

# Imperium Outline

## **1) What is Imperium**

### **1.1) General description**

Imperium is a game of interstellar conquest and exploration that is played by several people over a period of months over a modem or a direct serial line. The player takes the role of a person who has just received a large sum of money, and has chosen to venture into space to find fame and fortune. Players choose one of several "races", and will start out at that races "home" planet.

Players will be given a certain amount of money to pay for the expenses of operating a starship, and may try to increase their wealth at the gambling hall or on the stock market. Beware, the more money a player has, the more likely that they will be cheated at the gambling tables.

The ultimate goal of the game is to amass as much money and power as possible, using whatever means you choose. Or maybe not. It's up to you.

### **1.2) Space**

#### **1.2.1) The Universe**

The universe consists of a grid (which may or may not be square) of "Galactic" sectors that contain 100 subsectors (in a 10x10 square). Each of the galactic sectors is the equivalent of a solar system, and each subsector may contain the planets or stars in that solar system. Additionally, there may be items such as supernovas or black holes scattered throughout the galaxy, and they take up a whole "Galactic" sector.

#### **1.2.2) Planets**

Planets range in size from 1 to 4 (by default), with each size higher being exponentially larger. Planets can have various atmosphere types, water contents, mineral contents, etc. The larger the planet, the more people it can hold (if it supports life), and the more goods it can produce (and the more it costs to increase and maintain the planets technology and utility factors).

##### **1.2.2.1) Planet production**

Planets can produce various kinds of goods at different rates. For each of the various item types the owner may specify a percentage of that planets production that should be devoted to that type of item, including 0%. The rate at which that item is produced depends on the percentage the owner assigned to the item, and the ability of that particular planet to create that item.

Planets that are poor in minerals will not be able to make much of anything without having ore brought in.

##### **1.2.2.2) Donations to race**

Players can donate part of the technology or research production of a

planet to their race. Doing so will raise their races technology or research level, and any new players of this race will have their ships created at this level rather than level 0 (TF of 15). Donations of other items to their race must be done by transporting goods from other planets to their home planet. New players will then find the items there and can load them onto their ships.

Donating people on the home planet is a little different, as home planets require a certain population to exist before any people may be removed. It is up to the members of a race to bring people back to their home planet to meet this minimum requirement.

### **1.2.2.3) Planet Types**

- H - a home planet
- A - rocky, lifeless, no minerals
- B - entirely water, no land masses
- C - gaseous
- D - generic planet class, but no intelligent life
- M - earth-type, likely to support int. life
- N - rocky, no native life good min
- O - about the same as N, but good gold
- Q - Q should be fairly rare, maybe 1 per game

### **1.2.3) Stars**

Stars range in size from 5-10. Stars provide the energy in a "Galactic" sector, and this tends to show up in richer mineral contents of the planets in the sector (if any). But too many or too large stars will also prevent the formation of surface atmosphere and water on a planet. Stars must be navigated around within a "Galactic" sector. Sailing a ship through or stopping on a subsector which contains a star will destroy the ship instantly.

### **1.2.4) Notation**

The following notation is used to express a planet or stars location in the Imperium "space":

RRRa,CCCb

where

- R = "Galactic" row of object (not required if zero)
- a = "subsector" row of object (0-9) (required)
- C = "Galactic" column of object (not required if zero)
- b = "subsector" column of object (0-9) (required)

For example, a ship at "subsector" location 4,7, in the "galactic" sector 32,27 would be at location 324,277. Alternatively, if you choose, you can just think of the world as one big grid, going from 0 to  $\langle \text{world row size} - 1 \rangle * 10 + 9$  by 0 to  $\langle \text{world col size} - 1 \rangle * 10 + 9$ . In simpler terms, if you have a 32x32 world, the rows and columns can go from 0 to 319.

#### **1.2.4.1) Named objects**

Objects such as ships, planets, and stars may have optional names added to

them. These names will show up when the item appears on a report, or in the automatic messages the system generates. You may not refer to the items by name when asked for a planet, star, or ship number, as the names are not indexed, and so there may be more than one item with the same name. (Thus it is important to remember the NUMBER of the item, so that some unscrupulous player doesn't trick you by naming a planet or ship the same as another).

#### **1.2.4.1.1) Planets**

Planets may be named by the player who owns them. Home planets have the name designated by the deity when the world was created, and can not be changed by normal players.

#### **1.2.4.1.2) Stars**

Stars are by default NOT named, and can only be named by the deity.

