, then you can bombard or invade

Bombardment Value

A unit's bombardment value quantifies the destructive potential of its guns when they are used to bombard a system. The amount of bombardment value that a unit generates is found on the Fleet

Bombardment Value Chart. Add 1 bombardment point if that vessel is a Gunship. For ships that require multiple contributors, such as a frigate that requires 3 ships for 1 bombardment value, the group's bombardment output is increased to 2. For example, a frigate Gunship produces 2 bombardment value for every 2 ships. Crippled ships are too heavily damaged to participate in orbital bombardment, and they don't contribute any bombardment value to the attack this turn. If an out of supply ship performs orbital bombardment it earns an additional out of supply level because it is rapidly exhausting its limited supply of ammunition.

Bombardment Fleet Chart

<i>Class</i>	<i>Abbr</i>	<i>Bombardment Value</i>
Titan	TN	8
Superdreadnought	SD	6
Dreadnought	DN	5
Battleship	BB	4
Battlecruiser	CB	3
Heavy Cruiser	CA	2
Light Cruiser	CL	1
Destroyer	DD	1 per 2 ships
Corvette	CT	1 per 4 ships
Light Fighter	LF	1 per 6 flights
Medium Fighter	MF	1 per 4 flights
Heavy Fighter	HF	1 per 3 flights
Superheavy Fighter	SHF	1 per 2 flights

Bombardment Missions

After totaling the bombardment value, the bombing player decides what sort of bombardment missions they wish to conduct. Each bombardment mission has a different target that influences how much bombardment value is required to score damage against the enemy system.

Troop Bombardment

This is an all-out, concerted strike against an opponent's ground forces. A defending ground unit loses 1 Attrition for every 6 bombardment value (defender's choice). These strikes can disrupt production, and for every 18 bombardment value the system loses 1 Utilized Productivity next turn. For every 36

bombardment value, roll a d6. On a 1-4 the system permanently loses 1 Productivity, and on a 5-6 the system loses 1 Census and 1 Morale.

Productivity Bombardment

Productivity bombardment targets strategic industrial sites in an attempt to disrupt production and permanently cripple the system's industrial capabilities. The system loses 1 Utilized Productivity next turn for every 6 bombardment value. For every 24 bombardment value, permanently remove 1 Productivity. Particularly heavy bombardment can also cause collateral civilian population damage to occur. For every 36 bombardment value remove 1 Census and 1 Morale from the system.

Population Bombardment

Population bombardment orders a fleet's orbital guns to rain death down upon major planetary population centers with a goal of maximizing civilian casualties. The system loses 1 Census and 1 Morale for every 24 bombardment value. There is also a chance of collateral damage to infrastructure. 1 Utilized Productivity is lost next turn for every 18 bombardment value. For every 36 bombardment value, permanently remove 1 Productivity.

Tactical Support

- An old 1E draft has ships spending bombardment value to lower the Defense value of troops to make them easier to kill. Worth exploring? I could see this being better than Attrition damage from the perspective of making it impossible for an attack to bomb off all of the troops for an unimpeded landing.

General Bombardment

- Early 1E also had general bombardment, where you rolled randomly for every 20 bombardment value to see what you killed. This was a bad cost proposition given at you could kill something for 12 BV in other missions at the time, but the general idea isn't bad. You could lose 1 Census, 1 Productivity, 1 Intel, or 1 Morale depending on how you rolled.

Sustained Bombardment

Any bombardment value that isn't spent on bombardment missions this turn automatically carries over to the next turn as long as the attacker maintains orbital superiority on the following turn. If the attacking fleet is driven off or destroyed before it can bombard on subsequent turns any bombardment value that it was carrying forward is lost and will have no effect on the system. It can be assumed that the bombarding fleet was forced to abandon its bombardment efforts before they could come to fruition and any damage they did to the system was trivial at best and won't have any lasting effects.

Intense Bombardment

Intense orbital bombardment has a chance of rendering parts of the planet's surface totally uninhabitable. Roll a d6 for each point of Census or Productivity that was destroyed by bombardment this turn. On a 6, the system loses 1 Carrying Capacity. A system cannot have its Carrying Capacity

reduced below a minimum value of 1. If the system's Census, Morale, and Productivity exceed its new Carrying Capacity then they must be reduced accordingly.

Mass Drivers

Bombardment Surrender

A bombarding fleet can demand the surrender of an enemy system if it is conducting a Population bombardment mission and there aren't any ground forces defending the system. If the bombarding player wishes to ask for their surrender, the next step is to roll d10 + Morale to determine whether or not the colonial government is prepared to accept the terms of the surrender. The system will surrender if the roll is less than or equal to its Census.

If a system that refused a bombardment surrender offer loses Census or Morale on the same turn, it will lose an additional 1 Morale to represent that popular support for the ruling government is waning because there are elements of the population that believe that resistance is futile and they should have surrendered.

3.X ► Ground Combat Phase

This is the phase where control of a system is ultimately decided. Orbital bombardment and planetary blockades can only go so far and in the end it's up to the ground forces to settle the issue and determine who will end up in control of a contested system.

// I think this is generally fine, though some players would like troops to cost more and I have no problem accommodating that

Ground Combat Procedure

Each of your ground forces in the system is assigned attack orders at the start of the battle. Ground forces can be ordered to attack an opposing ground unit. Up to four of your units may attack the same opposing ground unit.

Ground forces in reserve status defend like normal, except they have -1 Defense and cannot be ordered to attack.

Ground attacks are resolved by rolling the attacking unit's D Factor and adding its Attack value, then the defender rolls his own D Factor and adds it to its Defense value. The defending unit takes 1 Attrition damage per point that the attacker's total exceeds the defender's own. If more than one ground force is attacking the same target, the attackers gain +1 Attack per additional attacker. Because of the nature of this opposed roll, it's typically most efficient to use multiple units to attack a single opposing unit rather than have them attack individually.

Any ground unit that has its Attrition reduced to zero is destroyed and removed from the game. Units that have taken Attrition damage but not enough to eliminate them retain this damage until it is

repaired. These weakened units are easier to kill than their full strength equivalents and, over the course of a long ground war, their opponents can hope to slowly grind them down until they are finally overrun and destroyed.

All ground combat occurs simultaneously in an encounter, and eliminated units still get to perform their planned attacks. Ground combat ends once the ordered attacks are complete. As a result, it can take several turns for attacking troops to wear down the defenders enough to completely eliminate them so that they can capture the system. This gives the defender time to move in reinforcements to intercede on the colony's behalf.

Example: A Jain Royal Marine (Attrition 3, Defense 3, Attack 2, D Factor d3) is being attacked by two Brindaki Regulars (Attrition 2, Defense 2, Attack 2, D Factor d2). The Royal Marine is counter-attacking one of the Regulars.

The attacking Brindaki Regular rolls a 2 for its D Factor, which is added to its Attack value for a total of 4. It gains +1 Attack from the second Regular that is attacking the same unit (no attack roll is made for this second unit), bringing the total to 5 Attack. The Royal Marine rolls a 2 on its own D Factor. Adding this to its Defense gives it a total of 5. The Brindaki attack total doesn't exceed the Jain's defense total and as a result no damage is scored in this attack.

The Royal Marine now rolls for its own attack. Its D Factor roll is a 2, which is then added to its 2 Attack value for a total attack of 4. The Brindaki Regular rolls a 1 on its D Factor, which is added to its Defense to give it a modified Defense of 3. The Jain's total exceeds the Brindaki's own by 1 point, which means that the Brindaki Regular takes 1 Attrition damage.

Invasions

Capturing an enemy system requires that you load friendly ground forces on to Transport Fleets and move them to an enemy controlled system to attempt an invasion. Ground forces only receive half their normal Attack value (round down) when they invade from transports unless they are being supported by friendly Assault ships. The number of assault functions that are required to support a ground force during an invasion is equal to its Construction Cost. Marines always receive their full Attack value when they invade from transports, but they gain a +1 Attack bonus if they are supported by Assault ships.

All of the defending ground forces that are on the ground in the contested system gain a +1 Defense bonus because they are dug in and prepared for the enemy attack. Defenders can attack any of the enemy ground units that are participating in the invasion, but they can't attack troops that are on orbiting transports that aren't invading this turn.

An invader must seize a beachhead before any of their ground units may land on the planet. A beachhead is established if at least one defending ground force was killed in the invasion. This secures a landing zone for your ground forces and allows you and your allies to disembark them to the planet's surface next turn. Ground units don't receive an Attack penalty once they have been landed in the system.

There's little reason for you to attempt another invasion if your empire already has a beachhead in the system. You're better off landing troops in the system and then fighting a conventional ground war on subsequent turns. The exception to this is if you have troops waiting in orbit that need to help support the troops on the ground who are at risk of being eliminated by enemy ground forces this turn. In this case invading from transports might be your best option for maintaining your existing foothold in the system.

Example: A Human Marines (Attrition 2, Defense 3, Attack 3, D Factor d2) and Infantry (Attrition 3, Defense 2, Attack 2, D Factor d3) and invading a Kili system from orbiting Transport Fleet. The Kili have 3 Defense Brigades (Attrition 4, Defense 3, Attack 1, D Factor 2).

The Marines have the Marines special ability, and they invade with their full Attack value. The Infantry meanwhile only receive half their Attack value, reducing them to Attack 1. The Kili meanwhile are dug-in, and gain a +1 Defense bonus (increasing them to Defense 4).

The Human player decides to have both of his ground forces attack the same Kili Defense Brigade. Likewise, the Kili player has ordered all of his Defense Brigades to attack the Marines.

The players choose to resolve the Human attack first. The Marines are leading the charge because they have the highest Attack value. They receive +1 Attack from the supporting Infantry. The Marines roll a 2 for their D Factor, for a total of 6 Attack value. The target Defense Brigade rolls a 1 for its own D Factor, giving it 4 Defense value. The Human's Attack exceeds the Kili's Defense by 2, and the Kili takes 2 Attrition damage (now at 2 Attrition).

The Kili Defense Brigade has a base Attack value of 1. It is getting +2 Attack from the pair of supporting Defense Brigades. It rolls a 2 on its D Factor, for a total of 5 Attack value. The Marines also roll 2 for their D Factor, giving them a 5 Defense value. The Kili fail to score any damage to the Marines.

The Human player was unable to seize a beachhead in the system this turn because they were unable to destroy any of the Kili ground forces during the Ground Combat Phase this turn. This prevents the Humans from landing troops in the system next turn.

