Vel's SMAX Guide, version 4.0:
The Unofficial Guide to Alpha Centauri

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Chris Hartpence

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Legal Stuff

Introduction

I'm not sure, but after this, the strategy guide's fourth revision, I think we may well be closing in on saying pretty much everything that can be said on the topic of our favorite game.

Since it seems that Firaxis is not going to be making any additional patches, fixes or releases to the game, what we've now, the condition of the game as it stands at this moment is very likely what we'll be dealing with for the remainder of our SMAC-ing days. The disappointing thing about that is the fact that in some ways, SMAC-X is still a bit of a flawed gem. An outstanding game by any measure, that is true, but I think everybody who has played the game extensively has a list at least a few items long of things that could stand to be tweaked, changed, or improved upon.

On the other hand, the upshot is, we **did** get a lot of bug fixes as of the last patch, and the game as it stands now is worlds better than it was. Go back and do a quick compare....it's no contest. Also, for me as a writer, working in a relatively static environment means that the stuff I write today won't be obsolete or irrelevant in months to come, undone by some future patch, so I guess I can count that as a bit of a personal advantage.

So to anybody picking up this guide because you're new to the game, welcome! I hope it serves you well, and makes all your SMAC-ing endeavors easier than they otherwise would have been, and to those of you who are joining me for this, the fourth release of the guide, and have been with me from the start, all I can say is a heartfelt "thank you," and once more, welcome back!

And while I'm thanking people, a special note of thanks has to go out to the folk of Apolyton (http://www.apolyton.com). The Alpha Centauri forums on that site served as the testing and discussion grounds for the vast majority of the material you're about to read. If not for the tireless efforts and constant discussions on that board, this guide would only be a shadow of what it is now, if it existed at all. Guys, you're the best! :)

The Purpose of this Guide

From the outset, what I hoped to accomplish with the creation of this strategy guide is a set of instructions that would enable a relative newcomer to the game to sit down (after a careful reading), play and win against the AI on the hardest level of difficulty. From letters I have received, I think it is safe to say that the guide has succeeded in that goal, but the book remains just that...a guide. Please do not take anything in this work as the "final word," or the "absolute best way" to go about the game. No such creature exists. What you can rely on, however, is that everything in this book has been tried and tested extensively, leaving no doubts whatsoever about the validity and reliability of the strategies presented here. They work, and the principles they are based on are rock solid.

While it's true that certain portions of the guide veer off into extremely intricate and detailed areas of Alpha Centauri, (the exact rush-building formula, for example), it is simply beyond the scope of this work to give a microscopic treatment to every aspect of the game. Such a work would no doubt be several thousand pages long, and this author is not at all sure he's up to the task of putting such a monumental work together. Still, any time a strategically crucial concept calls for it, you'll find that Nth degree of detail present.

Two other things to take note of before we begin. Whether you've got "Classic SMAC" or the "Alien Crossfire" expansion, this guide will be of value to you. The vast majority of material here is applicable to both games.

Chapter One

Bright Beginnings

Getting Started
Differences you'll find between SMAC and SMACX

If you're coming to SMAX from the SMAC universe, then there are a number of differences you will want to take note of, and build into your plans as you try your luck in a radically changed environment. A brief outline of the changes you can expect to see are spelled out below.

New kinds of worms

Three of them, to be specific. First, Sealurks. Watch out for these guys, they're rather similar to IoD's, except they don't act as transports and tend to be "lone wolf" units. I've not had much luck in catching them, but with the right tech you can grow them yourself, and they do make good additions to your naval forces, though they lack the versatility of an IoD.

Next, Fungal Towers. I've never captured these guys either, and frankly, I doubt it's possible. They get morale upgrades depending on how much fungus they're surrounded by, and tend to spawn worms fairly regularly. If you're a diehard Marketeer, then getting rid of the towers in the vicinity of your bases will most likely be a top

priority. True, you could look at them as a good source of income, but they're generally more trouble than they're worth for fans of FM, but Greenies will love 'em!

Finally, spore launchers. Artillery for worms, and they are annoying! Oftentimes, when and IoD comes to pay you a visit, the Spore Launcher will not land on the shore, but remain on the Isle, and snipe at your terrain enhancements, forcing you to build an empath foil to deal with the IoD in order to get rid of the sniper. (Alternate plan—Build an artillery unit of your own and duel with the sniper).

Seven New Factions

Five human, two alien. You'll find details on the new bunch a bit later in this guide! Or, if you're reading the electronic version of this book, and want to see more now.

New techs, weapons, facilities, and secret projects

'bout half a dozen new techs, spawning a variety of new weapons and abilities. I'll not go into specifics here, as all of this is covered elsewhere in the guide, but suffice it to say for the time being that there are a LOT of new capabilities you can give your troopers, opening up whole new vistas as far as exotic and special purpose troopers go! The new facilities are great as well, giving you base-specific probe modifiers, missile defense systems, additional defensive bonuses and ways of getting better still production out of sea squares!

Project-wise, it's a mixed bag, with far and away the most useful (overpowered!) project being the Cloudbase academy. One thing further, the Hunter-Seeker Algorithm has been weakened so that it's not quite the final word protection against probes that it once was. Nonetheless, it's still a crucial project to snag, but again, more on that later.

Most significantly, artillery now actually does something in the game, and on Transcend level, the maintenance cost bug has been fixed, meaning that Transcend level bases are only one third as profitable as they used to be, but that is as it should be.

Before you fire up the game....

It is vitally important that you understand just what kind of game you're playing. I mean this on two different levels, and will take them one at a time. First and most basically, keep in mind the fact that Alpha Centauri is not a war game, but an empire-building game. War is, of course, a part of the process of creating and maintaining an empire, but it is only a means to an end. That is not to say that you cannot enjoy the game if you treat it as a war game and nothing more. Many players do that, and they love the game. It is a perfectly valid approach to playing. In fact, there are factions which just cry out to be played in exactly that manner. Bear in mind, however, that if you choose to play the game exclusively as a war game, you are denying yourself a significant and fascinating portion of the overall experience.

The second thing I mean is that the game actually begins before your map screen comes up. Everything in Alpha Centauri is important, and if you want to excel at the game, then from the moment you begin setting up the parameters of your game world, you should be considering how they may impact your game.

To that end, and in order to get your mind turning on the subject, we'll examine each of the options you can select from.

Planet Size

This will impact how much time you will have to develop in isolation before other factions begin to find you. If you want to mix it up from the start, shrink your world size. If you're looking to explore the various "Builder" elements in the game, expand the world size.

Oceans

Another factor that will impact how long it takes other factions to contact you. Oceans represent a pretty formidable obstacle. You've got to research two techs before you can even start building a boat, and then you must begin exploring the planet at the less-than-lightning-fast rate of three or four squares per turn. On the other hand, setting oceans to a minimum may well create a game where all the factions wind up starting on the same continent!

Cloud cover

A more subtle option. Impacts the amount of rainfall the planet receives. In turn, this impacts the number of green, nutrient rich squares the world contains. Worlds with heavy rainfall are nutrient rich, allowing for easy growth and expansion. Worlds with minimal cloud cover are arid and dry, making each base a very big and important deal, especially in the early game. In short, Rainy = Rapid Development. Arid = Slow Development.

Native Life Forms

This will dramatically alter the flavor of your game, and it will do so in a number of ways.

First and foremost, the higher the setting, the more fungus you will have to content with, which will slow your development as your scouts and colony pods will either have to spend several turns going through or around all the fungus, and your formers will need to spend several turns per square just clearing the fungus to make use of the underlying terrain.

Second, more fungus = more chances to run into worms (and by extension, more chances of seeing those fungal towers). While running into worms can be a great way to generate extra cash, a sudden, large influx of native life at the wrong time can really hamper your progress unless you're playing the Gaians or the Cult with their inherent ability to capture worms. On the other hand, if you are Morgan, intent on running an early game Market Economy, this could have some pretty serious implications for your game (Note—If you're playing for score, then use Abundant Native Life forms, as you will receive a 25% bonus to your score).

Third, the delays mentioned above have a strange effect on the game as a whole. It tends to work against both "Builder" and "Momentum" strategies, making the former harder due to the fact that it takes so long to get decent production geared up (time spent clearing the fungus), and it makes the latter more difficult because oftentimes attacks must be delayed when a horde of worms suddenly appears to be dealt with. About the only factions it makes life easier for are the Gaians and Cult, again, because of their ability to capture worms.

Optional Rules

Many of these are self explanatory, and most do not need comment. However, there are a few....

Accelerated Start

(The following text was written by DilithiumDad, of the Apolyton Forums, and appears here with permission from the author)

"Most players despise the Time Warp option. It's like taking over from an utterly incompetent governor. Time Warp accelerates you anywhere between 30 and 80 years into the game. Faction might is scrupulously balanced, and each faction has exactly one secret project. But some players swear by Time Warp, and the only single-player games they play are using this option. (Time Warp can also be used in Multiplayer, but it is far, far better to use the Scenario Editor to accelerate each player's starting position.) This option can make the game very challenging. If you have gotten used to grabbing almost all of those critical early Secret projects, Time Warp will humble you, because you will have only one of the first seven. This option makes the AI very strong, because you can't use your special tricks during those critical first 50 moves that puts you leagues ahead of the pitiful AI. Deirdre usually completes the Empath Guild soon after your start, and she or Lal will become Planetary Governor. On your first move, you will likely find yourself with rioting and starving bases, useless units, and sloppy terraforming. You will be behind in tech, and the tech you do have will be low-priority, making the usual beelines impossible. In many ways, Time Warp is much closer to Multiplayer than the usual single-player game, because the opposing factions are more equal to you and the secret projects are spread evenly."

(Thanks, DilithiumDad, for pointing out the fact that I'd missed this one before, and thank you again, for permission to use your notes here!)

Blind or Directed Research

This is probably the most important choice you will make in the whole pre-game setup, as it will dramatically influence how you

proceed from turn one. Blind research more or less leaves you in the hands of Fate. It makes for a very "realistic" game, but can also be immensely frustrating if you suddenly find yourself neck deep in a war and have few if any combat-oriented techs. Directed research is the favored choice by the bulk of gamers, mostly for the control it gives over the game environment, but whichever you tend to favor I strongly recommend trying the "other" choice out from time to time, just to give yourself a taste of some other perspective.

Random Events on/off

These are mostly mild boons or minor irritants, but they can occasionally be really painful (Asteroid strike wipes out your biggest and best base, solar flares destroy all your Orbital Power Transmitters, etc.) so consider if you want to deal with that on top of the rival factions or not. In single player mode, the overall effect is negligible on the game, and in multi-player mode, it helps to level the playing field between the peace-loving "Builder" approach and the more warlike "Momentum" approach.

Unity Pod Scattering

I like to refer to this as the "Easter Egg Hunt" (and you'll also hear the term "Pod-Lotto" cast about). If you want to add a random element into the game, and generally make life a little easier for all players involved, then turn this option on. Otherwise, leave it off. You still may have a few pods, but they'll be isolated to your starting position. From a Single Player perspective, this makes the game really easy, in the sense that you, as a Human player can generally make much better use of your new technology (in terms of implementing the advances that new techs provide) than the computer, and since Pod-Scattering tends to help you shoot up the tech tree faster, it has the effect of making the game easier. In Multi-Player, pod scattering "on" helps "Momentum" style players achieve technological parity with their "Builder" counterparts, strengthening the former while correspondingly weakening the latter. Keep this in mind if you're setting up a multi-player game, as it will affect the flavor of the game from turn one.

TechStag

Turning this option on will have an enormous impact on your game! it will slow you down immensely. This, in combination with a huge, high water level planet can mean a hundred years or more of isolation before some other faction finds you. Think carefully before you activate this! If you are a fairly passive player, this may be for you, otherwise, you might find yourself very bored!

Spoils of War

A huge benefit to war-mongers, as it means you can get away with almost totally ignoring infrastructure development, and focus exclusively on building up your army!

Ironman

Disallows use of the autosave feature. No going back to undo mistakes. Also, increases your score by 100%.

Do or Die

If you're planning to win by conquest, this option could be your best friend.

Aggressive Opponents

The AI factions are already pretty aggressive, and this makes them doubly so. If you're going for a diplomatic win, you might want to leave this one off.

Defining some Key Terms

Before we get down into the guts of the guide, let me outline a few terms you'll see cropping up repeatedly, and before I do that, let me say this: There are probably as many different approaches to the game as there are players who love the game, but these (often wildly varying) approaches can, in at least a general sense, be grouped into three basic categories or "styles" of play. Understanding what is meant by each play-style is essential to understanding the viewpoint from which the rest of the guide is written.

Builder-Style

Builders don't care much for fighting, preferring to cloister

themselves off on some small to mid-sized continent, terraform, build infrastructure, and research new technologies. The hallmarks of Builder style play are: 1) Long delays in prototyping new weapons and defensive systems, in favor of constructing infrastructure, 2) The preservation of as close to 100% of industrial capacity as possible in order to speed the completion of the abovementioned infrastructure (in short, this means minimizing support costs), 3) very aesthetically pleasing empires in general (let's face it, Builder-Empires just look cool!), and 4) Strict adherence to industrial caps, with regards to ecological damages (i.e.—Builders spend a **lot** of time terraforming, and they don't like to see their efforts undone by sudden fungal blooms, so you will seldom find any, and certainly no significant eco-damage in a Builder Empire). For the reason of preservation of Industrial Capacity alone, "clean" is probably a Builder-Players most treasured unit ability, and many a Builder player will micro-manage his/her bases down to the unit level, upgrading any unit which is tying up support costs.