#### **1.2.4.1.3) Ships**

Ships may be named by the ship owner. Names may be changed at any time, and more than one ship may have the same name.

##### **1.2.4.1.3.1) Suggested ship names**

Because more than one ship can have the same name, and ship names are almost always visible to other players, they can be used to communicate to other players certain messages right away without their having to send messages back and forth. For example, the following ship names and naming conventions are suggested:

Rescue - The ship is on a rescue mission, and does not carry any offensive weapons or shielding, and should be treated as a non-combatant vessel. (Like the Red Cross)

Warning - The ship is currently infested with the plague or some other hazard, and should be avoided.

Probe - The ship is an automatic probe ship which is designed to scout out the galaxy, and should not be considered a combatant.

Civilian - The ship is a civilian transport vessel, carrying people such as colonists, and should not be considered a combatant.

Merchant - The ship is used for automatic resupplying of a planet, or is a commercial freighter hauling goods from one planet to another.

A ship with the name "rescue" should not be attacked, but may be scanned to determine that it truly does have no weapons installed. Therefore, any player who names a ship "rescue" in order to get near enemy planets and then attacks them deserves to be ganged up on by other players.

A ship with the name "probe" may be attacked or boarded, but this will be considered an act of war by most players, and you will certainly be telling them that another player is in that location, which is probably the whole reason for sending the ship in the first place.

Another way to name the ships that you may want to use is to place the first character of one of the above names (if any apply), followed by a minus

sign, and the real name of the ship. This would let you give the ship a specific name while indicating what the ship's purpose is. For example "P-Voyager" would indicate the ship is a "probe" named "voyager".

### **1.3) Races**

#### **1.3.1) Description**

Races, for the time being, are all considered to be life forms that can breathe the same air, drink the same water, and eat the same food. They originate from different planets, however, and may or may not be friendly with other races they meet. Races can be thought of as "countries" in the USA, Canada, Germany, etc. sense of the word. They represent a group of people of similar genetic background, but different cultures.

#### **1.3.2) Race Relations**

Each player can decide their feelings toward the other races, and these feelings will be the defaults for people of that race the player meets. The player can also specify relations with players individually, so that you may create situations where "I don't like race xxx, but player yyy (of race xxx) is OK", or conversely "I am allied with race xxx, but player yyy is a traitor, so I am at war with him".

#### **1.3.3) Home planets**

##### **1.3.3.1) Description**

Each race has a "home" planet on which all players of that race will start out. The home planets are assured by the galaxy building program of being a "fair" distance apart from each other, and having a basically equal number of "vacant" planets near them for players to take over. If the home planets are attacked and taken over by another player, or in any other way have their population wiped out, then there can be no more new players of that race until one of the players of that race (if any) can repopulate the planet.

##### **1.3.3.2) Attacking a home planet**

Home planets may not be attacked until there has been at least one player of that race.

##### **1.3.3.3) Restrictions**

Home planets have special restrictions on what can be done to them (while they are acting as home planets, once taken over they behave as normal planets in most respects, until they are retaken by a player of the race they belonged to). Only players of the race may load or unload items from the planet, and players are prevented from loading up all the population of the planet.

### **1.4) Ships**

#### **1.4.1) Description**

Ships are built based upon a certain tonnage size, which determines the number and size of items they may carry. There is no notion of a "military" or "civilian" starship. Any ship may carry any item in any quantity that will fit,

although there are limits on how many items may be used at a time on items such as engines or weapons. Certain items also require a minimum crew to operate.

## **1.4.2) Ship components**

### **1.4.2.1) Hull**

The hull is the most important part of the ship. If the hull is destroyed, the ship will explode, taking all of the items aboard with it. Of course by the time the hull is gone, they have probably been damaged severely anyway.

The hull is the only part of the ship that can not be removed and replaced. It has a tech level based on the tech level of the planet it is built on at the time it is built. It may be increased by bringing the ship back to port, however. The hull is not normally accessed by the player as an item. It is instead referred to by the ship number itself, since the two can not be separated.

### **1.4.2.2) Engines**

Engines provide the power for the ship, as well as the ability to move between the stars. Engines are all considered to be the same size, but you can load more than one (cargo limits permitting) to increase the ship's speed, the rate the energy banks recharge, etc. Engines also have a tech level, which is the tech level of the planet they were built on, at the time they were built. You can have various tech level engines in each ship, but the lower tech engines will bring down the average tech level of the higher engines. In general a higher tech level engine will provide more power, and will weigh less. Like most items, engines may be brought up in tech level. But bringing up an engines tech level will not make them lighter.