Productivity Suppression

The mere fact that ground forces are fighting on a planet can cause a disruption in planetary productivity. The system owner compares the total Attrition value of his forces to the total Attrition value of all enemy ground units that have been landed in the system to determine how much Productivity he still controls. The system's Utilized Productivity next turn is halved if the enemy's total Attrition is greater than or equal to twice the defender's total Attrition. Utilized Productivity is further reduced to zero if the enemy's total is greater than or equal to four times the defender's own. These effects are cumulative with Morale, so a system that is in unrest and has enough enemy troops present to further halve its production would be reduced to one-quarter its normal Utilized Productivity. Round fractional Utilized Productivity values up.

Conquest of a System

A system is conquered once all of the defending ground forces have been eliminated and there is at least one enemy ground force left that can take control of the system. The invaders have successfully conquered the system and immediately take ownership of the colony. If two or more empires were both trying to conquer the system on the same turn, either as allies or as adversaries, the power with the largest disembarked army (by total Attrition) assumes ownership upon its conquest.

Shipyards are captured when the system they are located in are conquered by an enemy force. Newly captured shipyards start out in a crippled state and must be repaired before the new owner can start using them. Any Mothballed units that were being stored at these shipyards are also captured. These units remain in mothballs and it is up to their new owner to decide whether or not to reactivate them, scrap them, or leave them be.

Integrated Example: Ground Combat

3.6 ► Supply Phase

// should Supply be checked AFTER Combat Phase? That way you could move out of supply, attack, and then move back in supply next turn. Or you could put it BEFORE Movement Phase and it would have a similar effect.

Supply Depots

- Eliminate supply points; Supply Depots source of all supply
- Supply Depots are orbital bases (DV 10) costing 20 EP and maintenance of 2/1
- Treating supply depots as orbital bases and not ground units makes them easier to destroy, which is more strategically interesting from a player perspective. A deep strike to destroy an enemy supply depot as with the Narn attack on Gorash VII becomes a more viable option.

// Should Supply Depots be able to repair ships like Supply ships can? That would make them into a limited repair dock, maybe with the ability to repair a number of ships equal to the Productivity of the system where they're located? Example: a Supply Depot in a Prod 3 system could repair 3 ships per turn?

- Should repairs take multiple turns, or should they be completed in a single turn? Right now they take multiple turns. If the costs were increased for units and the repair times maintained, the time could be equal to $\text{Repair Cost} / 2$ (round up). So repairing a 6 EP CL for 3 EP would require the CL to be under repair at the Supply Depot for 2 turns.
- Main advantage beyond rules consistency for Supply Depots to be repair docks is that it would make them even more important and useful to have around, and it would free up shipyard slipways so that they could be used for more meaningful duties.

Basic Supply Routes

Supply routes represent the transparent flow of civilian and military freighters that move back and forth through your empire. A basic supply route has a length of 2 jump lanes and cannot cross restricted jump lanes or move through a system that contains enemy fleets. Units that can trace a basic supply route back to a friendly supply depot are considered in supply this turn and remove all out of supply levels and used conditions.

- // Basic supply route has range of 2 hexes
- // cannot pass through any systems that contain enemy fleets

Extended Supply Routes

Supply ships are used to keep fleets and systems in supply even when they are unable to trace a basic supply route back to a friendly supply depot.

- Change how Supply ships can keep units in supply
- As per forum post; a fleet/system is in supply if you have a total Supply value equal to the number of jumps to a friendly supply depot
- Sill cannot pass through any systems that contain enemy fleets

Blockades

- When an enemy has orbital superiority in a system they automatically blockade the system. You cannot blockade a system if the defender has any fleets or bases present.
 - Blockaded systems have their Utilized Productivity reduced to zero so that they don't produce any income.
 - Blockade is used to wear down the planetary population and troops, not trap and starve out space combatants.
 - Removes the need for a separate Breakout scenario
 - Simplifies the encounter rules because blockades are now completely automatic, and the effect economic in nature.
- This change leaves Blockade Runners without a clear intent or goal. Possibly just retire the ability and replace it with Fast? Or else give them a limited ability to slip past enemy forces in blockaded systems?

Out of Supply

Units that can't trace a supply route back to a friendly supply point will be out of supply this turn. Out of supply units earn an extra out of supply level for every turn that they spend out of supply. The effects of being out of supply vary depending on the type of unit that is out of supply:

- **Ships** subtract 1 point from their DV, AS, and AF values for each out of supply level they currently have. A ship's AS and AF cannot be reduced below half their starting value as a result of being out of supply, however. A ship is scuttled (destroyed) and immediately removed from play if its Defense VAlue is reduced to zero as a result of being out of supply.

- **Flights** are affected by out of supply levels a bit differently than ships. For each out of supply level, a flight must subtract 1 point from either its DV, AS, or AF value, whichever is higher. If the values are the same, the player decides which is reduced. A flight is destroyed when its DV is reduced to zero.
- **Bases** are more resilient to being out of supply. Bases only subtract 1 point from their DV, AS, and AF values for every full 2 out of supply levels. As with ships, a base's AS and AF values cannot be reduced below half their starting value as the result of being out of supply and it is destroyed if its DV is reduced to zero.
- **Minefields** are specially designed for long term deployment and are never out of supply.
- **Missile** units do not receive any benefits from their equipped ordnance packages and cannot reconfigure them this phase when they are out of supply.
- **Ground** forces lose 1 Attrition for every full 2 out of supply levels they have received. A ground unit is destroyed when its Attrition reaches zero. They don't suffer any penalties to their other combat stats as the result of being out of supply.

Raiding

Each campaign turn, there is a chance that raiders or other forms of piracy will hit vessels on their cargo runs.

Raiding Attempts

Using a base chance of 10%, roll a percentile die (d100) for every system that contains a convoy or where no military units are present, modifying the results as follows:

- System contains one or more civilian units (+10% per shipyard, supply depot, or convoy)
- System has military ships present (-5% per ship, -10% per Police ship)
- System is in rebellion (+20%)
- Use of Intel points (-10% per Intel point spent)

If the modified die result is equal to or less than the raiding chance then a raider attack has been generated in the target system. The raiders are treated as having been in the system since the beginning of the @@ Movement Phase. As a result, they can generate @@ Convoy Raid against a random convoy

If the raiders are attacking a convoy, the targeted convoy will automatically be included in the Pursuit scenario (unless later excluded through the use of scout functions; see @@ Scout Use in Task Force). The convoy's owner (or the system owner, if this convoy is in a system controlled by another empire) may dispatch a task force to help protect the endangered civilian convoy. However, this task force cannot contain any ships larger than a heavy cruiser (CA) and it won't have access to any reinforcements.

If the raiders are attacking a system where no convoys are present, then the raiders will instead generate a @@ Defensive Scenario and assault any fixed defenses located in the system.

Raider Fleets

The size of a raider fleet is determined by rolling on the Raiding Table to determine the total construction cost of raider units attacking the system.

Raiding Table (d6)

<i>Roll</i>	<i>Raider Fleet Size</i>
1-2	2d6 economic points
3-4	3d6 economic points
5-6	4d6 economic points

Once the size of the raider force is known, the composition of the force must be determined. The CM spends these economic points to “purchase” raider units off of the Generic Raider Forces Table to take part in the raid. Some scenarios may provide their own raider force lists that are geared specifically to the setting and should be used in preference to the generic raider units.

Generic Raider Forces Table

<i>Unit Name</i>	<i>Class</i>	<i>Cost</i>	<i>Maint</i>	<i>DV</i>	<i>AS</i>	<i>AF</i>	<i>CV</i>	<i>CR</i>	<i>CC</i>	<i>Specials</i>
Corsair	CT	2	1/6	2	2	2	0	2	1	
Brigand	CT	3	1/6	2	1	1	0	2	1	Boarding 2
Longship	DD	4	2/6	4	3	2	0	3	1	
Wolf	DD	X	X	3	4	3	0	2	1	Q-Ship
Dragonship	CL	6	2/4	5	4	2	1	4	2	
Battlewagon	CA	8	2/3	6	4	3	2	5	2	
Trireme	CT	2	1/6	2	1	1	2	2	1	
Quinquereme	DD	4	2/6	3	1	2	3	3	1	
Caravel	CL	6	3/4	4	2	2	4	4	2	Carrier
Galleon	CA	8	3/3	5	2	3	5	5	2	Carrier
Asp	LF	1	1/12	1	1	2	-	-	-	
Viper	MF	2	2/12	2	2	2	-	-	-	
Cobra	HF	3	3/12	2	3	3	-	-	-	

Lamprey	MF	2	2/12	4	0	0	-	-	-	Boarding 1
Marauder	HF	4	4/12	4	0	0	-	-	-	Scout 1
Strike Carrier	CA	8	3/3	6	3	3	4	4	2	Carrier
Barque	DD	4	2/6	3	3	2	1	3	1	
Sloop	CT	2	1/6	2	1	2	1	2	1	
Skiff	CT	2	2/6	2	1	1	0	2	1	Supply 1
Schooner	CT	2	2/6	2	0	1	1	2	1	Supply 1
Pinnace	CT	2	1/6	2	2	2	0	2	1	
Gunboat	CT	2	1/6	2	3	1	0	2	1	
Galleas	CA	8	2/3	8	2	3	3	4	2	
Felucca	CT	2	1/6	3	1	2	0	2	1	
Brigantine	DD	4	2/6	3	3	3	1	2	1	
B5 Dragonship	CA	8	2/3	6	5	3	2	4	2	
B5 Double-V	MF	2	1/12	3	1	2	-	-	-	
B5 Delta-V	LF	1	1/16	1	1	2	-	-	-	

Raider Attacks

- If a raider fleet is in the system then it will conduct a raid during the Supply Phase
 - Moving raider attacks to Supply Phase completely?

A raider fleet automatically generates a raiding scenario against any convoy or colony in that system during the Supply Phase until they are finally hunted down and destroyed.

- This makes raiders an ever present danger until they are finally destroyed. And particularly successful raiders will spread into surrounding systems and could become a very real threat.
- **Raiding Scenario**
 - Targets a convoy or if a colony raid a base (if present)
 - Target must be included as part of the task force and counts against flagship command limit; the defender may only field CT, DD, CL, or CA in its task force. These

are the only ships that can keep up the with convoys (or would ever be assigned to convoy duty)

- Neither side has any reinforcements
- Scenario length is at -4
- Raiders get +2 surprise bonus
- If the convoy's escorts are destroyed or retreat then the convoy is captured by the raiders and they gain the convoy (now crippled) as a prize. They can keep the unit or sell it off for 50% of its construction cost.
 - Ex: A raider captures a trade convoy (20 EP). The convoy is now crippled, but the raiders can sell it and gain 10 EP to use to purchase repairs and buy new units.
- If raiding a colony, the raiders earn 50% of the system's income next turn, and the colony's owner receives nothing. As above, the raiders use this loot conduct repairs and buy new units.