    * Point 4 is not set in stone, as you will read about later.

Hybrid-Style

    The Hybrid's main watch-word is Flexibility. He's the guy who wants to be ready for anything that might come up, and while he greatly admires the Builder's stunning efficiency and sterling industry, he also knows that somewhere out there on the map, and maybe closer than he thinks, are people who would like nothing better than to take it all away from him. To that end, the Hybrid player makes some "strategic sacrifices," developing a stout standing army as early as techs permit it, and upgrading and honing them constantly. Often, the Hybrid Player has half (or more) of his army on the prowl, looking for pods, and looking for potential enemies of the state. Yes, he's interested in developing an economy to rival his Builder counterparts, but not at the risk of being blind-sided by some fast-moving attacker.

Momentum-Style

    Fast and loose! The Momentum player's main goal is to expand with lightening speed, get a horde of small bases (production centers) up and running, and then use them to build a war machine that is

second to none, and while he's getting his production centers geared up, his scouts are on the prowl, a sharp eye open for signs of anybody else. The moment he finds someone else, the real show begins, and the Momentum player is banking on the fact that, because he's so active, even if you have a technology edge, he'll be able to probe his way to technological parity and smash you with his relatively large standing force. Bases are seen as little more than barracks, and not much attention is given to infrastructural builds, beyond that which absolutely essential (i.e.—network nodes, to cash in artifacts found or stolen).

Early Game

    Generally describes the game up until the time all those annoying restrictions are lifted, and before you get the chance to start playing with the more interesting unit types. Specifically then, the techs that provide the boundary to the early game are as follows:

    Resource wise—Gene Splicing, Ecological Engineering, and Environmental Economics.

    Weapon wise—Lasers (Applied Physics) and Impact (Non-linear Mathematics) will be most prevalent (with Missiles falling at the outer edge of the early game, much as Enviro. Ec, developmentally).

    Defensively, you've got Synthmetal (Industrial Base), and Plasma (High Energy Chemistry) with some interesting variance provided by 3-res and 3-pulse armor, and of course, all units will be powered with the old-style Fission generators (weakest, and most expensive).

    Implications of the early game: 1) Stuff is expensive to build. The old generators are not cheap, to put it mildly, and that's bad news for you, because you're mineral production is wretched, and while there are ways to improve that, none of them will happen quickly, or without a fair amount of planning on your part.

    2) Terrain squares are not very productive. Pre-restriction lifting, you're faced with a limit of 2r (r being whatever resource you're harvesting) in each category, for an absolute maximum of six resources per square (i.e.—Monolith, 2r for each of the three resource-types).

    Taken together, that's a pretty punishing two-edged sword.

Not only are you paying more for your early game units in terms of time to build, but you're also faced with terrain squares that have limited value. There is some good news though, in the form of special resource squares. These squares are not limited by the early game restrictions, and as such, they should receive your immediate attention. If you find one that's located in an unattractive base-building spot, that's no problem....the moment you get industrial automation, send a supply crawler out that direction and start taking advantage of the resource! (and more about this in particular on the section on Terraforming!)

The Middle Game

The Middle Game is bounded on one side by the lifting of energy restrictions, the acquisition of Missile techs (with Air Power coming soon thereafter), and the discovery of Fusion Power and runs all the way to the acquisition of Hab-Domes and is where the bulk of your game will be played out. Terrain squares get more productive as more terraforming options become available, your formers get a ton of new things to do, and your units (both offensively and defensively) become vastly more dangerous.

The Late Game

From Hab-Domes on. Generally, single player games don't last very long once you get here, and few multi-player games ever make it this far, so don't expect to see much of the late game, unless you really enjoy playing single player mode, and really like to take your time.

Notes on stylistic approaches

So, you've thought it over a while and settled on a style that's "you." Good, because you'll need a well-considered plan to proceed from, and that's the first step. Whatever your style, your next step will be to select specific technologies from the Tech-Tree that "play into" whatever style you're going for.

For Builders, this means a straight shot to Industrial Automation for the acquisition of Supply Crawlers, and from there, moving right on into the lifting of those previously mentioned restrictions. Builders then, live and die by the following five techs:

Centauri Ecology, Industrial Automation, Gene Splicing, Ecological Engineering, and Environmental Economics. The goal of the Builder Game is to reach Environmental Economics as quickly as possible and create such a vast economy in terms of total outputs, relative to the opposition, that when the combat techs arrive (and wise Builders will begin pursuing them the moment they get Environmental Economics), their superior economic sub-structure will enable them to out-produce and out-tech everyone else in the game.

For Hybrids, again, with flexibility being the watch-word, the key technologies in the early game are: Centauri Ecology, Industrial Automation, Doctrine Flexibility, Gene Splicing, and Ecological Engineering. This gives you several of the key advantages of the Builder Player, but also gives you more options in terms of exploration and response to incoming threats.

Momentum players will want the biggest bang for their buck, and they'll want that as quickly as possible, so for them, the key technologies are: Centauri Ecology, Industrial Automation, Doctrine Flexibility, Non-linear Math, and Gene Splicing. They're willing to work around the mineral restrictions to get a decent army in the field. In particular, I'd like to highlight Miriam Goodwinson's "Believing" faction. With their +2 Support rating, each of their bases gets four free units. Figure one former and one garrison, that still leaves her two attackers per base that can go out hunting. Multiplied out over ten or twelve bases, and it's no wonder she's so feared by the Builder crowd!

As you can see, while there are key differences between the various styles of play, there are also some similarities between the three styles, and two techs in particular popped up all three times. These are quite possibly the most critical techs in the entire game: Centauri Ecology, and Industrial Automation. They transcend the notion of play-styles and various techniques. The fact is, if you have them, and your opponent does not, you are in a **vastly** superior position.

One final stylistic note to point out is this—Do not make the mistake of believing that Builders never fight and Momentum players never build infrastructure! All players of note will shift and change their strategies based on prevailing game conditions, and because of that, these "styles" mentioned are more archetypes than

anything. They point to the tendencies and pre-dispositions of players toward one end of the spectrum or the other. The implication is not that Builders can only build, and Momentum players can only crank out an endless supply of troops. I don't know of anyone who plays that way, and even against an average player, such a strategy would come apart rather quickly. Essentially then, the stylistic approaches speak more to the timing than anything else.

For Builders, the key to the game is the rapid development of infrastructure. They figure that the faster they can develop vast efficiencies, the better off they will be, and those greater efficiencies will enable them to quickly catch up militarily in the mid-game.

At the other end of the spectrum, the Momentum gamers recognize how much damage a few early game attackers can do, and seek to maximize that damage against their opponents, forcing their rivals to divert resources to deal with threats to hearth and home, while the Momentum player is free to build infrastructure without such threats.

In the center are the Hybrids, who will strike opportunistically (and divert some portion of their early game resources to be ready to do that), but are unwilling to go full bore in that direction, lest they fall behind in infrastructural development.

The Factions, Discussed

It is possible to play any of the 14 factions in any of the three broad styles outlined—Builder, Hybrid, Momentum—but some are clearly more ideally suited to one style than another. Below, you will find an outline of each of the factions (strengths and weaknesses in game terms), along with play notes and tested, workable strategy tips for playing each faction in any of the styles mentioned above:

The Original SevenMorganites

At a Glance
Extra Commerce income, +1 Economy, -1 Support, smaller bases, more cash at start

General Notes
Probably the most underrated faction of the original seven,

Morgan is terrific if played correctly, but a novice will probably have to work a bit to get the faction humming. This is mainly due to the fact that Morgan's play style is somewhat different from the others. If you're playing Morgan, then you've got to make the most of your one big advantage, and that's money. Morgan is the only faction in the early game that can go to war and still rake in the big bucks. Just run wealth, live with the Morale hit, and you make +1 energy per square, and get an industry bonus to boot! Many people regard Morgan as incredibly weak because of the smaller base size thing, but nothing could be further from the truth. Wealth is an integral part of almost any Morganite strategy, and Wealth comes with Industrial Automation, which also gives you Supply Crawlers, a terrific Secret Project, and Hab-complexes, which allows Morgan's bases to grow to size 11 without stopping. More pervasive a problem for the faction is the support hit, which tends to reduce the total size of the army you can raise (at least until clean reactors), but again, this is largely offset by the acquisition of supply crawlers via Industrial Automation. Need more troops? Just build a new base and some more crawlers! Viola! Support issue rendered moot. Now I grant you, most Morganite players will tend to keep expanding a bit longer than the other factions to keep pace with overall population numbers, but in truth, another 1-2 bases will generally put you at parity, population wise. It's just not that big a deal and remember, if you get the Ascetic Virtues you're small base problem all but disappears anyway, and the Living Refinery undoes your support problem once and for all (though at the point you get it, you've usually had clean reactors for quite some time).

Morgan, the Builder
This approach to the Morgan game takes his mercantile nature to heart. You don't profit by killing off your customers, and Morganite-Builders can make utterly obscene amounts of cash. The commerce bonus gives you the kind of windfall normally reserved for the Planetary Governor (magnified further still if you **are** the Planetary Governor), and by running Free-Market, Wealth, and "doping" your citizens into a golden age, you not only achieve pop-boom status (if you're running Dem too), but you also get +5 Econ, which does amazing things to the energy you get from your

base squares! A Builder game, Morgan-style means that you will be spending long periods of time with a Free Market economy, so if you're going to do this, then you need to pay close attention to what it means to Morgan. Specifically, no police, means that garrison units are of limited value to you. You've got lousy support anyway, and a Trance Scout won't help you a bit with drone control, so why not use an infantry-based probe team with light armor and trance ability? It accomplishes the same thing as your trance scout would have, but does not tie up a mineral in support costs, allowing you to put two formers per base in the field for the cost of a single mineral, and that's not bad. It's also quite nice from the perspective that your trance probe serves the dual role of protecting you from marauding worms and helping ensure that your rivals don't steal your tech out from under you!

A bit later in the game, when you get clean reactors, the support problem is rendered moot, and you can defend your bases as extravagantly as you wish with legions of clean troops in a variety of configurations and catch up on all the prototyping you've been delaying. In the meantime, all the money you're making each turn combined with the industry bonus from wealth enables you to rush-build your infrastructure with a speed that will make the other factions green with envy. It's all too easy to beat out even Domai's vaunted industrial capacity with Morgan's cash.

As much as possible, the Morganite Builder will want to run Dem/Market/and either Wealth (while building and enjoying the benefits of many pacts or treaties) or Knowledge if an extra bit of research boost and efficiency is needed. If you need to go on the offensive, your SE settings of choice will be Wealth/Green, with or without Democracy (mostly depending on if you have clean reactors or not yet), and if you want to push your labs up to 100%, run Dem, Green, Wealth (+4 efficiency), make your +1 energy per square, and dump it all into your labs. In this manner, you can out-tech even Zak, despite his research bonus!

For the Morgan-Builder game to be its most successful, you've got to pay a lot of attention to the energy outputs of your base square. This means two things: First, it means that Recycling Tanks are more important to Morgan's game than anybody else's (true, they're important, no matter who you are, but Morgan can get

enormous benefits from them almost from turn one!), so they should be at or near the top of your build priorities with this faction, and second, since the base square is so vital for Morgan (especially in the early game, as base squares are not subject to early game resource restrictions), what better way to magnify that than to have lots of bases! So, if you're Morgan-the-Builder, then you will want to have **tons** of bases. Stack 'em close, and stack 'em deep! In this case, the small base limitation works for you, not against you, and defending a massive network of tightly meshed bases is a snap. Consider: With a +5 Economy, Morgan is getting 8+ energy per base square per turn, **before** he builds an Energy Bank. Multiply that out over 16-20 tightly packed bases, factor in a BoreHole for each, and suddenly it's all too easy to see why Morgan's Money is the envy of every other faction in the game.

Even if you've got your heart set on playing the Builder game, you need to be prepared for war, but the good news is that you start with Synthmetal armor, and will find yourself only a few steps from Silksteel once all the early game resource restrictions are lifted (though in most case, getting to Biogenetics first, for clean reactors, will serve you better). Still, Morganite defenses revolve first and foremost around covert ops. If an opponent builds a base too close to you for comfort, either buy it and burn it down, or stack so many clean defenders in it that, regardless of your almost guaranteed lower morale, your enemies will have a hard time taking it back, and when fighting a defensive campaign, the presence of Children's Creche's everywhere will offset Wealth's only minus, putting you in reasonably good shape.

Morgan, the Hybrid

Industrial Automation is all the more crucial for this style of play, as some portion of your industrial capacity will be tied up in the maintenance of a standing force, and if you have to make use of that force to launch an attack, simply drop out of Market in preference for Green, keep wealth unless you just really need the extra morale percentages, and use Wealth's industry bonus and your inherent cash to replace lost troops at a faster clip than your opponents can kill them. Morgan excels at the art of attrition warfare. It does not matter if your first unit makes a kill, because

one of the four of five coming right behind surely will, and you'll wind up with a core force of elites (survivors of the many battles) in the end!