### **1.4.2.3) Weapons**

There are several types of weapons available, including hybrid of a blaster and a laser, called a "blaser", and photon torpedoes.

#### **1.4.2.3.1) Blasers**

Blasers do less damage than photon torpedoes, but as they are guided by the ships computer to their target and they travel at the speed of light, they are much more accurate. Blasers take their energy from the ship itself, and so they drain the ships energy banks, and if used too much they may make it impossible to leave the sector until the energy banks recharge.

#### **1.4.2.3.2) Photon torpedoes**

Photon torpedoes do more damage than blasers, but because they travel slower than light, and occupy physical space, they are less accurate. They require an explosive charge, which must be carried by the starship, and which may explode if the starship takes enough damage. But they can usually destroy an enemy ship with one or two shots, so they have some value.

#### **1.4.2.4) Sensors**

The ships's sensors allow it to map out subsectors, and if it's technology level is high enough, to map out sectors as well. Sensors are also used to scan for ships in the area, and the higher the tech level, the more likely they are

to pick up smaller ships farther away.

#### **1.4.2.5) Teleports**

Teleports allow a ship transport goods from ship to ship or ship to surface with other ships or planets in the same subsector. The higher the tech factor the large the item that can be transported, and the more reliably the transfer will occur.

#### **1.4.3) Ship defenses**

A ship defends itself by firing on ships that attack it, and by carrying some amount of ablative armor. The armor will absorb all of the points of damage the ship should have taken until there is no more armor left, at which point the ship begins to take damage. Armor is large and heavy, and the ship must be brought back to port to have more armor added. Ships may also carry small fighter craft which can be used to defend it, if the ship is large enough.

#### **1.4.4) Starting ship**

Players start the game with a single "Class A" ship, loaded with a single engine, a single computer, a single life support system, a single sensor array, the equivalent of 2 fuel tanks worth of fuel, 10 civilians, 5 scientists, 10 military, and 5 officers. The ship will have no armor, and will be located on the surface of the players home planet. All the "big" items on the ship will be created at the tech level of the player's race.

#### **1.4.5) Ship operations**

Ships operate on "energy" stored in a toroidal Makazu field in each engine. These fields are fed via "active fuel arrays", which hold fuel which has been emptied out of "fuel tanks" that were loaded onto the ship. Once the player loads a fuel tank into the active fuel array it can not be unloaded. The engines will suck out fuel from the active fuel array in an attempt to keep the Makazu field charged at the maximum (as per basic astrophysics). As each engine contains a part of the field, adding another engine will increase the amount of energy that may be stored up. When removing an engine it is necessary to drain the energy from the engine to be removed into the remaining engines, which will maintain the extra energy, but will not replenish it when it is used up. Thus, a ship with more engines will be able to move more quickly from one place to another on the same amount of fuel than a ship with less engines. Damage to the ships engines can be cause the destruction of the whole ship if the Makazu field collapses with a large amount of energy still contained in it.

### **1.5) Items**

Most items are considered "small", and do not have the level of detail of larger items such as engines or weapons. These items are not identified by a unique number per item, but by how many of them are present, such as "10 civilians". These items do not have separate technology levels, but are all the same level.

## **1.5.1) Small items**

### **1.5.1.1) Civilians**

Civilians are the basic workers and population. They are assumed to have basic skills, but can not pilot ships, make technical discoveries, or do much of anything else besides work and reproduce. Based on the amount of production put into a planets educational system, they may become scientists however.

### **1.5.1.2) Scientists**

Scientists are civilians that have completed more advanced schooling, and can work to develop new technology, and can pilot ships if needed. They will not fire weapons however. In all other respects they are the same as civilians. Scientists will reproduce more civilians.

### **1.5.1.3) Military**

Military represent the common soldier. They may fire guns and use weapons, but they can not pilot a ship. They are used to defend planets and ships from attack by other players. Military do not reproduce. They must be enlisted.

### **1.5.1.4) Officers**

Officers are military that have completed more advanced training, and have a higher intelligence than the basic military. They can pilot ships, fire weapons, and will improve the defensive capabilities of whatever they are on (planet or ship). Officers do not reproduce, they must come from promoted military.

### **1.5.1.5) Missiles**

These are used for planet->ship combat, as well as photon torpedoes for ships.

### **1.5.1.6) Ore**

Ore is used to create "production" on planets. Ore is mined from the planets "mineral" content, and a planet having a higher mineral content will produce more ore in the same amount of time as a planet with a lower mineral content.