Results of the Raid

~~After the raid is complete, players must determine the consequences of the attack. The raiders may have succeeded in crippling or destroying a civilian unit in the attack. Refer to @@ Scenario Resolution for the effects that this would have on the affected unit(s).~~

~~If the raid was instead against a system, not a civilian fleet, the system will not produce any income on the next campaign turn (though it will return to normal thereafter, barring another raider attack).~~

- Raider fleet remains in the system and will

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Minelaying

- Minelayers carrying minefields may deploy them at this time
- Minelayers may also recover minefields that have already been deployed to the system so that they can be transported to another location

Minesweeping

- Each Minesweeper function can remove 1 minefield (regardless of cost)

Adjust Ordnance Packages

- Missile ships change missile packages
- Should the ordnance package chart be repeated here?

Moving Cargo

- Loan cargo onto convoy
- convoy has transport capacity of 10

- This is the total size of cargo the convoy can carry
- Flights, minefields, and ground forces have a size equal to their construction costs
- Census and Intel are size 10
- Bases may be disassembled and moved via convoys, but their size is equal to twice their construction costs
 - Multiple convoys can combine transport capacity to move a base, but the base is lost if even one of the convoys carrying it is destroyed
 - That should make it harder to move large bases around, but still quite doable to load up some satellites (CT/DD bases)
- Move to destination and unload

Moving Census

- load Census on to convoy
- Census has a size of 10
- Reduce system Census by 1
- Move to another system and unload, increasing Census by 1

Moving Intel

- Load Intel on to convoy
- Intel has a size of 10
- Reduce system Intel by 1
- Move to another system and unload, increasing Intel by 1

Landings & Deployments

3.X.X ► Activations & Deactivations

3.X.X.1 ► Active Status

- Standard status

3.X.X.2 ► Reserve Status

Units that are placed into reserve status remain equipped for duty but have been partially decommissioned to reduce costs at the expense of combat readiness. Reserve units pay only half the normal maintenance costs (round up), however they are treated like crippled units for all purposes.

Only ships, flights, and ground forces may be deactivated and placed in reserve status.

Units in reserve status may not be given any orders other than to reactivate to active service.

Units to be deactivated are ordered to do so in the 3.1 Economic Phase. The units remain active on the

turn they are ordered to deactivate (and they pay their full maintenance costs that turn) and are not in reserve status until the end of this phase.

Units basing flights may be deactivated, but all units it is currently basing are also deactivated.

Flights may only be deactivated in a friendly system or if their basing units are being deactivated as well.

Activating a reserve unit requires that the unit be ordered to activate during the 3.1 Economic Phase. Units given the order to activate remain in reserve status (costing half maintenance) until the @@ Supply Phase.

The newly-activated unit's full maintenance cost will need to be paid on the next turn.

Units that are basing other units, such as a reserve status carrier and its fighters, may only be reactivated if all based units are also reactivated.

3.XX.3 ► Mothballed Status

Mothballed units have returned to base and are laid up in ordinary at friendly bases. Their weapons and various other important systems have been stripped out and are now being stored on-site in anticipation of the day when they may need to be reactivated.

A ship must be at a shipyard in order to be mothballed, with the exception of atmospheric ships which can be mothballed at any inhabited system. **It does not "cost" anything to mothball a ship, but the ship's maintenance value counts against the shipyard's construction capacity on the turn it is mothballed.** Any flights that the ship is carrying are mothballed with it, **but flight maintenance costs are also counted against the shipyard's construction capacity on the turn they are mothballed.**

Bases, minefields, and ground forces cannot be mothballed. Unwanted units of this type should be scrapped (see @@ Scrapping) if your empire is no longer capable of maintaining them or simply doesn't need them anymore.

Mothballed units cost nothing to maintain. They can't participate in any battles that are fought at their location, nor can they be loaded on to transports and moved as cargo. The only actions that a mothballed unit can perform is to be reactivated or scrapped.

If a player wants to restore the ship (and any flights it is carrying) to active service, he must pay the full maintenance cost using the same procedure as activating reserves (see @@ Reserve Status). **Units given the order to activate remain in mothballed status (costing no maintenance) until @@ Maintenance Status Changes.**

3.XX.4 ► Maintenance Status Changes

Ships must be at a friendly shipyard while they are being activated or deactivated. The vessel is being brought into the shipyard so that work crews can strip down its systems and put them into storage (deactivating) or bring the gear back out and reinstall it (activating). Atmospheric vessels can be

activated or deactivated in any friendly system, not just those that contain shipyards, because they can land on a planet's surface and use planetary industry.

A side effect of the shipyard requirement for starship activations/deactivations is that a player must be careful to make sure to maintain a shipyard in any system where his empire is storing deactivated ships or else he won't be able to reactivate them when the time comes that they're needed. You must also consider the possibility that an enemy force might move into the system and destroy the shipyards before retreating, making it impossible for you to reactivate any of the ships that were being stored there until a new shipyard can be built.

Bases and minefields cannot be deactivated to reserve or mothballed status.

Units placed in a special maintenance status such as reserve or mothballing during the 3.1 Economic Phase assume their new maintenance status at this point in the Supply Phase. The effects of these special maintenance states will take effect next turn.

3.X.X ► Jump Lane Improvements

- Explorer ships can improve jump lanes
- Restricted to Minor (30 EP?)
- Minor to Major (60 EP?)

3.X.X ► Strategic Redeployment

Flights and minefields may be strategically redeployed directly to a target fleet or system as long as they are in supply and a path can be traced between the two systems that doesn't contain any enemy fleet. These units are being transported to their destination using your empire's background logistical network and do not require the intervention of any player controlled convoys. This gives players a way to replace combat losses or reinforce their defenses after a hard fought battle.

3.7 ► Construction Phase

All new unit purchases or repairs ordered and paid for during the 3.1 Economic Phase are completed in the Construction Phase. All new units are then deployed to the map at the location they were built or purchased.

3.X.1 ► Construction Capacity

Construction capacity represents the raw industrial capability to finance and implement large-scale military construction projects. Systems often have multiple sources of construction capacity. Massive orbital shipyards are the primary source of construction capacity that is used to build naval units (@@ Orbital Construction), however a system itself has a limited ship construction capacity (@@ Planetary Construction). Each of these sources has a finite amount of construction capacity equal to the system's Utilized Productivity x 2. The total construction cost of ships, flights, minefields, and convoys that can be built at a location is equal to its construction capacity.

If a system does not have enough construction capacity to perform all the work that was scheduled for completion and paid for this turn, the items in excess of its construction capacity are not performed. The system's owner selects the construction projects that are delayed by the lack of capacity. These projects will instead be completed during the next @@ Construction Phase, if possible. Units can be left partially completed with final construction occurring on a future turn (@@ Partial Construction).

3.X.2 ► Construction at Systems

Atmospheric ships, flights, and convoys can be built using planetary industry and are then launched into orbit upon completion. A system effectively serves as a "free" shipyard with a construction capacity equal to its output (Raw x Utilized Productivity) for the purposes of building these Atmospheric vessels.

Colonies can also be used to build non-Atmospheric ships and flights, but these units require extensive prefabrication and must be launched into orbit in pieces for final assembly. These extra costs DOUBLE the construction costs of all non-Atmospheric vessels built using planetary construction capacity.

3.X.3 ► Construction at Shipyards

The majority of ship construction occurs at shipyards in orbit of inhabited worlds. A shipyard has a construction capacity equal to the output (Raw x Utilized Productivity) of its system location. This is the total construction cost of vessels that can be built at the shipyard each turn.

3.X.4 ► Base Construction

Bases are built in a different manner than ships and flights. Convoys are required to support the construction of bases as these units are used to ferry in supplies and workers to build the massive orbital structures. Each convoy that is not currently carrying other cargo or assigned to a trade route provides up to 10 construction capacity that can be used for base construction. Multiple convoys can pool their construction capacities to affect larger base construction projects.

3.X.5 ► Purchasing Ground Forces

The total construction cost of ground forces that can be purchased in a system each turn is equal to its Census value. For example, a system with 4 Census may only deploy up to 4 construction cost of troops per turn. The net effect is that larger colonies will be able to marshal larger armies in a shorter amount of time while sparsely populated frontier planets will have a much harder time rounding up conscripts to fight.

3.X.6 ► Partial Construction

Units can be left partially completed at a system or shipyard on the current turn and completed at the same location on a following turn. Full payment of the unit's construction cost is not required for construction to begin, and in some instances it may be more prudent to spend some economic points this turn to start construction rather than waiting for the full purchase price to become available.

The disadvantage to partial construction is the threat that the partially built unit will be destroyed before it can be completed, resulting in the loss of the economic points already spent on the now destroyed assets.

3.X.X ► Deploy New Construction

Completed units are placed in the system where they were built this turn.

Flights and minefields completed this turn can be deployed to carriers and minelayers, respectively, that are located in the same system as where they were built. Flights and minefields can also be automatically moved to any friendly fleets or systems during the @@ Strategic Redeployment step of the Supply Phase next turn as long as the target fleet or system is in supply.

3.1.X ► Repairs

Ships, bases, and convoys that have been crippled can be repaired to restore them to an undamaged state. The cost to repair a crippled unit is equal to 25% of its construction cost (round up). Ships and convoys must return to a system that contains a friendly shipyard in order to be repaired, however these repair operations don't affect the construction capacity or slipway limits of that shipyard. Crippled shipyards cannot be used to repair units until they themselves are repaired. Bases can be repaired if they are located in a system that contains a friendly colony. Otherwise, an empire must use field repairs to fix it.

Units cannot perform any actions during the Movement Phase while they are being repaired and they are treated as non-combatants if attacked during the Combat Phase.

Example: The Human player has a crippled Prometheus light scout cruiser that is in need of repairs. This ship has a construction cost of 7, which gives it a repair cost of 2 economic points.

3.1.X ► Field Repairs

Units that can't be repaired by traditional means may instead receive field repairs from a friendly supply depot or military supply ship. The cost to repair a crippled unit using field repairs is equal to 50% of its construction cost (round up).