Remember, it applies to all the factions to a degree, but even moreso with Morgan—You should never actually build the kind of unit you want! Build laser scouts or rovers, and selectively upgrade your way to the kind of force you need, and don't worry about ignoring the weapons techs in the early game. If you're behind militarily, just make it a point to capture an enemy unit with whatever weapon you're looking for, and you can start building them as well, even if you don't yet have the tech for it!

All the basic fighting strategies for the Morgan-Momentum game work just as well for the Hybrid game, and unlike most other factions playing a Hybrid scheme, you're cash position will be so good that you can almost always make offensive use of your probes. Do so!

Morgan, the Conqueror

Again, put your eyes, mind and heart firmly on the goal of acquiring Industrial Automation. Crawlers, coupled with the building of new bases, will quickly put you in a position where you will be able to crank out as many, if not more troops than your opponents!

Two basic ways you can go about this are

1)Beeline for the Command Nexus to offset Wealth's Morale hit, and rake in the cash while beating your opponents with average to slightly above average troops, or,

2)Forget the money, run Green (still beelining for the Doctrine: Loyalty) and beat on them with better than average troops. Either way works but running Wealth opens up more options for you with Morgan, enabling you to offset your average troops with regular and very active offensive probe teams, subverting a base or two to establish a foothold, and then pouring your troops into it (and, if you really want to get mean, use Fundy Wealth, to make it harder for your opponents to run probe actions against you). The Support problem is offset by an early emphasis on crawler production at all bases to spike up mineral outputs, and troops can be easily reinforced by rushing selective defensive structures

in captured bases and by upgrading scouts produced to best/best configurations.

Remember, as Morgan you have a far easier time paying for a war effort as you go because you can get that magical +1 energy per square and still fight before Punishment Spheres. Everybody else has to either wait till higher up on the tech tree, or save for the invasion in advance. Use that to your advantage and attack earlier, rather than later. Also, make active use of your probe teams to subvert enemy troops, adding them to your available force pool. Best of all, you can compare morale levels and make suicide attacks with the worst of your troops, keeping the best for "sure kills" and consistently raise the morale of an elite core of your army, which will soon have you fighting at "Morale Parity" with whatever enemy you are attacking, even if they began with an advantage in that department. About the only person you'll be hampered against in the early game is Miriam running Fundy, as that will shut down your probe actions, but even then, with your better research rates, you should be at a higher tech level when you begin your attacks, and a series of swift, hard, unexpected blows (and who the heck expects Morgan to come out fighting?!) will give you all the edge you need.

University of Planet

At a Glance
More Drones, +2 Research, -2 Probe, Extra Starting Tech

General Notes
Zak is plagued by drone problems, making the acquisition of either the HGP or the Virtual World (or both!) of paramount importance. Fortunately, since you start with the pre-requisite to Planetary Networks, it is often quite easy to grab the Virtual World. Probe actions are expensive for you, and it's relatively cheap for your enemies to launch probe actions your way, so guard against that and make the Hunter-Seeker project a high priority, but in the meantime, bulk up on defensive probes. You'll need them. Your main advantage is your brilliant research and built-in Network Nodes, and no matter how you decide to run your game, your inherent research advantages will put you ahead of the pack quickly. Persistence and

good planning will keep you there. Remember, you're getting the benefits of a no-maintenance-cost Network Node from the first turn you found a base. Everybody else has to build their Net-Nodes, and pay maintenance costs for them, so build bases like crazy! Not only does this keep your bases smaller (to a point, offsetting the drone issue), but it also makes your colony pods exceedingly good investments for the minerals spent!

Important note about Zak and Base-Building: The University is the most tempting, but also the most difficult faction to "ICS" with. (ICS = "Infinite City Sprawl," or cranking out a near-endless number of colony pods). On the one hand, the free facility you get at every base makes new bases such a good deal that you'll be hard pressed to resist the temptation, but, with Zak's drone problems, that is only useful to a point, and specifically, that point tends to be just under your second "bureaucracy warning," at which time, adding an additional base gives you more drones. So, if you want to build a ton of bases with Zak, you can certainly do that, but you've got to be set up for it. First and foremost, you'll help yourself by snagging the HGP and/or the Virtual World, as mentioned above. If you have to sacrifice one of these to get the other, by all means, get the Virtual World, as it provides you the benefits and effects of a drone controlling facility without maintenance cost (and Holo-theaters are expensive to maintain!), so you will be saving money and solving your drone problem if you get this project!

Zak, the Builder

This approach plays to your native facility. You're already a step ahead of the game, and if you get the Virtual World, then you're two big steps ahead of the game, as it totally negates your factional drone problems for bases size 4-7 and gives you two free facilities at each base you build. That's two less items on your infrastructure list, which makes building the rest that much easier for you. If you're playing the builder game, your main goal after restriction lifting should be to secure the Planetary Energy Grid to get yet another free, and maintenance free facility. Then, each time you build a base, about all you need to do is toss up a Tree Farm and a Crèche, and you're ready to boom—building the Research Hospital as the base grows each turn. Nobody can build peacetime infrastructure

faster than Zak, because the others don't start with a free peacetime facility. Morgan comes close, but even his vaunted money can't touch that. If you speed-build selected bases, you can turn those over to the production of battle-capable prototypes far more quickly than other builder factions, and be in a more classically "Hybrid" stance than most running this type of game. The two things you need to be ever-watchful of though, are covert attacks made in an attempt to catch up to you technologically, and, if you do plan an invasion you will need to save cash for it in advance because when you drop out of Market most of your money dries up too—if you want to keep a decent research rate while warring.

Zak, the Hybrid

This approach plays to your ability to rip through the early game tech tree much more quickly than anybody else. You can be running Planned/Wealth by the early twenties if you set your mind to it, and specialize your bases out, with the fringe ones doing early war-tech prototyping, and your inner core working on infrastructure. Best of all, you can get to Industrial Automation that quickly, and still go back and pick up Mobility and Flexibility, generally ahead of those who beeline straight for them (exception: The Spartans, who are only one tech from Flex at game start). This means that you can get probe foils in the water plenty early enough to send them out exploring, and infiltrate most of your opponents' datalinks before they can even mount a good probe defense, which is a crucial play. Combat wise, again, thanks to your free facility you can pay comparatively less attention to your infrastructure and focus more on the combat-oriented techs. You can also let current game circumstances dictate exactly how your research edge is used, magnifying your advantage depending on the prevailing climate of the game. If you're isolated, fine. Drop to peace-time expansion till something develops, but if you've got neighbors close at hand, you can carry the fight to them rather quickly.

Zak, the Conqueror

Simply put, while everybody else is spending time and energy to get where you start from (building those expensive Network Nodes), you can be building fast attackers to take their bases! About

the only group that can do this as or more quickly than you are the Spartans, and that's only because of where they begin on the tech tree. Theirs is a short term advantage in the sense that, research-wise, there's no way they can keep up with you. Even a heavy builder focus won't do it. This is a huge advantage, and if you put your mind to researching nothing but combat techs, you can have enough impact rovers for a good early game rush by the early to mid 30's! Except for the previously mentioned exception, nobody can top that, and that kind of raw speed plays well for a momentum game. If you find somebody on the continent with you, this is the kind of speed that will win you the game, and, once you make a couple of early kills to put you in a position of dominance, your faction is better suited than most to rapidly shifting gears.

Spartan Federation

At a Glance

+2 Morale, +1 Police, Free Prototyping, -1 Industry

General Notes

You've got the all around best, most balanced fighting force in the game. True, Miriam has an edge when attacking, but your bonus helps both attack and defense, and the free rover at game start really helps you if pod scattering is on, enabling you to pick up a larger than normal share of Unity Pods, and more intangibly, enabling you to build your bases with a better understanding of the map you're playing on (meaning simply that your bases will tend to be better arranged on the map, thanks to a more complete understanding of the continent as a whole. Most people have to build their first few new bases somewhat blindly if they want to expand quickly, but this is not the case for you).

Also, the Police bonus mitigates the effect of running Market, and enables you to forestall (or, depending on SE choices) do away almost entirely with drone control facilities, saving you time on infrastructure. This time savings—being able to skip facilities that most of the other factions have to build—goes far in making up for the −1 Industry Penalty you face. The free prototyping is not a huge advantage until later on in the game, as all early prototypes can be completed with a single cashed in supply crawler anyway, but

it's still a marginal advantage, and should be exploited whenever the opportunity presents itself. The industry hit hurts of course, not so much in terms of facility builds—for the reasons mentioned above—but mostly from a unit standpoint. Still, it is certainly no worse than Morgan's support drain, and you can get back to "normal" Industrial capacity by simply switching to Planned. True, you take an efficiency hit, but that in turn can be undone by building Children's Crèche's, rendering your negatives easily dealt with and gotten around.

The Command Nexus is a very attractive project for you, and you're pretty well suited to getting it, as it is only one tech away from you, and grabbing it will give you hands down, the best troops in the game until the advent of bio-enhancement centers, which will bring the rest up reasonably close to your troopers. The Spartan's main strength though, lies in the fact that they need not necessarily make use of their army to instill fear. Just the simple knowledge that the Spartans are out there is oftentimes enough to give others pause.

Santiago, the Builder

It takes you slightly longer to get your infrastructure in place on a "per facility" basis than the rest, but the police rating helps in that, again, you can delay or forego the building of drone control facilities, and once you **do** get the infrastructure built, it serves you just as well. In the meantime, you have the advantage of seasoned troops to defend your holdings, a thing that cannot often be said of other Builder factions. Because of this, and because it's common knowledge that the Spartans can more than hold their own in a fight, you are uniquely positioned to build in relative safety. Think of it as classic isolationism, and most Momentum folk are looking for soft targets, something the Spartans have never been accused of. Add to that the fact that most of your opponents will not be expecting you to play the Builder's game, and that alone can often buy you the time you need to get the bulk of your infrastructure in place. Once it is, it's a simple enough proposition to take a look around the map and reassess your current situation and again, if somebody decides to play rough and tumble with you, then they're just asking to get pasted.

Santiago, the Hybrid

Your starting tech makes you a natural at this. You're only a single tech away from Doctrine: Flex, and only two away from running Planned and getting probes. Taken together, that alone puts you in a strong Hybrid stance (Bonus: if you get the Virtual World project, you will almost never have a drone problem). Others need to build command centers just to get to where your troops start, and because of that, most factions will think twice about attacking you. Also note that with even a single Monolith someplace in your territory and building a Command Center of your own, it's easy for you to put together a core force of elite whatevers to attack or defend with. You have normal cash and research rates, which means, thanks to a slightly lagging industry, that you might be a bit behind the curve, tech wise, but a bit of luck with pods—which, as mentioned, you have an advantage in getting—will easily balance that out, and oftentimes, those pods render your industrial lag moot, as they "autofinish" whatever you were building at the closest base to the pod you just popped. All in all then, a Hybrid approach is very easy to play with Santiago.

Santiago, the Conqueror

This is probably the easiest way to run the Spartans, and it is a no-brainer. You've already got rovers. It's a short hop to Impact weapons, and a short hop from there to global conquest. All of the speed work I have ever done on early transcendent victories has been with the Spartans, and with good reason. Quite simply, nobody can put together a crack attack force of high-morale impact rovers faster than Santiago. Zak might be able to get them about as quickly, but they still won't be as well trained, and in battle, that will be the telling difference. In the early game, four rovers is about all you need to utterly lay waste to an enemy empire (Yang not withstanding....thanks to his perimeter defense network, but even then, a probe action against the base in question can render his key defensive advantage useless). If you want a fast and furious game, build four Impact rovers and send them hunting while you build up your Empire. When they find someone, you'll be amazed at how much damage and terror they can spread, and at nominal cost to you.

An important footnote here is that with Santiago, regardless of the play-style you select, you can do reasonably well at fighting sans Punishment Spheres under Market conditions, thanks to your police rating. Among other things, this means that if you find yourself faced with an aggressive, warlike Morgan, you can meet him in the field and give him the trashing of his life with your vastly superior troops all the while cranking out something reasonably close to the level of cash he's getting every turn.

Gaians

At a Glance

+1 Planet, +2 Efficiency, -1 Police, -1 Morale, auto-capture first worm, +1 Nutrient (fungus)

General Notes

The efficiency boon is terrific, and if you had a good way to rake in the energy (Free Market) your faction would be almost unbeatable. As it stands, about the only way you can do it is via Golden Ages, which while workable, is far from being as good since the money invested in Psych detracts from the total cash earned. Still, you've other important advantages that make up for your lack of raw energy. Specifically, you are good at "channeling" what energy you do get. Run either Dem or Green and you have a paradigm economy, allowing you to run either 100% cash or labs and rake in a respectable amount. Again the drawback is that you can either have good income or good labs, but only average both if you keep your allocation at 50/50. The trick then is knowing when to do which, and the approaches will vary—see below. Regardless of your play style though, you have two other important advantages which will serve you well. The first is the ability to draw resources from fungus squares. This helps your early game immensely, and means you have to spend comparatively less time terraforming (and you get Centauri Ecology at game start), to get your bases productive. The second is the ability to catch mind worms, with the added bonus that your first capture attempt is always successful. Goal number one then, is to send your scout patrol out trolling for worms! When you find one and catch it, you have the perfect pod-popping unit (assuming pod scattering is on), because even if the pod in question unleashes

more worms, they will ignore your native life form, leaving it to you to either try to catch them and add them to your force, or move on to the next pod. Repeat this process when you get Doctrine: Flex and gun skimships, and you're pretty much set for the whole game, as IoD's (Isles of the Deep) make tremendously good pod-poppers, scouts, and transports....very versatile units!