### **1.5.1.7) Gold bars**

Gold bars are produced by mining the planets "gold" content. Unlike ore, mining gold DOES deplete the resource from the planet, so a planet with a higher gold content will produce more gold bars rather than producing them quicker.

### **1.5.1.8) Air tanks**

Air tanks are carried by ships to temporarily offset the loss of their life support systems. Planets must have an atmosphere above 40% to produce air tanks.

### **1.5.1.9) Fuel tanks**

Fuel tanks are used to store fuel for ships, and represent a pre-packaged amount of fuel in a combustible, non-reusable container. Each tank holds 75 units of fuel, and once put into the ships' active fuel array can not be unloaded. Fuel tanks MAY be carried by the ship as cargo, and unloaded if they

are not used for fuel by the ship. Fuel tanks require a planet to have an atmosphere above 50%, as well as water above 25%, along with "ore" for use in the production of the fuel tank containers.

### **1.5.2) Big items**

Big items are listed under 1.4.2 (Ship components).

## **2) What are the components of Imperium**

### **2.1) Server**

The server does all disk I/O relating to the private Imperium files. It also is responsible for player-player real-time communication.

### **2.2) Shared library**

The Imperium.library, which lives in the LIBS: directory contains all the Imperium code used by the game that does not have to be duplicated for each "client". This includes all game logic, the code to talk to the server, and memory management functions. Having this code in a shared library allows the clients to be very small, and to make it possible to run several users even when memory is tight. Additionally, by removing all the game code from the client, it allows the game to be upgraded without requiring any change to the clients (in most cases), a benefit to people using special "clients" for which they do not have the source code such as BBS doors.

### **2.3) Clients**

The various clients are responsible for all user I/O, and any disk I/O that relates to the specific user (such as recording a game session or printing out a map to the printer device). The standard clients provide an interface to the console, the serial port, C-Net BBSs, and several network systems. You must run one client for each user of Imperium that you wish have log on at the same time. There is no limit to the number of clients that may be running at the same time, except for memory constraints and the number of active players allowed in the game (if you have a 32 player game, you could theoretically have 32 simultaneous players).

## **3) Features of Imperium**

### **3.1) Features in pre-release version**

**3.1.1) Support of Universe sizes from 10x10 to 256x256 galactic sectors.**

**3.1.2) Unlimited number of simultaneous players.**

**3.1.3) Shared library.**

**3.1.4) Client/Server architecture.**

**3.1.5) Ships that can be programmed in a simple manner**

**3.1.6) "Standard" linkable module for easy creation of specialized "clients" such as BBS doors.**

### **3.2) Features expected to be in first released version**

**3.2.1) Support for play over a network.**

**3.2.2) Support for play as a C-Net BBS "door".**

**3.3) Features expected soon after first release**

**3.3.1) Graphic front-end (support to be added at first release)**

**3.3.2) Built-in C-like compiler for programming ships.**

## **4) Movement of goods**

### **4.1) Description**

Goods are moved in Imperium by loading them onto ships and moving the ships from one location to another and then unloading them. Each ship may be "programmed" to move in a certain path, unloading and loading items at various points in that path.

### **4.2) Ship movement**

Ships (or fleets) may be moved manually, or automatically by means of a pre-programmed course and set of actions.

#### **4.2.1) Manual movement**

Manual movement involves giving specific commands to move some quantity of ships from one place to another. You may type the entire course in at one time, type one movement at a time, or a combination of both.

#### **4.2.2) Pre-programmed movement**

Ships may have a "course" preprogrammed into them (only the flagship of a fleet needs to be programmed, the other ships in the fleet will follow automatically). The course may also include "actions" at various places along the path, as well as a "loop" operator that says to repeat the course over and over.

##### **4.2.2.1) Actions**

A certain number of actions may be created by the player, and shared among many different ships. For instance, an action could be created which unloaded all non-essential items of a ship, and the action placed in the "course" of a ship which was used to supply planets with goods. By combining this action with another action which loaded up the ship and the "loop" operator the ship would operate automatically as a supply ship.

###### **4.2.2.1.1) Load**

Loads a set amount of items (up to the number on the planet and the ship's capacity to carry them). Percentages can not be used since loading one item affects the number of other items that may be loaded. {use percent as percent of planets items?}

###### **4.2.2.1.2) Unload**

Unloads either a fixed number of items (up to the number on the ship and the planet's capacity to hold them) or a percentage of the number of items on the ship.

###### **4.2.2.1.3) Long range scan**

Do a long range scan from the ship's current position.