Supply depots may coordinate up to 10 economic points of field repair operations each the same turn, while the maximum cost of field repairs that a military supply ship can support each turn is equal to its Supply rating. Multiple units can combine Supply functions to affect larger repairs. Supply depots and military supply ships cannot perform field repairs if they are crippled, out of supply, or performed any movement orders this turn. Additionally, Supply ships that were used to trace @@ Extended Supply Routes in the Supply Phase cannot conduct field repairs this turn.

The unit being repaired is treated as a non-combatant if attacked during the Combat Phase, but the Supply ships are free to engage in combat.

Example: A Prometheus light scout cruiser (Cost 7) is being accompanied by 2 Hermes transports (Supply 2). The Prometheus was recently ambushed by Waschaki pirates and was crippled. It will cost 4 economic points for the Hermes to field repair the Prometheus cruiser.

3.1.X ► Refits

Units can undergo refits to convert them into members of a different class. The cost to perform a refit is equal to 50% of the construction cost of the class that the unit is being refitted into (round up). A unit may only be refitted into a class of the same size. For example, a corvette that is refit could become a different class of corvette but it could never become a destroyer.

The same limitations that apply to repairs apply to refits. Ships and flights must be in a system with a friendly shipyard to be refit. The refit cost doesn't affect the construction capacity ~~or number of shipways~~ available at that shipyard. Crippled shipyards cannot be used to refit units until they are repaired. Bases can only be refit if they are in a system that contains a friendly colony.

Example: An Ares heavy cruiser in the Sol system is moved into the local shipyard with orders to be refit into a Hades assault cruiser (Cost 7). Both the Ares and Hades are heavy cruisers, which makes this a valid refit.

3.1.X ► Attrition Damage Repair

Ground forces that suffered Attrition damage earlier this turn but were not eliminated repair 1 point of Attrition damage during the Construction Phase as long as they are not currently out of supply or embarked aboard a crippled convoy. This represents that ground forces that have previously lost unit cohesion are integrating fresh reinforcements and will eventually return to full strength. The maintenance costs for these troops cover the availability of additional manpower and material needed to slowly repair them at no additional cost.

Hospital ships can be used to accelerate the recovery of damaged ground forces at their location and bring them back up to full strength. Hospital ships can repair 1 Attrition each turn per Hospital function.

3.1.X ► Scrapping

Units can be scrapped to remove them from service and recoup some of their original costs. Scrapping a unit in a friendly system recovers 50% of the original construction cost (round down). Any cargo or other units that the vessel is carrying are automatically scrapped along with it. A unit's current maintenance state has no impact on its ability to be scrapped. This allows players to scrap reserve and mothballed units without activating them first.

No economic points are recovered from scuttling units in uninhabited or enemy controlled systems because these units are being scuttled rather than scrapped. Players usually only scuttle units if they need to reduce their overall maintenance costs or to prevent the units from being captured by an opponent. In the latter case, destroying the units is seen as preferable to letting them fall into enemy hands.

3.7 ► Tech Phase

3.1.X ► Tech Investment

Economic points can be spent to fund research and development efforts in your empire. Tech investment is important because researching new technologies gives an empire an edge over the competition in the form of new advanced unit classes.

The maximum number of economic points that a player can spend on tech investment each turn is equal to the total Utilized Productivity in his empire. This represents the fact that an empire has a limited capacity for conducting research at its colonies regardless of the amount of income that it's earning from other sources. All of the economic points that an empire spends on tech investment are placed into its Tech Pool.

Tech Advancement

The total amount of tech investment that is required to achieve a tech advancement at the end of a campaign year is equal to the empire's total system income during the Tech Phase of the last turn of the year. This is called its tech advancement cost.

If the total number of economic points in your Tech Pool is equal to this cost, then you'll be guaranteed to achieve at least one tech advance when tech advancement checks are made. Paying more than your tech advancement cost gives you a chance of earning a second tech advance. The maximum amount of tech investment that you can have in your empire's Tech Pool is equal to twice your tech advancement cost.

- Test for tech advancement every 12 turns
- Rules stay the same as vanilla VBAM

Tech Advancement Effects

Tech Trading

Operating Alien Units

Reverse Engineering

3.X ▶ Colony Phase

3.X.1 ▶ Colonization

Convoys that are in uninhabited systems may establish new colonies during this phase. The convoy is landed in the system where it is disassembled and converted into living and work space for the new colonists. Colonizing a system gives your empire control of the system.

Colonies that are created using convoys that are carrying Census start with 1 Census and 1 Morale when they are colonized. If the colonizing convoy wasn't carrying any Census, then an outpost is placed in the system instead. An outpost is a special ground unit (4 Attrition) that represents the fledgling infrastructure that has been set up at the new colony. Outposts establish control over a system but aren't capable of producing anything for an empire. Outposts can be bombarded like any other ground force during the Orbital Bombardment Phase, and they take Attrition damage if the system is unable to trace a supply route back to a friendly supply depot in the Supply Phase. Unlike traditional ground forces, outposts cannot be loaded onto convoys and moved to other systems.

An outpost becomes a full-fledged colony once its system gains Census from a @@ Population Increase or by using a convoy to move a Census from another system and disembark them to the system. The system gains 1 Morale from the arrival of the new colonists and the outpost is then removed from the system.

Players may not make any purchases at colonies that were established this turn. This moratorium on new construction extends to outposts that matured into full colonies this turn. You must wait until the Economic Phase next turn to begin investing in these new colonies.

3.X.2 ▶ Productivity Increases

Players may spend economic points to improve Productivity in their systems. The cost to increase a system's Productivity by 1 point is equal to 10 times its new Productivity value. It would cost 20 economic points to increase a system from 1 to 2 Productivity, for example. A system's Productivity cannot be increased beyond its current Census value.

A Productivity point can only be utilized if there is a Census available to operate it.

Players may also sell off Productivity at their colonies to recover half of the original cost. The system's Productivity is then reduced by 1. Productivity is usually only sold off during times of crisis, such as if an empire is in dire financial straits or the system is close to falling into enemy hands and the player wants to sabotage the system's Productivity before it is captured.

A system may only purchase or scrap one point of Productivity per turn, and then only if the system is in good order and not currently blockaded by an enemy fleet. Productivity increases purchased this turn won't affect the system's economic or construction output until the Economic Phase next turn.

3.X.3 ► Terraforming

Terraforming is the process of deliberately changing a planet's environment by modifying its atmosphere, temperature, and ecology to make it more suitable for inhabitation. The cost to terraform a system is equal to 10 times its current Carrying Capacity. An empire must have a colony or outpost in a system before it can be terraformed, and the system can't have more than one special trait (ignoring system anomalies). Systems that already have two or more special traits already have Earth-like climates and cannot be improved any further.



Once terraformed, roll on the Special Traits Table (pg X) and apply the indicated special trait to the system. The system receives both the resource (Capacity, RAW) and population (Census, Morale, Productivity) bonuses from the special trait. Re-roll any *System Anomaly* or *Homeworld* results as these do not apply to systems that are being terraformed.

Example: The Kili colony on New Alcatta (6 Capacity, 1 RAW, Robust Economy) is in desperate need of terraforming to improve its value. The Kili player spends 60 economic points to fund the terraforming of the system. The player rolls on the Special Traits Table and gets Ultra Rich (+2 RAW, +1 Productivity). Eureka! New Alcatta now has 6 Capacity, 3 RAW, and both the Robust Economic and Ultra Rich traits. The system also gains 1 Productivity from the terraforming efforts, representing the arrival of new mining companies that have arrived to exploit the local resources that are now accessible in the system as a result of the terraforming. New Alcatta cannot be terraformed any further because it already has two special traits.

3.X.4 ► Population Increase

The Census values of inhabited systems naturally increase over time. Every 12 turns (e.g., at the end of each campaign year), each system rolls a d10 and adds its Carrying Capacity to the roll. This modifier represents that systems with high Capacity values have planets with more habitable biospheres. The system gains 1 Census if the number rolled is greater than 15. A system's Census value cannot exceed its Carrying Capacity. If a system doesn't gain Census this year, which is possible for a hostile environment colony, then add +1 to the system's next population increase roll. This effect is cumulative.

Example: Alpha Centauri has 8 Carrying Capacity and hasn't had a population increase in either of the last two checks. The player rolls a d10 for the system and adds +10 to the roll (+8 Carrying Capacity, +2 missed checks). The die roll is a 9, which becomes Centauri a 19 after modifiers. This is greater than 15, and the system's Census increases by 1.

If a system that has reached its maximum Carrying Capacity receives a population increase, randomly choose another of the empire's systems that still has Carrying Capacity available and apply the population increase to that system. You must be

able to trace a path of jump lanes between these two systems that doesn't pass through any systems that are controlled or contested by an enemy power. No system can receive two population increases

in the same turn, however. If an empire doesn't have any systems left that can accept the population increase then it is simply ignored.

// Another option for this model is to get rid of the cumulative modifiers entirely and use the Biosphere stat from 2E early development. Then it would be $d10 + BIO$ with population growth on $10+$. This would let us add Biosphere as another resource that promotes population growth, and you could have some systems that had more or less depending on special traits.

- Part of the metagame would then be to race to control systems with high BIO as they will have the best population growth, letting you gain Census quicker

Alt Colony Event Table (d10)

Roll	Effect
1-4	No Effect
5-6	-1 Morale
7-8	+1 Morale
9	+1 Census
10+	+1 Census, +1 Morale

Modifiers:

+1 Minor System
 +2 Major System
 +1 Homeworld

3.X.5 ► Morale & System Loyalty

// I'm still not happy with how static Morale is. I still think we need a better way to randomize this, whether through standardized random events or possibly some sort of integrated mission system similar to WAP? I'm open to suggestions

Morale Conditions

Morale Condition	Target	Modifier
Blockade: System is being blockaded by an enemy force	2	-1 Morale
Rebellious: An adjacent friendly system is in rebellion	1	-1 Morale

Supply Shortage: System is out of supply	1	-1 Morale
Conquered: System was conquered by an enemy this turn	3	-3 Morale
Troop Garrison: Number of ground forces is greater than half Census	1	+1 Morale
Unemployment: Productivity is less than half Census	1	-1
Full Employment: Productivity is greater than or equal to Census	1	+1
Homeworld Falls: Owner's homeworld was conquered this turn	3	-1 Morale
Shattered: Owner lost a battle in the system this turn	2	-1 Morale
Victorious: Owner won a battle in the system this turn	2	+1 Morale
Martial Law: Owner is using troops to control the population (@@ Martial Law) Morale	1	-1

CM's Note: A CM might require a player's systems to make a special morale condition roll if their government took an unpopular action. CMs can also tie morale conditions into their campaign storylines. They could also apply modifiers to better represent the current situation. For example, systems that are feeling undefended might get a -1 penalty to their rolls.