Deirdre, the Builder

Forget the money. Beeline for Dem, and make the switch as soon as you can, netting you a paradigm economy, and +4 growth when you build creches. At this point, you can slam your labs to 100% and keep pace with the best researchers in the game. True, your income suffers, but you can ease back from 100% periodically to save up more cash, and once you arrive at restriction lifting techs, you can reverse that for a time, effectively turning labs off to help you rush through infrastructure builds. Also, when you're ready to boom, you merely add Planned to what you've already got and giant bases are yours! Again, your research efforts are helped if pod-scattering is on—thanks to your mind worms—and since you cannot run Market, you will be spending the whole game actively exploring, so if you find others who are running Builder or Hybrid styles and making regular use of Market, a few probes into their territory with your mindworm force just might be sufficient to scare them away from their big source of energy (to avoid fighting a losing battle with your worms). Of course, this is an early game advantage, rendered much less effective once Secrets of the Human Brain are discovered, but the implications are that, if you spend a bit of time focused on catching 3-4 worms, you can keep your builder stance and put together enough of a force to effectively worm rush someone. Your troops aren't great, but Children's Crèches are an excellent build for you, as it helps with both troop morale and further enhances your Empire's efficiency.

Deirdre, the Hybrid

If worm capture plays an important role for the Gaian Builder game, it plays an even more important role for the Hybrid game. You will definitely want to make early use of the worm rush if at all possible. Essentially, this is a denial strategy, added to the usual

Hybrid mix. The goal is not so much to succeed in taking out an empire (though by all means, do so if you can), but to force them away from a Market Stance and slow them down, enabling your 100% lab focus to blow past them, tech wise (Note: The reason it is important to force your opponents away from Market is simply that, for the bulk of the middle game, Dem/Market at 70%, despite the inefficiency, can out-tech Dem/Green at 100%). You'll probably be stuck using your probes defensively, unless you pull back from your lab focus in advance to horde cash and again, with the Gaians, it is almost always more productive to run either 100% labs or 100% economy. To keep a 50/50 stance with this faction undoes one of your chief advantages. The real trick to playing this faction is in knowing when to run which setting, and that is determined by prevailing game conditions. Hybrids will probably want to run both Dem and Green unless game conditions turn nasty, in which case the Hybrid player will likely drop Dem to go on more of a war footing, relying heavily on Native life forms to offset your otherwise less-than-remarkable troops.

Deirdre, the Conqueror

Go Native! Forget Dem. Beeline for Flex and Planetary networks (Probes and boats), then to Green, catch as many worms as you can, run Econ. at 100% and build lots of probes. The probes will make up for your lack of research, infiltrate enemy datalinks, and augment your native attack force with captured enemy troops caught alone and in the open. Plus, the worms don't care what techs your opponents have and you're the best Psi-fighter in the game, especially if you zero in on Market-loving Builders (who probably also have a lot of nice techs you want). Again, the worm rush is vital to your success, so do not delay in building up your native attack force and constantly be scouting for opponents! And, once your attack force is on its way, focus on spreading your empire, growing lots of small bases to offset Green's growth penalty (hardly felt, if the bulk of your bases are size one or two).

The Lord's Believers

At a Glance

+2 Support, +1 Probe, -2 Research, -1 Planet; 25% Attack Bonus

<u>General Notes</u>

A superb faction, helped greatly by the Support bonus. The Believers get off to a slow start, but this need not be a crippling disadvantage. One good thing about it is that your bases will be laid out better on your continent, as you will generally have more time to explore before you can start expanding. A different twist on the same advantage Santiago has, with her starting Recon Rover. The planet negative puts you at a slight disadvantage when fighting the natives, unless you attack first, which more than negates your -10% penalty and the Support boon lets you field more units per base in any event. Also, your attack bonus allows you to work your way to "Trans-elite" troopers, giving you an extra point of movement and a 25% attack bonus above and beyond what everybody else gets. Also, the ability to switch to Fundy and render your bases and units immune to subversion is a **huge** advantage! Oh, and on the subject of huge advantages, remember that Miriam is the only faction in the game that can run Dem and still build a new base with free minerals! (The best part of all is the fact that with Dem, you can expand your empire further without getting drone warnings, and still reap the benefits of those ten starting minerals).

A word of warning with this faction though: If you are attacked by a psi-force, get as far away from Market as you can. In fact, it would be far and away in your best interest to run green when faced with such an attack, because if you **are** caught by the worms while running Market, even with trance or empath-assisted troopers, there's almost no way you can win, especially if those worms are being controlled by Cha'Dawn or Deirdre.

<u>Miriam, the Builder</u>

This might seem like a contradiction in terms, considering the slow start with research and the twenty percent higher tech costs, but in truth, you can offset both of these things with relative ease. Once you get Centauri Ecology, the boost in support enables you to crank out an obscene number of formers, very quickly moving to terraform the entire continent, and making all your bases that much more productive. Not to mention the fact that, as with the Spartans, most people will be content to leave you be if you play a

Builder game, and odds are, they're just breathing a sigh of relief that you're not attacking them! If you are attacked however, your best chance at defending is with an active stance, using pre-emptive strikes to take advantage of your native 25% attack bonus and running Fundy to prevent subversion. Research wise, even when you're running Fundy, Network Nodes everywhere gives you a net gain of +10% to your research rates. Not nearly the boost it gives others, but then, you'll only be running Fundy if there's trouble brewing, otherwise, you're better served by some other SE choice (Dem springs immediately to mind here). You're cash is good—ability to run Market—your troops are good, and you can offset the research hit by a program of steady builds and active probe teams to keep up until your infrastructure is in place. The Miriam Builder game is by far the most active of the lot, as she must make early and regular use of probes to keep pace until the infrastructure is in place, but it's quite easily pulled off.

Also note here, that when you play the Builder's game with Miriam, you will want to be very careful and specific about when you run Fundy. True, it gives you almost total immunity to enemy probe actions, but it utterly kills your research regardless of your infrastructure, so use it only when pressed or when pressing an attack against someone else.

<u>Miriam, the Hybrid</u>

Miriam's Builder game is so active that there really aren't many differences between it and the Hybrid game except that, where the Builder will focus mostly on early game formers, the Hybrid Player will take a few of those "free unit" slots and use them for the building of Prototypes, sending them out hunting in much the same way that the Deirdre Hybrid player uses her native life forms.

<u>Miriam, the Conqueror</u>

Again, like the Spartans, this one's a no-brainer. Race for Flex and Planetary Networks, switch to Fundy, save your money, find an opponent, infiltrate, probe them to death to get their tech, steal a base and upgrade all the garrisons to best/best, using pre-emptive strikes to defeat the forces sent against you (and continue to subvert

them all the while). Build cheap scouts or recon rovers every turn, upgrading them to whatever is needed (remembering that the newly captured base will get a larger than normal share of "free" units), and keep punching your opponent. In the field, with even tech, your forces are **very** hard to beat, especially if you're running Fundy, as they cannot use probe trickery against you, and you get a morale boost too!

The Human Hive

At a Glance
Immune to inefficiency, +1 Growth, +1 Industry, -2 Economy, Perim. Defenses everywhere

General Notes
If not for the lack of energy, this faction would be all but unstoppable, and as it is they are far and away the most powerful AI faction, coming out on top of the AI heap in almost every simulation I have ever run. Their Growth and Industry bonuses make for rapid expansion, and their inefficiency immunity makes a massive empire with few to no drawbacks a real possibility. This, combined with their inherent "Citizen's Defense Force" makes them a tough faction to match, and if they happen to also get the Command Nexus—not difficult to imagine, since they start with its requisite tech—and Planetary Transit System (also not too much of a stretch, with active probe teams), then the rest of the world stands a good chance of being doomed.

An important note about Yang—The immunity to inefficiency ability allows you to run SE settings which would utterly ruin any other faction in the game. Quite simply, you may freely ignore negative modifiers to efficiency!

Yang, the Builder
First, absolutely no one will be expecting you to play Yang as a Builder, so this will work very much to your advantage, but consider: You can switch over to Police State with impunity, enabling you to control your drones without the need to build any drone control facilities at all, and the addition of a Children's Crèche at each base goes a long way in capturing what energy you do generate. Add to

that the ability to run Planned (again, without penalty), and you get a faction with a huge industry bonus and no drone problems whatsoever. If you work heavily with forests, your income won't be bad, although you will never even begin to approach the energy levels of the real "Research Factions" in the game, forcing you to look for other alternatives.

Fortunately, there are some very good ones, and you get them at the same time you get the ability to run Planned—Librarians. While you're waiting for Industrial Automation, you can be whipping out Network Nodes and expanding like mad, and once you have the ability to create crawlers, it's easy (again, with your prodigious Industry bonus) to crank out enough crawlers to give each base some minerals to work with, and feed the entire population, and once you do that, every citizen you have can be converted to a Librarian, giving you perfectly efficient research capabilities, magnified by your already built network nodes. Now consider that if you take the time to build the Command Nexus, you essentially wipe out the penalties for also running Wealth (adding a bit more to your energy reserves, and giving you yet another boost in Industry). The only person in the game who can out-build you is Domai, and he has to contend with less-well defended bases, efficiency problems, AND a research penalty, which more than offsets his additional +1 bonus to Industry. In short, although it might not appear so at first glance, the good Chairman makes an astonishing builder, and that capability, coupled with an active stance with probes will quickly see you on par with every other Builder in the game should you choose to run the game this way.

Yang, the Hybrid
Again, this approach utilizes Yang's Industrial Might, and is not terribly different from Yang's Builder game, except that a certain set of bases will be geared up specifically for the purpose of providing an offensive punch for the empire, whereas the pure Builder approach will not do so until and unless threats begin appearing on the horizon. The Yang-Hybrid model enables you to maintain an active attack/trolling force while keeping a fairly brisk research rate, and the ability to drop into full "Builder Mode" if you determine that your potential enemies are very far away. On the

other hand, it's easy (gotta love that Industry) to kick into high gear and get ready to fight, and you can very quickly find yourself with an army numbering so many units that you can simply sweep the opposition off the map.

Yang, the Conqueror

Once more, your Industry and Police are the key factors to the Conquest game. The goal here is to simply skip over any real Infrastructural builds and focus on rapid colonization, followed by a buildup of troops that no one else in the game can match prior to the arrival of clean reactors. Even Miriam, with her support bonus simply cannot keep up with a fully geared-for-war Yang. So what if she's got better troops, you can replace your losses almost half again as quickly as she can replace hers, and her Probe Immunity is nearly meaningless to you. You likely won't have the cash to do much subversion anyway, and you can simply keep building units until you overwhelm her. Same with the only other truly good fighters in the game, the Spartans, except in their case, it's even easier to overwhelm them, because they have Industrial problems of their own, and the moment you achieve your first conquest on an enemy's soil…. that is the kiss of death, as that faction must now deal with your enhanced Industrial output right there on their turf. Simply put, if they do not or cannot re-capture the base immediately, they're doomed.

Peacekeepers
At a Glance
-1 Efficiency, Extra Votes, Extra Talents, Hab limit restrictions eased (bigger bases)

General Notes
You might not look so hot on the SE table compared to the others, but that doesn't mean you're a pushover. Not by any stretch. Your advantages make you a force to be reckoned with in any game. Consider a fairly normal expansion paradigm. Even if you only do an "average" expansion, you're virtually guaranteed the Planetary Governor's seat, giving you a healthy Commerce bonus (extra energy to help offset the -1 Efficiency), and Infiltration of all factions (as good as the Empath Guild, for free). Add to that the fact that your

extra talents and larger bases (giving Lal the ability to execute a Pop-Boom with little control infrastructure in place), and what you end up with is a faction that is quite far from being average.

Lal, the Builder

Democracy completely negates your singular negative, and is two thirds of what you need for a population boom. Add Planned and Wealth to that mix, and snag either of the early game drone control projects (Genome or Virtual World), and you can boom to size 9 with ease. The ability to do this earlier than almost any faction will give you a huge advantage in population, at which time you can switch to Market and out-tech even drone-plagued Zak. And once you get crawlers and Hab-complexes, you can boom all the way to size 16 with near-impunity, giving you such an edge in population that you'll be hard-pressed to lose the game. Yes, your troops are only average, but your greater population enables you to have more of everything: More research (despite the efficiency hit), more minerals, more troops, and with the right facilities, your bases can quickly become very tough nuts to crack.