#### **4.2.2.1.4) Short range scan**

Do a short range scan from the ship's current position.

#### **4.2.2.1.5) Visual scan**

Do a visual scan from the ship's current position.

#### **4.2.2.1.6) Land on planet**

Attempt to land on the planet in the current subsector.

#### **4.2.2.1.7) Take off from planet**

Attempt to take off from a planet the ship is on.

#### **4.2.2.1.8) Teleport items down to planet**

Attempt to use the ship's teleport system to beam smaller items down to the planet without landing. You must be in the same subsector as the planet, and must have a functional computer and teleporter. Works the same as the unload command otherwise. NOTE: You *must* own the planet to use this command.

#### **4.2.2.1.9) Teleport items up from planet**

Attempt to use the ship's teleport system to beam smaller items up from the planet without landing. You must be in the same subsector as the planet, and must have a functional computer and teleporter. Works the same as the load command otherwise. NOTE: You *must* own the planet to use this command.

#### **4.2.2.2) Loop operator**

The "@" character indicates that the course should "loop" around continuously. Note that this does NOT reverse the DIRECTIONS in the course, so you must code both TO and FROM direction commands to create a loop. This also lets you code a different FROM path (faster, but less protected) and TO path (slower, but more protected since carrying goods), or create a path which is not a simple 2 destination path (such as a circle).

You may place navigation or action commands BEFORE the loop character, but they will not be saved. You can use this as a "lead-in" for one-time actions that get the ship into position to execute the loop. For instance:

```
a223@9999b1111c
```

would execute action "a", move down two subsectors, down and right one subsector, then execute the loop. Assuming the ship went through the entire loop once, the programmed course would look like this:

```
@9999b1111c
```

You may *not* have more than one loop operator in the program. You will not be prevented from adding one, but it will not work as you would expect.

#### **4.2.2.3) "Count" operators**

All movement commands may be preceded by a "count" of the number of times to do the action. This must be of the following form:

```
[cur,end]<direction>
```

where "cur" is the number of times the action has already been done (needed, as the ship may not have enough fuel to move all the needed moves in one action, and you would not want to have to reprogram the ship just because it ran out of

fuel). "end" is the number of times to execute the item (inclusive). For instance: [0,2]4 would move the ship left 2 times, while [1,2]4 would move the ship left once (resetting the count string to [0,2], if the course was set to repeat). You should normally not set the first character of the count to anything other than 0, as this will result in a "slew" in the course that will not bring the ship back in exactly the same sectors next time through any loop (since the count will be reset to 0 when the ship has executed the move however many more you have specified). Also, this should obviously only be used when it will save you room in your path. Since using a count operator uses up, at a minimum, 5 characters of your available path, you should probably only use them when you want to move more than 5 times in a single direction. Note that only MOVEMENT commands can be prefixed by a count operator. You can not put count operators in front of actions.

### **4.3) Item movement**

Items may be moved on or off ships by either landing the ship on the surface of a planet and using the "load" or "unload" commands, by orbiting the planet and using the "teleport" command, or by moving into the same subsector as another ship and using the "tend" command.

#### **4.3.1) Teleport warning**

Teleporting items is somewhat risky compared to just physically moving the item from one location to another. Until your tech level is high enough there is a very good chance that a teleport operation will result in damage or complete loss of the items you are trying to move. In addition, you can only teleport "small" items such as people or gold bars. You can not teleport "big" items such as engines or weapons. What good is teleporting then? Well, it allows you to exchange items with a planets surface without having to land, thus allowing you to remain in orbit and ready for a speedy getaway if the need should arise, plus saving the extra fuel needed for another takeoff and landing.

#### **4.3.2) Plague warning**

Note that putting any item onto a ship or planet that was previously on an infected ship or planet will contaminate the new ship or planet with the plague.

## **5) Trade**

### **5.1) Description**

Players can trade goods at a set price per item by landing on a planet (or orbiting the planet and using the teleport system) and buying or selling goods at the price the planet owner has decided (if any). The planet owner may set the price for each small item (big items are their own lots), and a lot will be created for the planet. The planet owner must set a selling price for you to be able to buy anything, and likewise a buying price for you to be able to sell

him anything.

#### **5.1.1) Buying and selling prices**

The owner may set separate buying and selling prices for each item, including a buying price of 0 (not buying these) and a selling price of 0 (these aren't for sale). The prices are independent of each other, so a planet may be buying ore at \$10, but selling it at \$20. This allows the owner to earn some money by buying goods from ships that have items for sale and reselling them to ships who want them, automatically.