3.X.6 ► Unrest

- Morale < 1/2 Census, output is halved (round up)

3.X.7 ► Rebellion

- Morale reaches zero it is in rebellion
- Place 1 Militia per Census in the system
- Increases raiding chance by 20%; raiders are the rebel forces

3.X.8 ► Martial Law

Ground forces can be used to control a population that is in unrest or rebellion by declaring martial law. This improves the economic output of the beleaguered system by one level: from rebellion to unrest, or from unrest to good order. There is no benefit for declaring martial law in a good order system as its population is already completely content and productive.

Martial law can only be maintained as long you have enough ground forces disembarked in the system to enforce it. The minimum number of ground forces that you need to maintain martial law is equal to the system's Census value. Troops with the Peacekeeper special ability count as two ground forces for the purposes of this rule.

3.X.9 ► Reprisals

Players may conduct reprisal attacks against their own civilian populations in an attempt to eliminate dissident factions and restore order. These attacks can increase a system's Morale but the resulting

mass killings run the risk of reducing its Census in the process. The outcome of a reprisal is determined by a d10 roll. The system gains 1 Morale if the roll is greater than or equal to the system's current Morale value; however, it also loses 1 Census if the roll is less than or equal to its current Census value. Reprisals cannot be used against a system that is already in rebellion.

3.X ► End of Turn Phase

~~The turn ends in this phase. Optional rules like the Random Events option occur in this phase.~~

- Determine Victory

Chapter 4 ► Optional Rules

“Unmapped Stars” Variant

- All jump lanes are restricted lanes after they are explored and must be upgraded to improve them
- Represents systems where empires must build/activate jump gate or mass relay infrastructure to accommodate travel between systems

“Jump Engines + Restricted Lane Escort”

- Reading Charlie’s old New Earth Alliance campaigns reminded me that I kind of liked the way that restricted lanes were handled in some of those old campaigns, where you could only cross a restricted lane if you fulfilled some sort of prerequisite. With B5 that meant having a jump engine in the fleet, but with standard VBAM I’m not sure how you would simulate that. Or if it just has to be a special rule where you say a ship has to spend +1 Cost to have a Jump engine, and then only they can cross restricted lanes on their own. It would be a simple enough optional rule.
- Ships without jump engines cannot retreat from battle unless they are retreating with a jump capable unit (CC of ships equal to retreating unit’s CR can retreat with it?)

Planetary Surveys

- You don’t roll for a system’s special trait until after you system is surveyed. The number of Scout functions that must be spent to complete the survey is equal to its base Carrying Capacity.
- The rule is good for slowing down exploration
- is more relevant to detailed star systems where you’d need to survey each planet
- Variant Rule - Require establishment of an outpost and turns equal to base Carrying Capacity before rolling. (Wade)

Wartime Economies

- I absolutely don’t advocate a return to the 1E economic treadmill, because that causes severe balance issues and encourages players to stay at war constantly. However, I think there is still room for it to affect construction capacity at planets during wartime.
- I’m not sure how many players still play with this rule or not?

“Advanced Setup”

- Starting colonies
- Point based system

- Unimportant (1), Minor (2), Major (4)
- Scales better than in 2E because stats are now generally more controlled
- 10 points to spend on colonies for players that want a fast start
 - Default is then 1 Major, 2 Minor, 2 Unimportant
- Provide a fixed option for players that want a balanced start
- Should this default scenario give players extra colonies, or should this be an optional rules?
- Once homeworld selection is complete, players then take turns placing their initial colonies on the map. The number of colonies that each player starts with is determined by your scenario. It's recommended that each empire start with 1 Major system, 2 Minor systems, and 3 Unimportant systems in addition to its homeworld. This gives each player a suitable economic base from which to grow and expand during the early part of the game. Random map generation rarely gives players the opportunity to acquire such a perfect alignment of systems when they're placing their initial colonies. As a result, each player receives a number of colony points that can be spent to claim systems during map setup. The default colony point total is 6 times the number of players, however players can adjust this up or down depending on how much real estate they want their empires to control at the start of the game. A system's colony point cost is based on its colony size as follows: Outpost (1), Settlement (2), Minor Colony (4), Colony (6), Major Colony (8), Homeworld (10). Colony placement is resolved in the reverse order of homeworld placement. The last player to place a homeworld on the map gets first choice on which other systems his empire controls. That player places all of his available colonies before the next player gets to place any of his on the map. Players can only place colonies in systems that are connected to one of their other systems by a jump lane. This ensures that all of the empire's starting worlds will be contiguous to one another. More to the point, it prevents a player from spreading his starting colonies all over the map with the goal of scooping up all of the best systems before his opponents get a chance to place their own colonies. Continue placing colonies on the map until the last player (i.e., the one that got first pick during

homeworld placement) has finished placing his empire's starting colonies.
Any systems that aren't controlled by any empires after all starting colonies have been placed on the map will start the game in an uninhabited state.
Reduce their Census, Morale, and Productivity values to zero. These are the neutral systems that the empires are going to be fighting over during the game. It's up to the players to move Colony Fleets in to colonize these systems during the campaign.

Extended Construction Times

- Units take time to build
- Construction times are equal to construction cost divided by 2 (round up).
- Construction times apply to all units, but not Productivity increases or Terraforming
- Units cannot move or perform any other actions while they are under construction
- Their AS/AF reduced to zero

// ships advance construction

// construction rate is 2 EP per turn, so construction times are equal to construction cost divided by 2 (round up)

// units completing construction this turn can then be assigned to fleets prior to the start of the next turn

If using the @@ Extended Construction Time rule, the time delay between construction of the unit and its completion does not begin counting down until the full cost of the unit is paid.

Units that are undergoing refit will remain under construction for a number of turns equal to half the refit cost (round up). Units cannot perform any actions during the Movement Phase while they are being refit and they are treated as non-combatants if attacked during the Combat Phase.

Ships, bases, and ground forces take a number of turns equal to their Construction Cost to complete after they are purchased. For instance, a ship with a Construction Cost of 8 won't be completed for 8 turns. An amount of construction capacity equal to the full Construction Cost of the ship will be unusable at the system or shipyard for as long as it is under construction. As a result, an Orbital Shipyard that is located in a system with 24 construction capacity can only have a total of 24 Construction Cost of units

under construction there at any given time.

Because installations (Supply Depot, Orbital Shipyards, Planetary Shipyards, etc.) cost considerably more than normal military units, construction times for these facilities are reduced to half the unit's Construction Cost (rounding up). For example, it takes 10 turns to complete an Orbital Shipyard that costs 20 economic points to build.

These same construction time rules apply to all 3.7.6 Repairs, 3.7.7 Field Repairs, and 3.7.8 Refits. Since Transport, Trade, and Colony Fleets are pulled from civilian and the general shipping pool they are not subject to this rule.

Construction times for all ongoing construction projects are advanced at the end of each Construction Phase. Units that cost 1 economic point are completed on the same turn that they are purchased, a 2 cost unit is completed during the Construction Phase of the next turn, and so on. Units cannot move, attack, or receive any other orders until they are finished. Completed ships are placed in the system of the shipyard or planet that built them. You'll need to assign these completed units to fleets and squadrons during the Turn Orders Phase next turn.

Any unit construction order that takes more than one turn to complete may be cancelled on a later turn.

When a construction order is cancelled, the player is refunded 50% of the economic point cost (round up).

Independent Convoys

Rather than building their own convoys, players may contract with independent convoy operators to secure temporary transport capacity. Civilian freight carriers like to make money and will manipulate the market and capacity to do so. Between fuel prices, over capacity, and dock strikes, a player is likely to lose a lot of sleep and resources dealing with these independent convoys.

To hire an independent convoy, the player must place a bid for how much they are willing to pay for this convoy to perform a single cargo run. The minimum cost is 1 plus the number of jumps that the convoy will have to move. Each additional economic point bid gives the player a +1 bonus to his roll on the Independent Convoy Table, which determines how much transport capacity the convoy is actually providing.

Independent Convoy Table (2d6)

Roll Effect

2	No capacity available, and no further independent convoy attempts can be made this turn
3	3 transport capacity
4	6 transport capacity
5+	10 transport capacity

The player must roll for each independent convoy, and you must accept/pay for the capacity before rolling another independent convoy. Each additional convoy has a cumulative -2 modifier to the die roll (i.e., the roll for a third independent convoy this turn is at a -4 penalty).

Independent convoys will not jump across restricted lanes without Scout escort, and will not jump into a contested system under any circumstances. The convoy is removed from play as soon as it completes its transport contract.

These are strictly independent carriers with no existing contracts with military or government entities. They provide a capacity strapped empire short term options at a cost until additional convoys can be built.

Colony Specialization

// can specialize colonial economies

// can only change specialization once every 12 turns

Industrial: doubles construction capacity; no income

Research: triple output in tech investment; no income or construction capacity

Mining: doubles output for income, no construction capacity

Agriculture: adds Utilized Productivity to population increase roll, no income or construction capacity

Off Map Systems

- If the system rolls a destination that is off the edge of the map, then this jump lane leads to an off map system. This is some other star cluster located beyond the confines of the map
- Off map jump lanes increase a system's trade value because they have a monopoly on trade heading out to the exotic civilizations that inhabit these distant regions
- Trade fleets in a system with an off map jump lane earn an additional 5 EP per turn
 - Or you could roll d6 for each off map lane and have that be its trade value, to make it vary. Then you'd have a marker on the map that would list that value.

- The idea is that it makes these otherwise “lost” jump lanes have some value in the game.

“Science Institute”

Build special science building in Ruins system to generate tech investment

Either in addition to or as a replacement to that rule

4.X ► Exploration Encounters

Pirate Cache

Pirate Base

Raiders

Trading Post

Alien Datacore

Alien Artifact

“Unit Design”

Tech Eras

Era I (2990-3000) Base CP

Era II (3001-3006) +10%

Era III (3007-3012) +20%

Era IV (3013-3018) +30%

Era V (3019-3024) +40%

- The advantage of these Era based tech modifiers is that all units in an Era have the same modifier, so you don’t have to worry about calculating tech bonuses for every Tech Year; you just apply the modifier for that Era.
 - Example: A Heavy Cruiser (20 CP) class with a ISD of 3014 would be a Tech Era IV design with a +30% CP bonus, giving it a total of 26 CP to spend on stats and abilities.
- Another advantage is that Tech Eras can be easily expanded to cover more than 6 years of time. They could easily be 10 years or 20 years depending on your setting.