Lal, the Hybrid

One of Lal's main strengths is his sheer "averageness." True, you lack the Industrial Might of Domai or Yang, the Morale and Prototype bonuses of Santiago, the cash of Morgan, and the Research boon of Zak, but you're also not saddled with their liabilities, and your one disadvantage is easily offset by the simplest of base facilities. All of this puts you in the position of great flexibility, enabling you to shift gears much more readily than any of the other problem-plagued factions. Your one "banned" SE choice (Police State) would be something you would never need to run in any event thanks to your extra talents (which, by the way, is like the Genome Project on steroids, as its impact on your bases is relative to the size of your bases….not static, as is the case with the Genome, and you get it for free!). All in all, you couldn't ask for a better Hybrid faction than this! Beware, however—That sheer flexibility can be both a blessing and a curse, and in a Lal-Hybrid game, you need to become adept at reading the ebb and flow of the game, and make the right choices at the right times (knowing **when** to shift into

a war footing and when to pursue relentless research is vital to you.....if the other factions make a mistake, they can play to their inherent advantages....cash, morale, or what-have-you, but all of your advantages are contingent on you making the right decisions at the right time, and a misstep can set you back very badly, as you have nothing really to fall back on)—Still, with practice at reading the game, Lal can be one of the very best, most well-rounded factions in the game.

Lal, the Conqueror

At first glance, with your efficiency problems and average troops, you might think Lal ill-suited to conducting a conquest war, but again, his sheer flexibility (and, assuming you got the Governorship, his auto-infiltration of all factions) serves him will in this capacity too. Even fairly large, newly captured bases seldom have drone problems, as your "Talent" bonus kicks in as soon as you occupy the base, often completely negating the drones created via conquest. That, combined with a lack of any pronounced weakness which can be exploited by your enemies, makes you a wily and tenacious faction on the battlefield. However, you will only be as wily and tenacious as your own personal skill in battle allows, again because your faction has no native combat advantages, meaning that you will have to engineer any and all advantages yourself (through a steady program of militaristic builds, and smart use of your standing army). Learn to do that well, and you will find Lal to be a doggedly determined fighter.

New Kids on the Block: The SMAX Seven
Cybernetic Consciousness
At a Glance
+2 Efficiency, +2 Research, -1 Growth, Spoils of War, no penalties for Cybernetic SE choice.

Game Notes
-1 Growth is a pretty huge penalty for a land faction, but it does not even compare with the benefits this group has. The efficiency (and ability to run Market), combined with the research bonus makes this group a powerhouse by any definition, but when you add

in the tech-steal ability, what you get is a faction that can stand up to any of the original seven, and then some! Their aversion is one you'd not run anyway (Fundy), so essentially what you get is Deirdre's efficiency, Zak's research, and none of their crippling disabilities (Dee's inability to run Market, and Zak's drones). That puts the faction in a position to do amazing things. So what if you have to build your own network nodes? With tech-steal, active probes, and your inherent research bonus, getting and keeping the tech lead will not be difficult for this faction, growth penalty or no. The "no penalties for Cybernetic" thing is of little consequence, as by the time you are able to make that switch, the game is pretty well won or lost. Still, it's an interesting footnote that you don't need the Network Backbone to get around Cybernetic's negatives when playing this faction.

Aki-Zeta, the Builder

Played this way, you take advantage of your tech-steal ability by **not** taking advantage of it. Nobody will want to attack you for fear of your being able to rip down a base and steal their proprietary research, so if you're content to play nice, they'll probably be content to let you, and you can make good on your threat anytime you like....just go for Non-linear math pretty early on (that being about the only deviation from the more builder-oriented techs), and you can make good on the implied threat....since you start with Applied Physics, you're only one step away, which is great for you....

As the consciousness, of course, you want to get those lab-enhancing facilities built as quickly as possible to further enhance your native +2 research bonus, but that will mean building at least some energy banks and the like to help pay maintenance, so if you pursue the Builder path, then do it with a vengeance.

One thing that will help your Builder game is the growth penalty. This happens in two ways. First, you'll hardly notice the Growth penalty when your bases are going from size one to two, but the extra few turns it takes to grow means that more advance terraforming work can be done for bases that have yet to be founded. Also, as bases get larger, and the Growth penalty begins to make its presence felt, you can at least count on the fact that your

bases won't be springing up to size in an uncontrolled fashion and in general, you will have plenty of time to get your Rec. Commons' in place before drones become an issue, which will lend stability to your Empire. On the other hand, be aware of the fact that you cannot easily execute a pop-boom, which does put you at a bit of a disadvantage, especially when faced with factions that can, but consider your likely rivals who can execute a population boom. Zak, who will have drone problems to contend with almost from the moment his bases surpass size seven, and Lal, who can't research as well as you, regardless of the size of his bases. All of the other factions who can execute a "boom" will fall somewhere between the two groups mentioned above, and none of them can match your research rates, giving you little to fear from their comparatively larger bases.

Aki-Zeta, the Hybrid

Impact weapons, Mobility, and Flex, and you're armed and doubly dangerous, as each one of your troopers is as good as a probe team too, if he's the one who moves into an enemy base. That, combined with your ability to do something other than fight (+2 Research) and do it efficiently, makes you a terrific choice for Hybrid style. Since you'll probably keep a standing army at the ready as soon as you get the techs to put something decent together (and you'll get those techs at a pretty good clip, thanks to your inherent strengths), you'll be in a much better position than your Builder cousins to make good on the threat of ripping down the defenses of your enemies and stealing their techs (an ability which, by the way, lets you selectively ignore certain tech paths, knowing full-well that when you get in a war, you'll be netting those techs anyway). Simply put, you will be hard pressed to find a better Hybrid faction in the game.

Aki-Zeta, the Conqueror

Again, your tech-steal ability is pivotal to your entire game. In this case, ignore the juicy Builder techs entirely....you'll get them anyway when you tear down their bases. Just get a core group of mobile, heavily gunned attackers and make everybody else pay. Even without focusing on Net Nodes right away, you will still out tech

everybody but Zak in the game, which means you can have your prototype Impact Rover rolling off the assembly lines before most folks have their prototype Synth-garrisons in place, and the math is very much on your side. (Exception, as always in the early game, is Yang, and you'll need to have probe teams accompany your troopers to relieve him of his much cherished Perimeter Defense).

Nautilus Pirates

At a Glance

-1 Efficiency, -1 Growth, terraform deep sea squares (w/tech), marine detachment (w/tech), +1 mineral/square (shelf only), sea pod and former already prototyped, free naval yard (w/tech).

Game Notes

Your advantages grow over time as more techs are discovered, but even with what you have at the outset, the faction is a powerhouse by any definition. First consider that you begin the game in total isolation, on what is, in most games, the largest "continent" on Chiron. No one can attack you at all until they get Doctrine: Flex, and build a fleet. Even then, all of the important advantages are yours in terms of sea-battling, and that only becomes more true as the game wears on. Next, is your inefficiency. Just as with Lal, this is easily overcome via the simplest of base facilities, and is not much to lose sleep over, and the Growth penalty....I feel certain that was put in place to prevent the faction from simply running away with the game. Sea bases are notoriously good at cranking out food, and when you get a few kelp farms in place, you will be able to grow like the proverbial weed in spite of the –1 Growth. In fact, you'll have such surpluses that you will barely notice it. The only thing that hurts a bit is the inability to execute an "easy" pop-boom, but again, if the Pirates could do that too, they'd simply run away with the game every time.

+1 Mineral per square means that your early game mining platforms can keep you on-par with your landlocked cousins (pre-restriction lifting of course) and again, you've got an easy 75 years of pretty much competition-free expansion....probably a hundred or more before someone mounts a serious offensive.

Marine Detachment ability is huge too, enabling you to capture enemy ships and upgrade accordingly—you'll want to cover the

newly captured and weakened ships with interceptors to protect them from sniping while vulnerable, but remember, once you get them back to base, they'll be recovered in a single turn, thanks to your naval yards everywhere. You can also capture transports loaded with troops, effectively making the Marine Detachment like a probe team that can avoid stacking limits.

It's true, before the advent of fusion power, you will pay a premium for your formers and colony pods, but on the plus side, each base you build comes with a built in pressure dome, which acts as a Recycling Tanks, so even with fission reactors they're a bargain for what you're getting.

Svensgaard, the Builder

Make use of your early game privacy to establish a ring of bases around an uninhabited large island or small continent, then send colony pods and formers to the mainland with a vengeance. This mixed approach will give you such a strong core empire, protected by equally strong coastal bases, who gain the benefits of all the coastal boreholes you eventually build. After that, strike off the beaten path and start building deep sea bases that are worthless if taken from you. Thanks to mid-game techs, deep sea bases are good for you, and if you focus on kelp and tidal harnesses, and using your highly developed core bases as cash cows, you can easily rush whatever infrastructure you need at the relatively mineral poor deep sea bases—it's important to set realistic goals here. Ten minerals at a deep sea base isn't too bad, and certainly sets you up well for rushing....not to mention the fact that in the late-mid game and beyond, you start to get Orbital Mining Stations, Robotic Assembly Plants and the like, which can turn even your modest sea bases into industrial powerhouses, enabling you to strike from unexpected directions if pressed.

Svensgaard, the Hybrid

This faction is a Hybrid player's dream, and there's absolutely no reason why you should not be in the driver's seat, diplomacy wise. You can find and infiltrate all the other factions before they make contact with each other, and with a steadily growing global naval presence, you can oftentimes dictate when or if your various rivals

will meet each other at all, simply sinking their fledgling navies as they come out of port. This kind of control over the ebb and flow of the game is key to influencing the Metagame (more on that concept later) for all the players, and for this reason alone, I'd say that if any faction came close to being unbalanced, this is it.

Svensgaard, the Conqueror

Conquest is easy for Svensgaard, since you start with two of the key techs you need to go hunting. Get a good weapon (Impact), and you don't even need the rovers...in fact, if you wait till you get Doctrine: Initiative (an early-mid game tech, at best), your infantry units actually become more effective than rovers, given that a transport full of assault marines can sweep in on any coastal base from five squares out and taking the base with complete surprise, and remaining entirely out of sensor range till the moment of the attack. This, combined with your inherent ability to capture transports filled with enemy troopers—at times effectively doubling the size of your attack force—makes you deadly indeed. Pay close attention to the section on Naval Power....you'll be making heavy use of it.

Yes, air power may well be at the top of the food chain battle-wise, but 99 times in a hundred, initial contact with a faction not on your starting continent will be made in the water. Never forget that, and never underestimate the power inherent in being the first faction in the water to pop sea pods!

Free Drones

At a Glance

+2 Industry, -2 Research, fewer drones, % chance that rioting bases will join you, Aversion Green

Game Notes

"The Mouse that Roared" would be an excellent descriptor for this faction....their puny research capabilities and punishing slow start might seem to make them not worth playing, but that sweet industry bonus will more than make up for it in the end. Simply put, while you may have a lagging research capability, there's nothing whatsoever to prevent you from making hordes of cash (Market), and that influx of energy, coupled with an Industrial capacity that

no one else in the game can touch (Yang can come close, but still can't match you, and he has no money anyway), will quickly see you ratcheting up the power chart, and the speed with which you can crank out lab-enhancers and such will quickly undo your measly 20% penalty to research.

Miriam is drawn to Fundy…it plays well with her other abilities and makes her a wretched researcher, but that is not the case with you, and in the absence of choosing Fundy to render your bases and units immune to covert actions, the efficiencies of Democracy become much more attractive in peacetime, with Police State in times of crisis (coupled with your inherently fewer drones to begin with).

Minerals drive the early game, and he who can build the most stuff the fastest will win. Nobody builds stuff faster than the Drones. Nobody.

Domai, the Builder

Building stuff quickly is what you guys do! All you need is Planetary Networks, and Doctrine Flex if you start by yourself, and you're off and running. Infiltrate, steal tech in the early game to give you the tools you need, and then use that amazing infrastructure to build everything with lightening speed. By the time you get your Treefarms in place, you'll have to remind yourself that you **have** a research penalty, things will be rolling along so well for you, and if you're pressed by an attack, it's easy to build a stout army very quickly with cash + your native industry. Domai must be fairly active (at least in the early game) as a Builder though, much in the same vein as Miriam's Builder game. Probes are about the only way you can reach those much needed early game techs in reasonable time, so use them!

Domai, the Hybrid

Essentially, you make use of some of that incredible industrial advantage by "blunting" it slightly. In the early game, a high industry rating is nearly the same as a high support rating, enabling you to carry more units per base, cutting down your minerals available, but still building things reasonably quickly. What this means is that you'll be able to keep pace, build-wise, and support a big enough

army/exploration force that no one will want to press you. The Research penalty truly **is** a penalty in the early game, and you won't have a lot to do for the first ten years, but after that, and once you've found someone to trade with or steal techs from, you'll soon find yourself with a lot of new capabilities. One of the coolest features of the Drones is the ability to snag rioting bases from other factions, and this opens up whole new vistas for you and your probes, enabling you to get a toehold on continents by enciting drone riots and simply moving in without firing a shot.

Domai, the Conqueror

Big Industry = Big Army. Probe. Tech-steal. Build more stuff, more quickly. Drones win. Game. (And with the Drones, it really is that simple!)