#### **5.1.2) Trade after landing**

Trading after a ship has landed insures that all items desired will safely reach the correct party, and not be damaged or lost via a malfunctioning teleport system.

#### **5.1.3) Trading via teleports**

It is possible to trade via teleports, if your ship has them. Doing so is riskier than directly landing on the planet, but depending on your relation to the planet owner, may be the only way to get the items. The planet owner can decide if the person who teleports the items is responsible for all damages that the teleport process might cause. For instance, if the planet owner has decided that the ship owner is responsible, and you teleport up 10 items, but only 6 arrive, you are still charged for all 10. Conversely, if you teleport down 10 items but only 6 arrive safely, you will only be paid for the 6. This is probably the most common situation. However, sometimes a planet owner may be desperate for a certain item that they will be willing to accept all damages.

### **5.2) Trading "big" items**

Because "big" items can not be moved via transporter, you must land on a planet in order to transfer them. Items for sale on a planet may not be loaded into a ship. In the case of weapons, items that are for sale will not be used to defend the planet during attack. Items for sale on a ship may not be unloaded or installed, and can not be installed at the time they are put up for sale.

#### **5.2.1) Buying from a planet**

"Buying" a big item automatically loads the big item into your ship, and so you must have enough cargo space free to buy the item. This requires no contact with the owner of the planet, assuming that you know the checkpoint code or the owner does not require the checkpoint for you to land.

#### **5.2.2) Buying from a ship**

To buy something from a ship requires that you send the owner a message indicating that you are interested in the item, and have them navigate the ship to a planet you own and land on the surface. You may buy the item without waiting for a message when the ship is on the surface of a planet you own. The main reason for putting things up for sale on the ship is to indicate to other players that you have the item available (via the trade report), and the

general location of your ship (so that someone on the other side of the galaxy doesn't try to get you to bring the items to them).

### **5.3) Selling ships**

You can sell an entire ship as well. Any items (large or small) on the ship will also become the property of the new owner. The price set on a ship is "per ton", and so will change depending on what is loaded in the ship. Ships that are for sale can not be in a fleet when put up for sale, and can not be added to a fleet while they are for sale. When purchasing a ship, the new owner takes possession of the ship wherever it is. Also, ship locations will not be specified exactly unless the ship is on the surface of a planet, in order to prevent pirates from finding the exact location and stealing the ship.

### **5.4) Trade report**

There is a trade report which will list each lot and it's location, for all players that are at least "neutral" to you.

### **5.5) "Giving" items away**

If you wish to give items away for free, you must allow people to land on your planet and use the load command. Alternatively you can give away an entire planet or ship with the "grant" command. Wholesale giving away of planets and ships is not usually looked upon with kindness by other players (after all, when was the last time you saw anyone give away a multi-million dollar oil tanker or cargo vessel, much less an entire country (planet)). But creating a planet on which your allies may load up their fleets for free is a good and fair idea, and crucial for any long-term interplanetary conflict.

To this end Imperium makes it fairly difficult to just set up "giveaway" planets, and makes it impossible to create lots with a price of \$0. If you TRULY want to set up a planet on which anyone can just pick up items for free, you have to load up all the population and abandon the planet so that anyone can land upon it and take it over (thus being able to load up their ships), trusting that they will also abandon the planet when done. Alternatively your deity, if they sanction this type of thing, may create a "dummy" player which is not used by any real person, but who owns the planet and has declared an alliance with everyone, thereby allowing everyone to land on the planet(s) they own without taking them over or abandoning them. Again, this is not normally encouraged. The most common use is to only allow allies to land on the planet and load items, and all you have to do in this case is give out the checkpoint code to players you wish to be able to land on the planet.

### **5.6) "Giving" money away**

While not as unlikely as giving away an entire ship or planet, Imperium also restricts how you may give money away. If you wish to give money to

another player, the "lend" command will allow you to do so, at a certain interest rate (which may be 0) for a certain number of days (which may also be 0). If you specify a rate of 0%, then the person only has to repay you what you lent them, no matter how long they wait. Specifying any other rate will add that percent of the original amount to their balance EACH DAY (48 ITUs) until the loan is paid off.

If you specify any length other than 0 the player will have that many days to repay the loan, plus interest (if any). At the end of that many days, you can foreclose on various items of property the player owns, if they are valued about the same as the amount owed.