- For example, with the FASA Star Trek ships, you could easily have about 10-20 year blocks for each major phase of the background, going from about the 2200 period on to 2300. That would let you fit in all of the various FASA units on each force list without having to worry about per-year improvements. You just hit watershed advancement points periodically as you go.
- Something that I'd already considered doing for another book that works with this system even better is to create a large list of ships and variants that are available in each Tech Era and then let the player choose a unit from the appropriate Era list when his empire advances its Tech Year. Once you hit a new Era, you then start picking ships off the more advanced Era list.
 - This accommodates settings that either have more units available (canon or non-canon) than would fit into a 6 turn era. It also makes it easier to build force lists for some empires because you can group them by era and design their stats and then let the players decide in which order they unlock them (or if they unlock them at all, if there are more unit classes available than there are "slots" in that era).

// updated unit classes

I moved this to the my conversion book from where it was originally, but here is the updated breakdown of ship classes:

Class	Abbr	Cost	Maint	CC	CP
Corvette	CT	2	1/6	1	8
Destroyer	DD	4	2/6	1	12
Light Cruiser	CL	6	2/4	2	16
Heavy Cruiser	CA	8	2/3	3	20
Battlecruiser	CB	10	2/2	4	24
Battleship	BB	12	3/2	5	28
Dreadnought	DN	14	4/2	6	32
Superdreadnought	SD	18	5/2	8	40
Titan	TN	24	6/2	10	52
Light Fighter	LF	1	1/12	1	4
Medium Fighter	MF	2	2/12	1	6
Heavy Fighter	HF	3	3/12	1	8
Superheavy Fighter	SHF	4	4/12	1	10

Light Ground	LG	2	1/6	-	6
Medium Ground	MG	4	2/6	-	8
Heavy Ground	HG	6	3/6	-	10

// the reason for the construction changes is that the changes to the CSCR makes CC less of a crippling design issue than it was before and allows for a more linear progression of CP. Corvettes are the most point efficient, but they are also the easiest to destroy.

// The elimination of Gunboats and Frigates from the progression allows for a better progression overall, and makes it easier to convert ships on the small end because you just have to fit them into one of two slots, and we don't have to try and balance the other two

// Ultralight Fighters and Commandos are similarly jettisoned because they aren't interesting enough to keep, and this allows for better balance.

Random Events

Random Events occur in the End of Turn Phase and all results are applied in the next campaign turn. If they are one-time events they occur in their appropriate phase next turn. If they are permanent effects, they take effect immediately and are treated as if they occurred during the turn just ending, in the appropriate phase.

// I know this is really more of an optional rule, but with the discussion on the forum and seeing Wade's list I think it would be really nice to have it be standard, at least for this game variant

- There is a 5% chance every turn of a random event occurring
 - Could have this be a progressing, cumulative +5%, but that requires bookkeeping and I'm trying to eliminate as much of that as possible
 - The ticking counter would at least mean that the chance of a random event would get higher and higher every turn, making it more likely that it would happen to shake things up.
 - I vaguely remember rolling a d20 each turn and have a random event on a 20, so this tracks. Not sure that is necessarily the best way, but it works.
- The target of the random event is selected at random from those in the game (including NPE)
- Roll on the Random Event Table to see what happens

Random Events (d100)

Roll	Event Type	Event Description
	Resource	System gains 1 Carrying Capacity

Resource	System loses 1 Carrying Capacity
Resource	System gains 1 RAW
Resource	System loses 1 RAW
Resource	System gains 1 Census
Resource	System loses 1 Census
Resource	System gains 1 Morale
Resource	System loses 1 Morale
Resource	System gains 1 Productivity
Resource	System loses 1 Productivity
Economic	System income halved for 1d6 turns
Economic	System income doubled for 1d6 turns
Technology	Tech advancement cost reduced by 10%
Technology	Tech advancement cost increased by 10%
Technology	Build more advanced units???
?	Alien Explorers A new NAW is discovered on the edge of space
?	Hyperspace Collapse A random jump lane connecting to the target system is reduced by one class (major to minor, minor to restricted, or restricted to unexplored)
?	Hyperspace Survey A random jump lane connecting to the target system is increased by one class (unexplored to restricted, restricted to minor, or minor to major).

Chapter 5 ► Scenarios

// become optional, you can select a scenario if you don't want to set up a traditional start-from-scratch game.

// Scenarios should mirror Chapter 2 for campaign setup to a degree, with clear rules for setup, and maybe additional commentary.

// Make Scenarios more flavorful and ready to play, maybe even specify what units are where? I just want to make these more useful

- To the point on above, I think the scenarios would work better if they specified exactly what each empire had available and make it easier to just pick up and play the scenario. And have some better defined objectives.

// Has anyone used any of the scenarios before? Or should they go to another book and use this space for more optional rules or expand other areas of the book?

that can be used with any scenario are included in the appendices.

Creating Your Own Scenario

Many scenarios include star maps that have been tailored to their specific setting as part of the scenario package. If you don't want to use a pregenerated map, you can instead choose to randomly generate a new map using the 2.5.3 Random Galaxy Generator.

The generic maps found in this book are included for players who either want to play on a predefined map or that don't have the time to create a random galaxy map. The generic maps come in five different sizes: These maps are compatible with all of the scenarios listed in 5.1 Sample Scenarios. Statistics for each of the systems on these maps can also be found in the appendices. These values can be altered by the CM to suit their needs or they can be used as-is in any game.

Political Situation

Scenario rules often establish the political situation that exists at the beginning of the game. This lets the players know who their friends and enemies are at the start of the campaign so that they can plan accordingly when it comes time to start purchasing and placing their starting forces.

If your scenario doesn't specify the starting diplomatic relations between each of the player empires, the players are free to engage in negotiations before the game to determine what treaties they want to have signed with their opponents at the start of the game. Importantly, this lets them enter into trade agreements that they can then use to place Trade Fleets in each others territories when they are purchasing their starting forces.

All of the treaties that players sign before the game are publicly revealed before moving on to the next step of campaign setup. This ensures that everyone knows where they stand with their neighbors, and it gives them a chance to see a clear picture of the political landscape before they begin purchasing and placing their starting forces.

CMs may want to impose limits on just what kinds of treaties that their players can sign before the game. Allowing players to form pre-game alliances can have a disruptive effect on the game if it forces their opponents to use more of their limited resources to defend against the alliance. Under normal circumstances these resources would've been used to grow and expand during the early game, and an empire whose growth is stunted during the early game might not be able to recover if conditions aren't right later on in the campaign.

Starting Forces

Players are normally given a fixed number of economic points that they use to purchase starting forces for their empires before the game. The number of economic points each player has to spend varies from scenario to scenario. When the amount of points to purchase starting forces is not defined, a default of five (5) times the player's total System Income is used. This is normally enough economic points to field a respectable military at the start of the game. These points can be spent on units of the player's choosing that are available to his empire. Unit availability is based on the Tech Year that the empire is beginning the campaign at. All units that have an ISD less than or equal to the empire's starting Tech Year are available to the player. For example, if a campaign has a starting date of 3005 the players can only purchase units off their force lists that have an ISD of 3005 or earlier. A player won't gain access to any of the more advanced units off his force list until his empire's Tech Year increases during the game. In addition to the units on their own force lists, players may also purchase units off of the universal list which contains a selection of basic campaign units that all empires are able to build regardless of their Tech Year. This includes things like Supply Depots, Orbital Shipyards, Planetary Shipyards, and convoys. If your empire seems to be lacking a certain type of unit, you'll probably find a unit on the universal list that can serve in that mission role. Some scenarios also give your empire a number

of free starting forces that are in addition to those that you can purchase with your initial allotment of economic points. It's fairly common for scenarios to give empires one or more free Supply Depots, Orbital Shipyards, Planetary Shipyards, or convoys. This ensures that the empires will start with a certain level of basic infrastructure already in place regardless of how they spent their starting points.

The total amount of economic points spent on starting forces cannot exceed the number of economic points that the empire was given to purchase starting forces with. Any points that the player doesn't spend are placed into his empire's Treasury and will carry over to the first campaign turn. It's best to spend as many of your starting points as you can during campaign setup. Spending fewer starting points gives you more purchasing flexibility once the campaign begins, but you'll likely be placed at a disadvantage compared to any of your neighbors that spent all of their starting points on military forces.

Players are free to adjust the number of economic points their empires have available to spend on starting forces before the game. Increasing the number of economic points that players are given to purchase starting forces is an easy way to jump start

Chapter X ► Special Abilities

// I think the special abilities need to be defined here rather than in the back of the book, that way players will have some idea what they do. Otherwise it's kind of undefined until they run into them later in the book

// Special abilities that have an asterisk (*) after their name may be purchased multiple times and each function has a construction point cost as shown on XXX.

Space Abilities

"Ammo Heavy / Matter / Kinetic"

- Uses weapons with limited ammunition reserves and has a harder time operating out of supply
- Loses an extra 1 AS and 1 AF for every 2 out of supply levels it earns

- Possibly also get a bonus when in supply? So it's a give and take situation where it fights better when it's in supply, but knock it out of supply and it starts losing stats rapidly

Armored

- Cannot be damaged by leftover damage
- Alt: Can only be attacked using directed damage
 - This would reflect that the ship is very strong, but if reduced to 0 formation then they are still going to be susceptible to damage; plus at that point they can still take leftover damage, making the ability less overpowered

Assault*

Assault ships are used to support troops during planetary @@ Invasions. The number of Assault functions required to support a ground unit during an invasion is equal to its Construction Cost. Normal ground forces receive their full Attack strength when they invade from transports with Assault support, while Marines receive a +1 Attack bonus when they are invading with Assault support.

- Support ground force invasions as per 2E
- Still doesn't carry ground forces like they did in 1E, because that was madness.
- Include Security ability function of improving formations of friendly units for the purposes of boarding operations

Atmospheric

Atmospheric ships and flights have airfoils or antigravity propulsion systems that allow them to operate both in space and within a planetary atmosphere. These units can be built in systems without using a shipyard (@@ Planetary Construction).

Ships that have CC > 1 also receive a +1 Maintenance Cost modifier.

All flights are considered to be Atmospheric unless otherwise stated, and they receive the Atmospheric at no additional cost. Non-Atmospheric flights gain a +1 bonus to the stat of their choice (DV, AS, or AF) and can only be based from ships and bases, never from planetary fighter garrisons.