Data Angels

At a Glance

+2 Probe, -1 Police, 25% cheaper probe actions, free covert ops center (with tech), Techshare3, Aversion Power

Game Notes

A faction not given much consideration, in general, because unlike the others, they lack a well-founded ideological base, however, a closer look reveals that this group plays borrows heavily from Lal's Peacekeepers, Morgan, and the Nautilus Pirates in terms of play style….admittedly without any of their advantages, but that's okay, as they've got numerous advantages of their own. Roze's singular negative is practically meaningless, while her other abilities are quite useful. +2 Probe effectively gives every unit you have the "Polymorphic Encryption" enhancement (for free!), further enhanced by actually giving that ability to your units if you feel the need to. Essentially this makes it almost ruinously expensive to steal bases or units away from you, enabling you to leave your units single stacked far more often than your opposition (which is great from a combat perspective). That, combined with your own correspondingly cheaper probe actions puts you firmly in the driver's seat where Covert Ops are concerned. Add that to your sharetech3 ability (gives you the same effect as the Planetary Datalinks for free!),

and what you have is a faction that is quite capable of defending itself from a variety of attacks, and able to zero in on specific areas of the tech tree, relying on the fact that sharetech3 will enable you to pick up new technological advances from areas outside of what you are pursuing as those techs are traded and passed around the other factions. In fact, to make the most of your sharetech ability, you should play this group as a synthesis of Morgan, Lal, and Svensgaard. Seeing that the other factions are in contact with each other is very important to you, as it increases the likelihood of techs being traded around, which gives you direct benefits (and, if no one seems willing to trade tech with you in the game, you've got your probe teams to get them anyway!).

Your only SE aversion is power, and that's one that doesn't really work well with this group in any case, so even if you could pick it, odds are good that you wouldn't. You're not hampered by a lack of energy, or any research or drone penalties, and that, combined with your probes, will very quickly put you in a position of dominance.

Morgan must rely on his additional cash windfall to subvert enemy troops that land, but you (with your cheaper cover ops rates) can accomplish the same ends with less money, putting you in the same or better position as Morgan, probe-wise.

Combatively, your troops are only average, but with your probe teams, it is entirely possible to stay in Free Market for the entire game and simply steal your opponents' bases one at a time, buying them out from under him, and stealing enemy troops as they drive up to try and get the base back.

Later in the game, the presence of a Covert Ops Center in each base, you've effectively got a +4 Probe rating, rendering you immune to probe actions a la Miriam, without any of her disadvantages! (Effectively giving you your own private "Hunter-Seeker Algorithm!")

Roze, the Builder

Regardless of your style of play, Probe Teams will play heavily into your overall strategy, and the Builder's game is no exception. As you've read before though, anybody who relies heavily on Probe Teams (Domai, Miriam, Yang, Cha'Dawn, and You especially), must play a fairly active Builder's game. Thus, your goal in the DataAngel

Builder game is to mind your own business, building probes anytime you get a few free turns in a base's build queue, sending out the probe foils to go find the others, and keeping the rover and infantry based ones milling about your empire (or sneaking across a rival's border, if you've got company on your continent). If the bad guys come calling, a little bit of cash will net you with a bigger army, a weaker opponent, and fewer worries. Also, if one of your neighbors decides to continue to raise a fuss, drive a few probe foils over to his infrastructure poor (and thus, relatively inexpensive) bases and simply buy his empire away from him one piece at a time.

Roze, the Hybrid

Played this way, it's all about getting out and meeting people. Your favored SE settings will tend to put you in good standing with both Lal and Morgan (and sometimes even with fickle Sven), and these are the more commerce-oriented factions, generally eager to trade and make treaties, so go out, meet interesting people from exotic, far-off lands, and infiltrate them, relying on your Builderesque approach to warfare as much as possible. With Roze, you can run your entire exploration effort via probe teams and transport foils, which means you can stick to Market in all but the more dire circumstances.

Roze, the Conqueror

Run a brief, early period of Market to get yourself built up to a position of power, making use of Market's energy boon to give you the important early game mobility and combat techs relatively quickly, then, construct a medium-sized force, augmented with money and probes and go hunting! If you come across a base that looks like it might be a tough fight, fine. Buy it, add the garrison to your strike force, and keep moving. It is entirely possible for you to buy even a base with a number of secret projects in it on the cheap, something even Morgan is hard-pressed to do at times!

Cult of Planet

At a Glance

+2 Planet, -1 Industry, -1 Economy, Brood Pit at each base (with tech), Worms are counted twice for police duty, Aversion Wealth

Game Notes

Widely considered to be the weakest faction in the game, the Cult is still quite fun to play! Their planet bonus and lack of industrial might and cash makes it imperative that you play to this group's natural strengths, and that means going native with a vengeance! The Cult "Out-Greens" even Deirdre, able to catch more worms, more quickly. This in turn (if you have pod-scattering on) enables you to go pod-popping early on, which increases your chance of catching still more worms and that can very rapidly put you in a position to launch an early-game worm rush.

The vast majority of the factions in the game have no trouble with getting to +1 Energy per square, which means they'll have no trouble out-teching you. Because of this, and because of your native strengths, you must play to the metagame and become the spoiler. Specifically, this means doing everything you can to enhance the power of your native life, attacking rivals who are running Market in order to deny them access to their much-cherished money. Simply put, you can win the battle and the war by taking the fight to a Marketeer. If they drop out of Market to fight you, you win by forcing them away from their principle source of money and tech (exception: Morgan!), and if not, you will run over them, given their –3 Planet Rating!

Cha'Dawn, the Builder

It's not that you don't build well....you do okay at that, at least as well as the Spartans, but the trouble is, without some serious crawlers to augment your lagging energy production, lab-enhancers just aren't going to benefit you as much as some of the other factions. This is not to say that you should avoid them, only to point out that you will need to augment your infrastructure with a bit of an energy kick in order to get yourself up to something near parity with your Market-loving rivals (and, set up this way, when you succeed in driving your rivals away from Market, you will actually be out-producing them!) Nonetheless, pure Builder Style is a difficult game for Cha'Dawn, as you **must** be active if you hope to exploit your position relative to Marketeers. Also, as with the other technologically lagging factions, you must take an active stance with your Probe Teams, though, like Yang, you will seldom be in a

cash-rich enough of a position to make use of many of the covert ops requiring you to spend credits. Still, as a means of keeping tech parity, Probe Teams should play an integral part of your strategy.

Cha'Dawn, the Hybrid

Much more natural a style with this faction. In times of peace, you can devote yourself to the creating of fungal barriers and fungal farms, and building up your mineral and energy position via crawlers (both of which will help you offset your starting negatives), all the while, searching out your rival factions. Once you find someone, infiltrate, and as soon as you see them making a switch to Market, hammer them hard with your captured worm force!

Cha'Dawn, the Conqueror

Sleek and fast, and....pure native! This is actually one of the simplest ways of playing the game, and I find it personally very satisfying. It is a vastly different game than I normally play, and as a change of pace, it is wonderfully refreshing.

The first thing you need to do is catch a worm. Just send your scout out to play in the fungus, and before long, you'll be all set.

Next goal, send your worm out to pop some serious pods, and try to catch another worm. Essentially, this means more playing in the fungus for you (and all the while, your bases are slowly but steadily working on colony pods to continue your expansion). Once you've got two worms, you're really rolling, because now the first can continue the pod-popping crusade (which will go far in keeping you in the ball-park, tech-wise), and the other can begin some serious worm farming (getting three chances per turn, unlike your scout's one) to stir up some native life. At this point, you're in prime position to get ready to do a big worm rush (and it generally only takes 4-6 worms in the early game).

If you're alone on your continent, then your next two overriding goals ought to be Planetary Networks (for probes) and Doctrine Flex (for transports) so you can go make some greedy Marketeer pay!

Manifold Caretakers

At a Glance

Recycling Center at each base, +1 Planet, +25% Defensive

bonus, "Space Survey," Directed Research, Deep Radar for all units

Game Notes

Overpowered in human hands, almost to the point of making the game tedious. It's a cakewalk. Nobody will have much luck in attacking, you begin with a recycling tanks at every base, which means that you don't have to worry as much about terraforming, and farms are not really needed much at all until the midgame. All in all, you have a vastly simplified game, with more techs at game start, and an almost unbelievably strong defensive position. One thing to remember when playing the aliens, however. The human factions will generally despise you, which means that your commerce income will be somewhat lower than in a "typical" game. Also, do not discount this faction's Planet rating! All the strategies that work with the other "green" factions in the game work with H'minee too!

H'minee, the Builder

This group was designed for the Builder game. You can play the part of the turtle, and do quite well. A program of rapid expansion will see you filling up the continent quickly (possibly switching to battle mode if you see that you're not alone, and sweeping them off the map before they can build to any significance), then, just become a hermit. Terraform to your heart's content and use your impressive tech lead—and it will be impressive—to hammer the daylights out of anybody who wants to spoil your fun!

H'minee, the Hybrid

Also easy to do. With your tech lead in the beginning, augmented by automatic Recycling tanks at all bases, your research will be top notch. That alone will make the Hybrid game easy, because you will be able to field better-armed-and-armored troops than most, if not all of your opponents. That, coupled with the fact that your 25% defensive bonus kicks in from the moment you take over a base makes it unlikely that the opposition will be able to root you out, once you get a foothold.

H'minee, the Conqueror

Again, fairly easy to do, but with H'minee, you're probably

better off simply subverting human bases to avoid population flight, and as a bonus, captured garrisons will gain that additional 25% defensive bonus from the moment you take control of the base.

Manifold Usurpers

At a Glance

Recycling Center at each base, +1 Growth, +1 Morale, +25% Offensive bonus, "Space Survey," Directed Research, Deep Radar for all units, aversions – Dem.

Game Notes

Again, an almost impossibly easy game no matter what level of play you select. You get all the advantages of Miriam's attackers, with none of her disadvantages, a morale boost besides that, a free recycling tanks at each base (which, as per the Caretakers, dramatically speeds up your game), and multiple techs at game start. You would have to try hard **not** to win the game with these guys! With normal research rates, your tech will be as good, if not better than everybody around you (especially since you are guaranteed of one extra energy per base – Tanks – and three techs at game start). All that and your attack bonus too and you are, simply put, a terror. Note here that as with the Caretakers, in most cases your Commerce income will be less than with a human faction, which adds a further wrinkle to the Usurper Builder game. It does not make it impossible, but it is something else to consider.

Marr, the Builder

Sure, you can do this well, but why? Of course, if you're just looking to play the Builder's game with the ultimate "big stick," then this faction will do the job for you. No one will **want** to attack you, figuring that if you're content to Build, in most cases, they'll be content to let you (at least you're not attacking them!).

Note: In order to play an effective Builder game with the Ursurpers, you must pay attention to your faction's aversion. Democracy is one of the hallmarks of the Builder crowd, and it is a choice you are denied. But, like Yang, the early use of specialist bases (Librarians) can easily put you in a position easily on par

with the more Democratic-minded Builders.

Marr, the Hybrid

A cakewalk. In times of peace, nobody will even breathe hard in your direction for fear of provoking you, and you can focus on infrastructure, and if/when the time comes to attack....well, your faction was born and bred for it!

Marr, the Conqueror

You could do this with your eyes closed! Just follow the human-faction momentum paradigms with a vengeance and you will beat them at their own game every time. Probe teams and foils first, then sweep in for the kill, and you have a leg up again, thanks to the free Rec. Tanks at the outset!

Chapter Two

The Early Years

Early Expansion and Growth

With all of two colony pods and a scout patrol, it's a little early yet to be thinking in stylistic terms. Right now, survival is the priority, and ensuring your survival means having a good number of bases to work with. Regardless of what kind of game you're playing, you're not going to get very far without a solid foundation. Having said that, getting your empire up to a "critical mass" with regards to overall number of bases is vitally important. Opinions vary about what exact number this "critical mass" is, but you could almost universally ballpark it in the 10-15 range.

So, what's the best way to get to that number of bases in a hurry? Well, there is no one "best way," but there are a number of pretty interesting approaches, each with their own set of advantages and disadvantages. Remember that during this phase of the game, your Empire is embryonic....it is not really large enough to have a set "playing style." That is to say that any of these early game strategies can be pursued by equally well, regardless of the play style you eventually wish to fall into—Builder, Momentum, or Hybrid.

Early Game Paradigm #1 Monster Terraforming Advantage

Consider the following: Unless you're running democracy, each new base you found gets 10 free minerals. This means you can get your token scout patrol guard for that base for free the turn after you build the base in question. It also means you can add 25 energy credits to it (before considering industry bonuses or penalties), and get a former the turn after the base build, and then start work on your scout patrol. Depending on what you do with your former at that point—and to that end, if you're going to uses this approach, pay very close attention to the Basic Terraforming section, which can be found on page 63), you can net yourself a powerful advantage indeed.