If you do specify a length of 0, then the loan will never go into default, and the player has the entire game to repay you (and you can never repossess any of their property due you by this loan). By allowing you to set a rate of 0% and a duration of 0, Imperium will allow you to "give" money to player, while still keeping a record that the player owes you some money. Imperium will also take into account a player's outstanding loans when calculating their standing in the power report. For instance, to be fair, a player which "seems" rich because they have a lot of money on the power report is not really all that powerful if they got the money due to the graciousness of other players.

## **6) Exploration**

Exploration is accomplished by moving your ships away from the more explored regions near your home planet and into the darker regions of space...

### **6.1) Limits**

You can not move left past column 0, right past the number of columns in the world minus 1 times 10, plus 9, up past row 0, or down past the number of rows in the world minus 1 times 10, plus 9. There is no "wrap around" and all players/races use the same coordinate scheme (after all the stars are the same for everyone, and by comparing what you see to what another player sees it would be possible to deduce the coords anyway (doing this in Empire requires that you trade the coordinates of one of the weather centers with another player), so not allowing this would just be an arbitrary restriction). For instance, in a 10x10 world, you can't go right or down more than 99.

### **6.2) Moving safely**

There are many hazards in the reaches of space, and you must take care not to make obvious mistakes that can be fatal to the crew on your ships.

#### **6.2.1) Hazards**

##### **6.2.1.1) Black holes**

Black holes take up an entire galactic sector, and moving into them may or may not be fatal. There is a chance that a ship that moves into a black hole will reappear somewhere else in the galaxy completely unharmed, it may reappear with no energy left in the tanks, possibly stranding you if you have no fuel

left. And of course, the ship may disappear for good, never to be seen again. You should avoid black holes in all but the most desperate cases, such as when you are being attacked and are certain to be destroyed anyway.

#### **6.2.1.2) Supernovas**

A supernova also takes up an entire galactic sector, and moving into one of them will turn your ship(s) into rapidly expanding vapor immediately.

#### **6.2.1.3) Stars**

Stars only take up one subsector, but moving through them will almost certainly destroy your ship(s).

#### **6.2.2) Prevention**

The best prevention for all of these is to avoid moving out of the area of your last sensor scan. As at most 12% of a galactic sector will be occupied by planets or stars, and only stars are dangerous, you stand a good chance of being safe while moving WITHIN a known safe galactic sector. If you always make sure and scan when moving near the edge of a galactic sector the first time (the subsectors ending in 0 or 9), you should be able to detect the black holes or supernovas before you move into them.

### **6.3) Taking new planets**

You can take over new (currently unowned) planets by putting some of your people on the surface, either by teleporter or by landing the ship. Be aware that if a planet was recently vacated due to the plague that it may still be able to infect your landing party.

#### **6.3.1) Setting up a planet**

When you take over a planet, you will be able to set things such as the planet name, the work percentage, etc.

##### **6.3.1.1) Planet names**

Planet names do not have to be unique, but you should probably try to keep them this way, either by adding a number after the name such as "Invictus II" or somesuch, to avoid confusing yourself and others.

##### **6.3.1.2) Planet work percentages**

You can adjust the amount of the total planetary production devoted to the various types of construction to fit the planets ability to produce the items, your need for the items, greed, etc. Any work not assigned to one of the other types of production will be assigned to "cash" and will earn you money directly. You may also donate a portion of the "technology" and "research" productions to your race, and any new players of your race will start at a higher tech level, thanks to you.

##### **6.3.1.3) Planet stats**

Planets are of different sizes and classes, both of which affect what you should try and put on them.

###### **6.3.1.3.1) Planet size**

A larger planet will hold more people comfortably, and will have a higher

birth/death ratio. This means that without any outside interference the planet will create more people before it finally reaches the point at which it's population will not increase. Additionally, a larger planet will not become polluted as quickly (but conversely will take longer to clean up) and is easier to defend (more places for people to hide).

#### **6.3.1.3.2) Planet class**

There are several "classes" of planets, each with their own general stats. For instance some planet classes have no land mass, and so you can't land on them. Others have no atmosphere, and you must be careful not to unload people on them. And there have been rumors of planets with tremendous riches just waiting to be found.

#### **6.3.1.3.3) Planet Atmosphere**

A planet's atmosphere is fairly simplified in Imperium. It basically represents how "suitable" the atmosphere is to player-controlled life. You can consider it as a combination of things like density, gas combinations, vacuum, etc. The higher the number the better the atmosphere is, up to the maximum of 100%. Players can live comfortably at 60% and above, can get by with 45% and up, and will die on planets with an atmosphere below this point. The planet's atmosphere is reflected by the "gas" entry in the census reports.