- Atmospheric ships and flights can be built in any system (system acts as a Shipyard for these purposes)
- Flights receive Atmospheric at no additional cost, but flights that are specifically Non-Atmospheric get a +1 bonus to the stat of their choice
 - Covers the rare situations like the EA Starfury that is non-atmospheric

Auto-Repair

Auto-Repair allows a unit to perform @@ Field Repairs on itself (and only itself). Its owner must still spend economic points to complete these repairs, of course. Bio-organic starships commonly have the Auto-Repair ability to represent their natural ability to regenerate hull damage over time. Technologically advanced ships can also have automated damage control systems that serve a similar purpose.

Auxiliary

- +50% CP, but unit does not cripple; it is destroyed when it takes damage equal to its DV
- Boarding ships capture instead of cripple/destroy Auxiliaries

Blockade Runner

Boarding

Boarding units deploy marine boarding parties to enemy ships in an attempt capture them. A Boarding unit receives 1 point of directed damage per Boarding function that can be used to attempt to capture enemy ships or recapture friendly ships that the enemy already captured earlier in the battle (see @@ Capturing Ships & Bases). For example, a Boarding 3 ship could score up to 3 damage per turn as directed damage to try and capture ships.

Carrier

Carriers are dedicated to the fighter operations role. They have advanced hangar facilities that make it easier to repair and rearm damaged fighters during a battle. ~~As a result, all flights that are based from a dedicated Carrier unit gain a +1 DV bonus.~~

- Based flights can be equipped with special ordnance or mission packages, giving them a +1 bonus to DV, AS, or AF (player's choice).
- Alternative: +1 formation to all flights launched from Carrier??

Diplomatic

Diplomatic vessels are used to convey ambassadors to foreign capitals so they can conduct negotiations with their alien counterparts. As part of this mission these units have luxurious VIP quarters complete with special environmental controls to accommodate species with different atmosphere requirements, advanced linguistic translation software, and spacious conference rooms. These units allow empires to remain in contact with each other even if they aren't capable of maintaining sustained contact (@@ Diplomatic Contact).

Disruptor

Disruptors are adept at breaking through enemy defenses and striking deep into enemy squadrons. A good example of a Disruptor unit is a ship that excels at making successful flanking attacks against exposed targets. This ability can also be used to approximate the effects of slow firing heavy weapons that do massive damage and are hard to hit, such as a massive spinal cannon that has to recharge for a long period after firing. ~~For each point of Disruptor rating, the unit can lower the Formation Level of one enemy ships or base by 1. The decision to do so is made during the Assignments Phase.~~

Experimental

- A rare class that is more advanced than normal, but far more expensive to operate
- Treated as if it was 1 Tech Level higher for purposes of calculating CP, but maintenance is much higher

- Used to represent technology concept designs in some source materials where an empire has a highly advanced unit class that is outside the ordinary for their fleet

Explorer

Explorer ships are vessels that are specifically geared towards long range exploration and the mapping of new jump lanes. These ships have advanced sensors that make it easier for them to perform hyperspace surveys of previously unexplored jump lanes. Explorers have an effective Scout value equal to their Command Cost for the purposes of @@ Jump Lane Exploration and are the only types of ships that can perform @@ Jump Lane Improvements.

Because they are meant to spend much of their time exploring out on the rim of known space, Explorer ships only subtract 1 point from their DV values for every full 2 out of supply levels. This effectively doubles the length of time that they can spend out of supply before they are destroyed.

- Non-rated state (+1 Maint)
- Halves out of supply levels from being in peril (round down)
- Required to upgrade/downgrade jump lanes
- Exploration bonus, plus likely a bonus to out of supply to allow them to be out of supply longer (like that they only lose stats for every 2 out of supply levels); that would allow them to be out of supply longer before they are destroyed, but that might make the ability appealing for players to just throw on all of their ships. Still thinking of a way to make that a non-combat ability that wouldn't make it a great military application.

Fast

Fast ships can move across an extra jump lane each turn in addition to their normal movement. This means that a Fast ship could traverse up to three jump lanes in a single turn! Only fleets that contain all Fast ships can exploit this advantage. If even a single ship in the fleet doesn't have the Fast ability then the entire fleet must follow the normal movement rules. Units that are being transported aboard a Fast ship don't affect its movement capabilities, however.

~~The use of Fast ships to perform scout functions is traditional among technology-hampered powers. Every 2 Fast ships in a Task Force grants an additional scout function that the player can use during scenario setup. Fast ships used in this way may not be included in the Task Force at the start of the scenario. They are instead placed into the Reinforcements Pool.~~

Fire Control*

- Increases friendly AS/AF during Scout phase
- Accurate long range sensors that cut through enemy countermeasures and give friendly units the ability to better concentrate fire

First Strike

Units with the First Strike ability have long range weapons that allow them to deliver a devastating attack against enemy forces from outside normal engagement ranges. Massive dreadnoughts that are

build around spinal laser or railguns commonly have this ability. First Strike units double their AS and AF values on the first round of combat.

Stealth and Q-Ship units that go undetected before combat receive the First Strike ability in the first space combat scenario fought in an encounter. They lose the First Strike ability after it is used, as the element of surprise has been lost.

Guardian

Guardian units provide intrinsic support to their squadrons. These ships are equipped with excellent point defenses that they can use to protect nearby ships against incoming weapons fire. ~~A Guardian unit can increase the Formation Level of one ship by 1 per Guardian function. These bonuses are assigned during the Assignments Phase of the combat round.~~

Gunship

These heavily armed warships excel in the orbital bombardment role. A Gunship adds 1 point to their normal bombardment value. For units that require multiple craft to earn a single bombardment point, such as a frigate that requires 3 for 1 bombardment point, simply increase the group's bombardment output by 1. Gunship frigates would generate 2 bombardment value for every 3 ships contributing to the attack, for example.

Hospital*

Hospital ships can be moved into a system to reinforce damaged ground forces and bring them back up to full strength. A Hospital ship may repair 1 Attrition per Hospital function each turn (@@ Attrition Damage Repair). Many empires rely on medical frigates to quickly replenish their ground force's Attrition losses.

Interdictor

Interdictors are equipped with special equipment that can prevents enemy ships and flights from retreating from a battle (see @@ Emergency Retreats). This effect is usually achieved by producing a blanket electronic jamming signal or gravitic distortion field that shuts down enemy jump drives to prevent them from leaving the area.

- Prevents the opposing task force from performing FTL retreats

Jammer

Jammer units negate enemy Scouts by actively jamming their sensors and confusing their electronic instruments. At the start of the combat round, a player reduces his task force's total Scout functions by 1 per point of Jammer rating in the enemy task force.

Kamikaze

Kamikaze vessels are outfitted with ramming prows or explosive charges that they can use at point blank ranges to damage enemy spacecraft. These sacrificial attacks always end in the destruction of the unit, but they score substantial more damage against the enemy in the exchange. ~~Kamikaze units provide twice their normal ramming strength when they ram during combat. This makes them highly~~

effective in this role. These ships and flights can always be used to ram, even if the 4.11 Ramming optional rule is not otherwise being used in your campaign.

Kamikaze ships may make a special orbital bombardment attack against a system by plummeting through the atmosphere and impacting upon the planet's surface. The unit generates twice its normal bombardment value this turn, but it's destroyed after the attack is complete.

Mass Driver*

- Roll d6 for effect when used to bomb system: 1: -1 Cap, 2: -1 Raw, 3: -1 Census, 4: -1 Morale, 5: -1 Productivity, 6: Destroy Ground Force
- System receives the Devastated trait if it loses Raw to represent that it has been subjected to mass driver bombardment
 - Devastated trait could then be removed via terraforming?
 - Alternatively, Raw could remain the same but just reduce Capacity
 - System reduced to 0 Capacity is now completely uninhabitable; Devastated trait remains
- Reduces deadliness, but make it still very nasty
- Example: 3 Athraskala bombers (Mass Driver 1) are bombing Balos. They roll 3, 5, 5. The system loses 1 Census and 2 Productivity.
- Can now reduce Raw, too, potentially making a system potentially unusable.

Minelayer*

A Minelayer is a ship or flight that is built to transport and deploy minefields. A unit can carry one minefields per Minelayer function. These minefields are automatically deployed into the player's task force when the Minelayer is in the task force, and they don't count against the task force's normal mine deployment limits. Minelayers are the only way that players can deploy minefields outside of a Defensive Scenario.

Minelayers may deploy some or all of their minefields to their current system location during the Minelaying step of the Supply Phase. Deploying mines to a system lays a defensive minefield that will remain in the system until they are recovered by friendly Minelayers during a later Supply Phase.

Minesweeper*

Minesweepers have special weapons or electronics packages that allow them to scan for, detect, and clear enemy minefields. Minesweepers are the only units that can destroy enemy minefields that are encountered outside of combat. A Minesweeper can destroy one enemy minefield per Minesweeper function, regardless of the cost of the minefield, when deployed during the Minesweeping step of the Supply Phase.

In space combat, Minesweepers provide their task forces with free directed damage equal to their total Minesweeper value in the Ship Fire Phase that can be applied against minefields in the enemy task force. This gives players a way to neutralize enemy minefields during the battle to remove the enemy's defensive advantage.

Example: The Pegasus destroyer is a Minesweeper 2 unit. A single Pegasus could destroy 2 minefields per turn during the Minesweeping step in the Supply Phase. A group of 4 Pegasus minesweepers could destroy up to 8 enemy minefields per turn.

The Pegasus can also damage mines in space combat scenarios. Each active Pegasus will score 2 free directed damage against minefields in the enemy task force during the Ship Fire Phase. This would be enough to eliminate a single Basic Anti-Ship minefields (DV 2) every round.

Missile

Missile units are armed with expendable missile, torpedo, or drone weapons. They can be outfitted with mission-specific ordnance packages to configure them for different mission roles and improve their combat effectiveness. A Missile unit may equip one ordnance package of the player's choice from the list provided below for every 2 Command Cost (round fractions up, minimum 1 ordnance package per unit). For example, a light cruiser (CC 2) receives one ordnance package while a heavy cruiser (CC 3) receives two ordnance packages. Players assign ordnance packages to their Missile units during the Adjust Ordnance step of the Supply Phase.

Missile units pay for this flexibility by relying more heavily on supply lines for replenishment. Out of supply Missile units lose the benefits of their equipped ordnance packages and cannot make changes to their ordnance loadouts. The ordnance bonuses are restored once the units are back in supply, however.