The simple fact is this: you are competing in time with one or more opposing factions. The faster you can get your formers out and improving things relative to your opponents, the better off you will be, as it will give you the opportunity to make use of those improved production squares while your opponent is not, netting you a mineral, energy, and/or nutrient advantage over your opponent for each and every turn you are able to maintain that advantage. Some have argued that this approach has a weakness in the sense that if you are terraforming faster than your bases grow, then the terraforming work nets you no real advantage over your opponent, and on the surface that is true, but digging a bit deeper the benefits become clear. The fact is, there's no such thing as "terraforming too quickly," and no matter how many formers you have out working, you could always stand to have a few more, because formers have a lot to do, and their work is never really done. Even if a base has not yet grown from size one to size two by the time you finish "terrain-terraforming," that enhancement has not gone to waste, as the base will have access to it from that point, until the end of the game. And while the base is busy growing from size one to size two, the former in question can be laying the groundwork for future bases...building roads to new base sites to speed colony pods on their way, setting up sensors, and perhaps even doing some advance terraforming work for the new base that doesn't even exist yet, so that it can gain the benefits of your terraforming plan from the very first turn of its founding!

Keep doing that with every base you found, and over the course of the game this will net you a **huge** advantage, as each base's former

will gain somewhere between 6-10 turns of terraforming activity over and above what your opponent is getting. That's six to ten turns per former you have out terraforming. To give that advantage some kind of tangible reference point, make the blanket assumption that an improved (terraformed) piece of real estate will net you 2 FOP's (factors of production – energy, nutrient, or mineral) over and above what a non-improved land square will net you. Multiply that by 6-10 (from above – the number of "free" terraforming turns you can expect to get over and above your opponent, and we will assume ten, for simplicity's sake), and further multiply that by the number of formers you've got. Whatever number you get is a fairly good estimate of the total advantage you've netted yourself (i.e., If you have ten bases, each with a rushed former, your estimated advantage using the formula above would be (2*10) * 10 = 200 FOP's. If you consider that a Trance Scout Patrol costs you 10 FOP's (10 minerals, specifically), you begin to put the advantage in perspective.

Of course, not all 200 of your FOP's will be in the form of minerals. Likely, they will be a mixed bag of all three, but that's okay too, because what it really means is that, relative to your opponent, your bases will produce more minerals more quickly, give you more money, and grow faster (which will enable you to make even more bases!). Keep this theory in mind for later, when we get to the economy section....we will build on it significantly.

Again, there are those who would say that you'll not get the full 200 FOP's value for this work, if the base(s) in question do not grow fast enough to take advantage of your terraforming, and while that's true from the perspective of total resources you collect in the short run, the formula above is still a valid measure because terraforming land adds value to the land, even if it is not used on the turn the terraforming is completed. It gives you options and flexibility. Chances are good that you'll eventually terraform every square of the continent you're on, and once supply crawlers become available to you, you'll find yourself wishing you had more terraforming work done, as the combination of crawlers and workers will quickly move to take advantage of all the 'forming work you've managed to do, prompting you to build yet more formers, regardless of how many you've got in the field already (either that or, allow workers and/or crawlers to harvest from

marginal land tiles until the formers can catch up, which is an unattractive option!)

For the moment, simply understand that taking this approach will help you grow your empire more quickly than the norm, and it will also give you a viable intra-base infrastructure more quickly than your opposition can put together. (Intra-base infrastructures consists of things like roads, bunkers, airfields, and sensor arrays).

The beauty of this approach is that if you want to get a veritable **horde** of bases up and running quickly (sans infrastructure, but that will come later), then this is bar none, the best way to go about it. Build your formers first, and while your base is working on it's token scout patrol, you can be terraforming as mentioned above, and finish your first square at about the same time your scout is done....then get to work on those colony pods!

The only infrastructure you will want to focus on with this style is Rec. Commons (and only then if it looks like your base will grow to size three before you could complete another colony pod at that base). The rest of your infrastructure will come after you've reached critical mass, or covered your entire continent in bases, whichever you choose.

The number of your bases will grow exponentially, and you'll fill up the continent very quickly! (And, even though they will all be small, this will give you an **enormous** pool of resources to work with. You can visually divide up your empire in regions, and pick a certain base in each region for rapid development via rush building, to give each region a strong point). So, you begin with two bases, build two pods to get four....everybody builds pods (after the former/scout thing), and you've got eight before you know it.....16....32.....repeat as needed.

Main weakness of this style—If you get unlucky, and the worms come calling in the few turns it takes to build the scout patrol after your former is out and working, you lose the base. It's an exceedingly fast style, but not without risk.

<u>Early Game paradigm #2</u> Security Over SpeedThe basic assumption here is that, the world is a dangerous place, and you'd better be prepared for that. To that end, the build order is similar, but the timing is fundamentally different.

Build your two bases. Keep your freebie scout patrol in one of them.

The base containing the freebie scout starts working on a former first (and then builds a scout of its own). The empty base builds a scout first and then a former.

Stylistic Note! If you compare these two styles in play, you will see that the first style nets you about 8-10 turns of additional former operation, but does so at the expense of leaving the bases vulnerable for approximately 4 turns.

Terraform as mentioned in the next few pages, and the next build your bases will do will be another scout (which will eventually perform escort duty). In the meantime, your freebie scout is now available for exploration, and the bases are secure. After the second scout is built, they can accompany the formers if they want to do some exploring, or hang around in the bases until the colony pods are done.

When the pod is done, the "extra" scout moves to the new site with the pod, so that from the get-go, the new base is protected (and you can change ownership of the scout to the new base by using Ctrl-H, when the scout is in the base square). The new base then builds a former/scout/pod and repeats the process.

Main weaknesses: Overall, this is a good deal slower than the first method, both in terms of how quickly you get the pods cranked out, and in terms of how much terraforming you get done, but the trade-off is safety. If you're on a landmass with company, or are worried about worms, this is probably your best bet.

<u>Expansion Paradigm #3</u> Specialized Base Expansion This is great for people on small landmasses and for Marketeers, as it provides a great deal of overall flexibility, but it does so at the expense of raw speed of colonization.

The initial scheme runs pretty similar to #2 (above), keeping your freebie scout at home for a few turns until you build base guards, then, the focus turns immediately to Rec. Tanks for the additional +1/+1/+1 kick per turn. Then build a pod, then a rec. common, and then back over to any one of the following: more pods, guards, prototypes, or secret projects, depending on your needs at the moment.

The big strength of this paradigm is the fact that your bases will be exceedingly stable. You will only rarely experience riots, because your infrastructural development will be kept pretty well in time with your base's growth cycles. This style also facilitates an early switch to Market, and that's a huge boon! However, it is not without its drawbacks. The main drawback here is a lack of speed. All that focus on base facilities means a slower rate of expansion. Yes, you will have stable, profitable bases, but you will also have fewer production centers. Depending on how your game develops—and on local geography—that could be anything from a minor irritation to a crippling disability.

Expansion Paradigm #4 A Focus on factors of EfficiencyThis focuses on the specific points in the game when extra drones are created by the growth of your empire. Here's the formula from the datalinks to determine what the threshold would be, depending on your map size and level of play:

BaseLimit = (8—Difficulty) * (4 + Efficiency) * MapRoot / 2

Where:Difficulty = Player's difficulty level (0—5)Efficiency = Social Engineering Efficiency rating.MapRoot = Sq. Root of # Map Squares / Sq. Root of 3200.

For your convenience, the MapRoot Values for the different base sizes are listed below. With those values at your fingertips, it's just a matter of plugging in your efficiency rating and difficulty level, and you're set!

Tiny = 0.6
Small = 0.8
Standard = 1.0
Large = 1.1
X-Large = 1.6

Go above whatever number you get when you turn the crank on this formula, and you get drones. Therefore, the idea here is to grow your empire in "spurts." Let's assume you're on a standard planet, and running a "Planned" economy (good early game choice). Your first goal then, is to get yourself to six bases as quickly as you can. Use the methodologies in Paradigm #1 to do this. Once you set up your Nth base (6 in this example, and just under your first expansion warning) build a Rec. Tanks & a Rec. Commons—not

necessarily in that order....you might want to reverse it if you are an early-game Marketeer—and then start cranking out pods again....you next goal being some number of bases equal to 1-expansion warning #2 (under Market, given the example above, your new target would be 16 bases).Once you get there, stop again, and build the Rec. Tanks and Rec. Commons at your newest bases, while your original bases go to work on more advanced facilities, then move to the next "tier," of bases. Repeat until you have filled up the continent.

The advantage here is that you solve the extra drone problem due to size, you blend speedy expansion with infrastructure builds, and you do it in relative safety. The drawback though, once again, is raw speed. This is still not as fast an approach as paradigm 1, but it is probably the most balanced of the lot.

A note about SE choices in the Early game—You will find both Planned and Wealth hard to beat in the early game, and both of them together are powerful indeed! Both Planned and Wealth confer a +1 Industry, with Wealth adding an Economy kick, and Planned giving you a Growth bonus, and the good news is that a single facility (the Children's Creche) can almost entirely negate the negatives of running both of these SE choices!

Summary of Planned/Wealth with Children's Creches in all bases: (Faction-Specific bonuses notwithstanding):+2 Industry (20% discount on all builds)+1 Economy (+1 Energy per base)+4 Growth (40% faster growth in all your bases, half coming from Planned, and half coming from the Children's Creches themselves)-1 Efficiency

A quick note on Base-Placement: I know that many people love coastal bases, but in MP games, I'd recommend not having terribly many of them, and the ones you do have had better be guarded heavily! In SP games, it's not that big a deal, because the AI won't launch many truly cunning attacks against you, but every coastal base you have is an invitation for the Marines, so limit your exposure! Best of all would be to build 1-3 coastal bases in a relatively protected bay area (if you get one) so you can more easily control the access to your bases on the coast by maintaining an active naval presence in the bay, or if you land by the poles, build your

coastal bases on the most remote "side" of your starting content. All other bases should be at least one, and preferably two spaces back from the coast to prevent probe foil infiltration attempts, naval bombards of your bases, and surprise Marine attacks! With all the spiffy sea-square enhancements available in SMAX, it's very tempting to build as many of your bases coastally as you can, but this is a lure you should resist! If you want to build coastal bases, wait until your formers can create a land bridge and block off a sizable chunk of ocean (creating your own private inland sea), and build them there! Specialize your coastal bases out to the nearly exclusive production of naval units and early game probe foils, supporting and defending them via your inland, and less vulnerable bases.

At the other end of the spectrum, you can ring your entire coastline with bases spaced every other tile, and stacked units in the remaining tiles. This takes an enormous mineral investment to pull off, and your Empire will be less-than-attractive to look at, but it has the advantage of making it extremely difficult for your enemies to even get a toe-hold on your continent.

Terraforming 101

Terraforming is an art form, and the more efficient you become at making use of your formers, the better your game will be.

In the early game, your terraforming activities should revolve around three central themes:

1) Aiding Growth
2) Optomizing special resource squares
3) Terraforming to boost mineral outputs

I'll spell out some particulars about them each below to get your mind wrapped around the subject.

Aiding growth falls into two categories, and both are important. First and most important is to see that you have a square inside your newly founded base's production radius that produces at least two nutrients (note that a nutrient special resource square might give you more than two). The reasoning behind this is simple: If your goal is to continue your expansion from this base, then you'll want to build a colony pod relatively quickly, which means you'll need a good base of food to grow from, and, given the early game restrictions, two is about as good as it gets. And even if you're not planning to

use the base as a springboard for future expansion, it's still not a bad idea to have your former build a farm for at least long enough to speed that base from size one to two. Note here, that not all terrain tiles providing you with two nutrients are created equal. Clearly, some choices are better than others. Best of all in the early game is if you have a Monolith in your base's production radius. In that case, you don't have to do a thing. Likewise, nutrient special anywhere inside your base's radius, you're set (although in this case, if the Nutrient special is on a flat tile, your best move would be to build a road, then forest it, otherwise, leave it alone for the moment....it will serve you well enough "as is" and speed things up for you—something to keep in mind when you're looking around the map trying to decide where to colonize next.

Stylistic Note!: Techs and money permitting, you may find it useful to rush-build a Recycling Tanks as your first build, overpaying by a sufficient amount to give you ten minerals in your build queue the following turn, which will enable you to rush your former immediately after that. You don't often have that kind of cash in the early stages of the game but it can happen, and if it does, then a rushed 'Tanks will simplify your terraforming efforts, as you no longer need to concern yourself with the creation of a 2n tile, thanks to the benefits of the structure you just built.

The second thing your formers can do to aid growth, not quite as important as the first, but certainly helpful, is to "prep" the future base site by building a sensor array on the base square (giving you a permanent 25% defensive bonus that cannot be stripped away via artillery or other sniping), and constructing a network of roads to the base site, enabling your colony pod to arrive at the site more quickly, and giving you a few extra turns of production. Hand-in-hand with prepping new base sites is the notion of selectively ridding yourself of fungus. Don't worry too much about this in the early game, as it is FAR more efficient to wait until the advent of fungicidal tanks, but also do not be shy about plowing some selected tiles of fungus under if it means cutting travel time to a new base site in half!

The essence of the game is one of pitting your economic system against that of your opponents (be they human or AI), and one of the keys to winning that kind of game is raw speed. Tiny advantages (a quicker base-build here, an extra turn or two of Former activity

there), can, over the course of the game, combine to create a huge advantage over your opponent!