#### **6.3.1.3.4) Planet surface**

A planet's surface is also simplified. The surface is either "land" or "water", which can be considered "unsuitable" land such as lava flows, acid lakes, etc. Ships can land only on the "land" portion of a planet, so a planet that is 100% water can not be landed upon. Attempting to do so will destroy the ship(s). The amount of the surface area covered by water will also affect population growth. Each percentage of water on the planet will reduce the maximum number of people by 1/2%. So a planet with 40% water would hold 20% less people than a planet with no "water".

#### **6.3.1.3.5) Pollution**

Pollution occurs from industrial development. Every time something is built on a planet a certain amount of "waste" is produced. "Waste" is also produced when increasing the planet's efficiency level. All this waste is represented by the "pollution index" of a planet. This is a number from 0 to 100 which indicates just how polluted the planet is. The higher the pollution index, the higher the chance of the planet developing the plague, civilians revolting (if the planet was acquired by hostile takeover), and the slower that civilians reproduce. A pollution index of 100% will increase the planet's odds of catching the plague by 50%. The pollution index can be reduced by devoting some of the planet's production to research (which will also cause research breakthroughs on the planet).

### **6.4) Taking planets owned by other players**

Taking planets owned by other players will usually require that you bomb

the planet enough to reduce the number of military on it, and then assault the planet from several ships. If the planet has no military on it, you can simply assault the planet and take it over. Taking a planet like this, even from an ally (who probably won't be after this) will always cause the civilians to resent you, which has many consequences.

#### **6.4.1) Civilian revolt**

Since your new "comrades" will consider you lower than the muck on the bottom of a septic tank, you will have to keep a fair amount of military on the planet to keep them in line. Usually 15-20% of the population, or the people will revolt, decreasing the number of your military on the planet, possibly enough that they take the planet back.

#### **6.4.2) Reduced production**

Since you have to watch over everyone's shoulder to prevent 6.4.1, the planets production will not be as high as it normally would.

#### **6.4.3) Inability to load civilians**

Since these people want nothing to do with you they will resist the request to get on your ships (where they are afraid they will be tortured), so you will have to use quite brutal "persuasion" techniques, thus causing a loss in people actually loaded. For example, loading 100 people may result in only 75 or so actually getting on board, the rest not surviving your "readjustment" sessions.

#### **6.4.4) Inability to unload civilians**

Being resentful of your aggressions the population will try and eliminate any one they feel might be a sympathizer to your cause. Thus unloading civilians will result in the deaths of some who are "found out", and civilians you previously unloaded may have to take part in these assassinations just to maintain their cover. Plus, when your own people find out what you have done on the planet, they will most likely resent you as well. So it is impossible to gain control of a planet no matter how many civilians you unload.

#### **6.4.5) Snipers**

The civilians will take any opportunity they get to kill your military if they can get away with it, so you can expect at least one soldier per day to be killed on larger planets.

#### **6.4.6) Increased military pay**

Enlisted military get 1/3rd more pay for duty on hostile planets.

#### **6.4.7) Decreased enlistment rate**

Enough said.

#### **6.4.8) Stopping civilian revolt**

There are only two ways to stop civilian revolt. By killing every civilian on the planet (before you take it over), or by giving the planet back to the original owner (or if they win the planet back). A player who takes a planet from (or is given it by) a player who took it by force will still have to deal with revolt.

## **6.5) Universe formation**

The Imperium universe is modeled after the "big bang" theory, with subsequent collapse of the matter spewed from the center into "clusters". This means that there will usually be galactic sectors that contain neither planets or stars, and others with a high density of stars and planets. The world creator uses heuristics to verify that the spread is "fair" however, so each race 'in theory' should have just as many planets nearby that can be taken over as any other \*at the start of the game\*.

Obviously once the game starts there is nothing preventing a player for taking planets near the home planet of another race, so entering the game later on and picking a race that nobody else is using may not be a good idea... On the other hand, planets near the home planets of other players may already be taken over, so picking a new race has it's merits.

## **7) Suggestions to players**

### **7.1) Planets near your home planet**

If you take over a planet near your home planet you may want to consider using it as a "general store" for other players of your race. Many players will want to pick up more supplies, such as fuel, before venturing out far from their home planet, and if yours is the nearest planet, they may have no choice but to pay your prices :-).

### **7.2) Towing service**

You may want to offer some kind of "towing" or "rescue" service to other players near planets you own, by agreeing to bring them fuel or supplies if they get stranded near you, for a fee of course.