Ordnance Packages

<i>Ordnance Type</i>	<i>Combat Bonus</i>
Long Range	+1 DV
Heavy	+1 AS
Anti-Fighter	+1 AF
Comm Drone	+1 CR
Piercing	+1 Disruptor
Chaff	+1 Guardian
Bombardment	+1 Bombardment Value
Jammer	+1 Jammer
Proximity	+1 Minesweeper
<ul style="list-style-type: none">• +1 Maint	

CM's Note: When designing a scenario, you can limit which ordnance packages are available to each empire at the start of the game and then introduce the remaining ordnance packages as the empire earns new tech advances.

Mobile Shipyard

These massive vessels are used to build ships and flights. A Mobile Shipyard has a construction capacity equal to its rating. For example, a Mobile Shipyard 7 would have 7 construction capacity that it can use to build new vessels. Mobile Shipyards can only build units when they are in supply, and they can't move on the same turn that they are carrying out construction orders. These construction orders are canceled if the construction ship is forced out of supply or moves.

Q-Ship

A Q-Ship is a warship that is indistinguishable from a normal freighter until it reveals its true nature by arming weapons or performing other actions that are inconsistent with the behavior of a civilian transport. One Q-Ship can be concealed for each friendly convoy in the system (@@ Stealth & Concealment). The Q-Ship cannot be detected by enemy Scouts and remains hidden until the owner decides to reveal its presence or its attached convoy is attacked, even if the enemy completes a successful Espionage mission against the Q-Ship's system or convoy.

A player may add one Q-Ship to his task force for each convoy already in the task force and these Q-Ships don't count against the task force's command limit. Q-Ships receive the First Strike ability on the first round of combat if they started out concealed in a convoy.

Police

~~Police units excel at running anti-piracy patrols in friendly systems. Ships and flights with the Police special ability have twice their normal Construction Costs for the purposes of determining the effectiveness of military anti-piracy patrols (3.5.6 Raiding). This demonstrates that Police ships are more effective when they are protecting systems and convoys from raiders.~~

- Counts as two ships for the purposes of @@ Raiding.

Scout*

These vessels have powerful long range sensors and electronic warfare systems that let them have a major impact on space combat scenarios. Scouts may use their available Scout functions during scenario setup to influence conditions at the start of the battle or use them in combat to provide electronic warfare support for their task force. Scouts are also used to perform @@ Jump Lane Exploration and explore the galaxy for their empire.

- Used to explore and support combat operations by generating scout functions
 - At one point during 2E I had split the functionality of Scout and Explorer into two very different things, but then I merged them back together at some point before release.
 - Should Explorer be the only ships that get exploration bonuses? Some settings don't seem to make any distinction between the two, while others do.

Shields

Some units are protected by energy shielding, a defensive technology which makes a unit harder to damage. These defenses can take many different forms, and are collectively referred to as Shields. A shielded unit receives a +1 formation level bonus in combat until it is crippled, at which point the Shields fail and the vessel is left exposed.

Flights with the Shields ability have the option of disabling their Shields at the start of the combat round in exchange for a +1 bonus to their AS or AF (player's choice). The flights are effectively redirecting power from their shield generator to their weapon systems for a quick boost in firepower.

- Formation bonus, either a fixed +1 or else equal to $CC / 2$ (round up) so that it scales with the size of the ship. Fixed +1 works if this is a +1 Cost ability, while the $CC / 2$ is best if it is a +1 Maint.
- Non-rated ability; only purchase once
- Flights can deactivate their Shields to gain a +1 bonus to AS or AF (player's choice)

Slow

Slow ships have slower or less reliable hyperdrives that limit their strategic speed. These vessels have a movement rate of one jump per turn, which is half that of a normal ship. Slow ships may still perform two jumps per Movement Phase if one of them is a major lane.

CM's Note: *System monitors are the most likely unit classes that would be given the Slow ability because they are intended for system defense and won't need to move between systems very quickly.*

(-1 Cost)

Stealth*

Stealth encompasses a multitude of electronic countermeasures that are meant to make a unit harder to detect. This includes everything from anti-sensor hull coatings and heat collection/dissipation systems to full-blown cloaking technology. Stealth units are able to evade detection and move unseen through enemy occupied systems (@@ Stealth & Concealment). Stealth units that avoid detection receive the First Strike ability on the first round of combat.

~~During the Assignments Phase, any ship or base that has the Stealth ability can decide to cloak and try to evade the enemy. When cloaked, a unit increases its Defense Value and formation level by an amount equal to their Stealth rating. Units can't conduct fire during any firing phases as long as they are cloaked because doing so would give away their position. Once a unit is crippled it can no longer engage its cloak during the battle.~~

Stealth flights are especially dangerous because of their ability to move unseen on the battlefield. In the Assignments Phase, Stealth flights are not assigned to squadrons until all other flight deployments have been announced. This gives their owner the chance to see where enemy flights have been deployed before making their own Task Force assignments. Stealth flights also receive a bonus to a combat statistic of the player's choice (DV, AS, or AF) equal to their Stealth rating. This bonus is declared when the flight is assigned to a squadron.

Strikefighter

Strikefighters are long range flights that are outfitted with their own jump drives, which give them the endurance needed to conduct successful @@ Carrier Strikes against targets in nearby systems. Unlike other flights, Strikefighters do not start battles in a crippled state when they are performing carrier strikes.

The Strikefighter ability may only be applied to flights. It is very expensive to add a jump drive to such a small vessel, but the strategic advantages can be well worth it, especially for smaller empires that don't have the resources to field a proper war fleet.

CM's Note: In other settings, rather than having their own jump drives, Strikefighters may instead incorporate design features that give the flight extra range such as improved crew comforts, better life support, or extra fuel capacity. The in-game effect remains the same, however.

(+1 Cost)

Suicide

Each Suicide vessel is equipped with a series of explosive charges placed at strategic locations throughout its superstructure. A "dead man's switch" automatically activates these charges if the unit is captured by the enemy. This makes it impossible for a Suicide unit to be captured by another empire. Note that the Suicide ability is an exception to the normal special ability rules and it is effective regardless of whether or not the unit is crippled.

- Unit cannot be captured; is destroyed rather than being captured
- (+1 Cost)

Supply*

Supply ships are fast combat support ships that have the speed to keep pace with military fleets. Supply ships allow fleets and colonies to trace @@ Extended Supply Routes. This extends the range at which an empire's fleets can operate away from friendly supply depots before they are out of supply. They can also perform @@ Field Repairs to repair crippled units.

Supply Depot

In addition to normal planetary supply depots, some orbital bases are also considered to be supply depots. Any base noted as a Supply Depot in its special notes is treated like a @@ Supply Depot.

- Bases only (for the sake of sanity) that turns them into a mobile supply depot

- Allows us to recreate Babylon 5 by having it be a Battleship sized starbase with the Supply Depot ability. Then when B5 declares independence it can actually survive on its own.
- +10 Cost, +2 Maint

Suppression*

- Used to reduce enemy AS/AF
- Ion weapons are a good example, or any active countermeasures that can confuse enemy targeting computers.

Tender*

These vessels are capable of docking corvettes either internally or at external docking ports for long distance travel. Each point of Tender allows a ship to carry a single corvette. Corvettes that are based from a Tender don't count against a task force's normal command limits. The command overhead of these units is effectively being paid for by the Tender itself. A Tender cannot carry units that have the Tender ability themselves.

If a Tender is destroyed in a battle, all of the corvettes that it was carrying are moved back to the reinforcements at the end of the round. However, if a Tender is destroyed outside of combat, all of the ships that it was carrying are destroyed along with it.

Trade

~~Trade ships are warships that perform double duty as armed merchant liners. Trade ships that are assigned as 3.3.6 Convoy Escorts to a convoy cost nothing to maintain because they are earning enough money from running cargo missions on the side to cover their normal Maintenance Costs.~~

Towing*

- Restore strategic movement to crippled ships ~~(but not Slow)~~
- 1 Towing function will tow 1 crippled unit
 - This is simpler than having it be based on CC
- Allows them to move as normal ships
- Crippled Fast ships move as normal ships, too, do not get faster movement
- Could also be used to tow bases if that is something that we would like to allow, but in that case I would make the cost sufficiently high (Towing functions = construction cost) to make it impractical outside of towing some small bases (corvette sized satellites) around.
 - Maybe the max cost of base that a tug can tow is equal to its Towing rating, and multiple ships can't combine Towing functions? That would mean that a Towing 4 tug could move a 4 EP base, but to move a 8 EP base it would need Towing 8. That should make it pretty difficult to achieve.
- **Do we want tugs to be able to have a combat bonus? Ex: if a tug is moved from the task force to reinforcement it can take one ship back per Towing function? Putting the tugs on the front line is already going to be kind of a foolish move**

Ground Abilities

Marines

Peacekeeper

Chapter X ► WIP

Unit Construction

// the discussions of removing squadrons and buffing flights would allow us to simplify the unit construction rules insofar as calculating CP is concerned; this is because CC would no longer be paramount to task force setup

- Change CR/CC to be based on class possibly, so that they were fixed elements that you didn't pay to increase? Would require a new Command (X) ability to allow for certain units to have better command and control abilities
- Allows construction times to be standardized at Construction Cost / 2 (round up), rather than having two different systems for ships and bases.

+2% CP per Tech Year

Bases & Minefields get +50% starting CP compared to base hull at that Tech Year

Armored = cannot be crippled using partial/leftover damage

Shields = (some sort of formation/directed damage bonus???)

Missile = free bonus based on ammo used: +1 DV (Long Range Missiles), +1 AS (Heavy Missiles) +1 AF (Anti-Fighter Missiles), +1 CR (Comm Drones); special mission missiles available, too?; Missile type must be set during Supply Phase and cannot be changed

// instead of fixed +1, it could be made into +X where X is CC and the economic penalty changed from +1 Cost to +1 Maint

Outstanding Leaders

- 10 XP per level

- Max one level per turn

Graded Crews

- Unit Cost = XP per level
- Max one level per turn
- Loses level (minimum Regular) when crippled
- Green, Regular, Veteran, Elite
- Stat gain equal to CC per level, Stat loss equal to CC for Green
- Bonus goes in order from highest stat to lowest stat; tie breakers go to stats that come first in stat line (DV, AS, AF, CV, CR)

Experience

- XP not stored liked before, must be applied to unit or leader as partial progress towards next level
- Can create new leader with partial XP that has no traits but holds the partial XP

Credits

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