The next thing your Formers should be paying attention to are your special resource squares. Whatever they are, they represent your chance to get around those cursed resource restrictions in the early game, and if you don't take advantage of them as quickly as possible, then you're not getting as much as you should be out of your territory, and it shouldn't come as a great shock when somebody blows past you on the power chart. Special Resource squares are so important to the early game that they often dictate where you build your bases, but they need not define your base layout completely. The moment you get crawlers (Industrial Automation) the exact location of the resource becomes of lesser importance in the sense that now that resource is available to any base you have.

Not all resource squares were created equally though, and some will hold more value than others. Examples of this include Nutrients on rainy tiles (netting you up to 5n!), Energy resources on rivers (great place to found your HQ base), and Mineral resources on rocky terrain (7 minerals with a mine and road!) are all things to be watchful of, and will greatly impact your game.

The main thing though, is to flow with the game in whatever direction in takes you. Did you get a nutrient bonus on a rainy square? If so, that one base can be used to drive much of your expansion because it will grow so fast, freeing up your other bases to develop their crawler suites earlier than anticipated. Did you wind up with a mineral resource on rocky terrain? If so, try to arrange two or three bases around it so they can share it. They can take turns making use of the heightened production to rapidly develop, and, the base(s) in question will be able to support a larger than normal number of formers, which will greatly speed your continental terraforming. Or, rarest of all, did you stumble across that holy grail of research, an energy resource on a river? Build or move your HQ there and rip through the early-game tech tree like nobody's business!

Finally, at least some of your formers (a good rule of thumb here is 15-20%) should be pulled off of "regular" terraforming duty when you get half a dozen bases up and running, so you can set about creating mines on rocky terrain tiles. Mines are crucial for spiking your mineral outputs, and the sooner you get started making a few,

the better off you'll be. Even if your first supply crawlers move into position before mineral restrictions are lifted (and if you're playing directed research, they almost certainly will), go ahead and set them up to work the mines you've got....the moment those mineral restrictions come off, the production of your bases will spike nicely!

Another note regarding early game terraforming. Once you've seen to it that your base has a terrain tile providing you two nutrients a turn, the next best thing you can do from a "speed perspective," is determine where you want your next base to be, then plot a course to that future base site using flat terrain tiles wherever possible. This is important because it only takes a single turn to build a road on a flat tile (takes two turns on a rolling). One turn for the road, three more for a forest, and you're ready to move again!

(How-To Notes: Terraforming Wizardry: Two important tricks here that, if used frequently, will put you far ahead of the pack: First, whenever possible, operate your formers in teams. While it is true that you won't save any time terraforming the continent as a whole in this manner, it is also true that you will finish terraforming specific squares much more quickly, and from the perspective of any particular base you look at, that's what is most important. To that end, when moving your formers as a group, use leapfrog techniques to get them working as quickly as possible (having the leading element(s) of the former team create roads so that the laggards can move into position and terraform (plus, you can always selectively delete roads later). Second, never let the computer automatically move your units! It sacrifices speed and efficiency. A perfect example of this is as follows: Let's say you've got a colony pod en route to a new base site. Your formers have pre-worked the area, and you've got a sensor and a road built on the base site. Your pod is two squares from the build site, but no roads have been constructed. As luck (or cunning planning) would have it, both squares that the pod will be passing through are flat, and both have a former on them. If the computer moves for you, you can be all but assured that the pod will move first, and you'll lose at least one turn getting your next base built, but if you have your two formers move first, and set them to build roads, the roads will be finished just prior to the colony pod's moves, enabling netting you an extra turn or two of production from your new base. Done consistently over the course of an entire game, the effects are vast and far-reaching.)

Eco-Damage and Clean Minerals
Clean Minerals
The number of minerals a given base can produce without causing or contributing to eco-damage.

<u>Eco-Damage</u>

A red number on your base screen indicating the amount of damage that the base in question is causing to Planet, either by excessive mineral production or by terraforming work done in that base's production radius. The higher the number, the more likely you are to see a fungal "pop."

At this stage in the game, most of your bases will be quite small, and their mineral suites undeveloped, so you need not worry much about eco-damage and it's effects. For the moment, just keep in your mind that the "baseline" number for clean mineralsis 16 (12 during perihelion), and that exceeding this number will lead to eco-damage. Build up enough eco-damage, and you get fungal "pops" which destroy your terraforming work and can spawn mindworms.

This basic concept will be expanded upon in the "Metagame" section of the book (Pg. 191), so head there now if you'd like more information, and a big round of applause needs to go out to Ned, Blake, Fitz, Johndmuller, and all the other contributors to the Eco-damage thread on the Apolyton forums!

Meet the Supply Crawler

Supply crawlers are one of two keys to unlocking the explosive productive powers of your early-game bases (the other key being formers). As mentioned earlier, in many cases, your formers can terraform terrain squares at a faster clip than your bases can grow, and in not terribly many turns, you will find your starting bases at size 2-3, with 6-7 terraformed squares surrounding them. Unless you do something with those terrain squares, the efforts of your formers will only be "potential energy" until the base nearest the terraforming you've been doing grows again! This need not be the case once you get supply crawlers. Simply put, supply crawlers enable you to "harvest" one type of resource from whatever square they're on. Consider the implications of that for a moment, and tie it in with some other things you know about the game already.

Nutrients: More food = faster base growth, and if that's your goal, then harvesting food from some rainy squares will see your pool of surplus food growing rapidly, causing your population to spike! (Note, however, that all factions can execute a Population

Boom one way or another, so some people regard a nutrient crawling focus in the early game to be a relatively weak approach, but again, it depends on your game...there are specific times when it is necessary or desirable).

Minerals: A size one base can support a mineral suite far higher than the 3-4 it starts with before you start getting eco damage, and since you are beginning with nothing at all....having to build the infrastructure in your fledgling bases piece at a time, it can fairly be said that minerals "drive" the early game. With this being the case, one very good use of your early game crawlers would be to enhance each base's mineral outputs up to the point where you start seeing eco-damage (and when you do see eco damage, unless you want to provoke the worms, stop harvesting with one crawler and re-check for eco-damages. When you get it back to zero, you're in the "optimal zone" for mineral production at that base.

Energy: Early game techs are cheap in terms of the raw number of research points it takes to reach the next tech. Your HQ base never loses energy to inefficiency, therefore, if you can get crawlers from your HQ base to go out and grab some energy for you, that means more cash and faster research, both of which are good things for you.

Exactly what percentage of your crawlers you allocate to the harvesting of which of the various factors of production is a matter of personal preference. There really is no one "right" answer....only that if you're not using crawlers to enhance the outputs of your bases, and your opponent is, don't be surprised if he winds up far ahead of you by the mid game.

Defining your Style

In the early game, survival is the only issue at hand and there is little to no difference in overall playing style. All factions, regardless of how they will eventually develop have the same basic starting needs, and so initial styles are quite similar, though expansion paradigms used may bring about some variation. But as the game grinds on, the stylistic differences begin to make themselves apparent, both in terms of technologies pursued, and in terms of build order choices. Whatever game you've chosen for yourself, the sooner you can begin to play into the strengths of your selected style,

the stronger your game will be. Please do not take the information below as the "final word" on early game beelines. Your style is whatever you wish it to be, and is defined by whatever tech-beeline you happen to prefer. These are mentioned only as a starting place, and because they have been tested repeatedly by me, and I know them to be both powerful and reliable. Nonetheless, they only represent a starting point. Something to get you thinking on the subject. Adding, deleting, and changing as you see fit until you come up with an approach that is perfect for your own unique style of play.

As to techs, and my views on the various styles of play:

Momentum folks will want to get the "top-end" early game warfare techs as soon as possible. Specifically, the most important things in this type of game are Planetary Networks (probe teams), Doctrine: Mobility (rovers), and Nonlinear Math (Impact). With these three techs, you can put together a fearsome early game force and send it out hunting. Your goal here is to attempt to find one or more enemies to smash before someone discovers Intellectual Integrity, or you'll have a significantly harder time making the attacks work (a perim defense will really mess up your day). As the game grinds on, you want to continue your weapons focus, with the goal of getting to Doctrine: Air Power as quickly as possible—hopefully before your opponents get AAA-Tracking units. Do this, and the opposition is virtually fried. You will be in a position to hit so hard and so fast that, superior infrastructure or not, they will not be able to recover.

For Hybrids, you need at least Applied Physics (banking on the fact that most momentum rover rushes consist of 4-1-2's, giving you a 2:1 advantage with lasers on the counter attack) & High Energy Chemistry for some good early prototypes, paired with Doctrine Flexibility to increase your options, and then toward more infrastructurally-minded techs. As you get into the guts of the game, the techs you chose to research (assuming you have Directed Research "on") will be driven by prevailing game conditions, paying attention to combat and defensive techs, but also keeping an eye on those much hated early game resource restrictions, and the technology to lift them.

Builders, run straight for Industrial Automation, switch to

Market as soon as possible, and then move straight for the restriction lifting techs. Alternately, you could beeline for Clean Reactors first, and then get back on the restriction-lifting train. It's only a few techs out of your way, so it won't set you back much in terms of time, and will leave you with the advantage of being able to build clean formers fairly early in the game. More formers without cutting into your mineral suite means more terraforming work done more quickly, which is always important. It depends on how you have your game set up, but if you are inclined to build "specialist bases" (covered later) then you may want to consider the importance of an army of clean formers in your overall plan. After that, you need AAA tracking, and you need it yesterday!

Defining your Focus

There are three factors of production in SMAC/X, and collectively, they produce a total of six economic outputs. The inputs are, Nutrients, Minerals, and Energy, and their corresponding outputs are Population, Infrastructure, Units, Cash, Research, and Psych. All Empires will have all of these things, of course, but by focusing your empire like a lens down on one of them selectively and shifting that focus around when appropriate, you can create a situation of unmatched power.

How do you go about defining your focus then? Some examples are below:

Vel's standard early game focus—Minerals (my personal thanks to the honorable Jimmytrick for showing me the light) The Path to Power

Minerals drive the early game, much as energy drives the late game, and he who can produce the most stuff the fastest will be in the stronger position. To that end, supply crawlers should be a vital component to your strategy, regardless of your style.

Consider—Each of your early game, size two and three bases (with an average production of 6-8) can have far greater mineral outputs (upwards of 20) than their population normally would allow and not suffer any eco damage for it. And in the absence of any drawbacks, it makes sense to bulk up each base's mineral production to as high a level as it will support and still not give you any eco-

damage. This is very efficient in that, regardless of your playing style, it enables you to do more things more quickly than you would otherwise be able to. In my mind, the early focus on minerals gives me the tools needed to grow into a more advanced focus later (energy), by enabling me to develop an infrastructure with amazing speed.

Other focuses

Pravin's Pride—Explosive GrowthSo named for the leader of the PK's, cos nobody can "Boom" like Lal. The goal here is to build the minimum infrastructure needed for the execution of a Population Boom, and then blasting your population up to pre-hab complex limits, building infrastructure with ever-increasing speed as you grow. In this case, crawlers are used for minerals when they are produced, and switched to food crawling on an "as-needed" basis to keep the base growing. This leaves you with a burgeoning population, but lagging infrastructurally, which makes your bases more prone to riots until infrastructure can catch up with the sudden flood of new people.

(How-To Note: Executing a Pop-Boom: Pop-Booming is such a powerful tool that if you're not using it and you're opponent is, you have almost no hope of winning against him. In a nutshell, what you're doing is setting up conditions where your base will grow every turn until you either run out of surplus food or reach whatever hab-limit you have, and doing it across your empire is not hard at all. The only thing you really need is some extra food and a +6 Growth rate. The simplest way to get extra food is with a few extra supply crawlers out harvesting. The easiest way to get to +6 Growth is to run Planned/Democracy, and build a Children's Creche at each base, however, the SE restrictions faced by some factions make this an impossibility, and in that case, there's another way to go about it, but it takes a little more work. Golden Ages (bases size 4 or greater) produce a +1 Economy and +2 Growth, and all it takes is Psych Investment. You can do it empire-wide by building Children's Crèche's everywhere and running whatever SE settings you can to boost growth, and then allocating enough into your Psych percentage (SE table) to throw all your bases into golden ages, or, you can do it individually by crawling energy to the bases you want or need to grow rapidly, "doping" them into a golden age. Regardless of how you go about it, it's something you should practice till you can do it in your sleep, 'cos nothing's better than 6-10 turns of Booming, followed by a switch back to Market for more cash and tech more quickly than you would have ever thought possible.)

Cash Cows

Again, this approach calls for an initial mineral approach, and then an eye toward building cash-enhancing facilities first (Energy Bank, Tree Farm, and Crèche), and using your ever-increasing supply of cash to help rush build with greater and greater speed, quickly leaving you in a position of power. Crawlers can be switched out from minerals to energy harvesting in key bases (i.e. – the one you Built the ME in would be a terrific choice for this), which will only further strengthen your cash position, and, when the time is right, you can switch over to some efficient SE setting, slam your labs to 100% and rake in the techs.

Perpetual Golden Ages

This approach relies on a balanced mineral/nutrient crawler scheme to create specialists and throw a base into a golden age, and gain the benefits of +1 energy per square (assuming you're running Wealth), effectively giving you the benefits of Market with none of the restrictions. It's amazingly powerful, but takes some serious micro-management.

Specialist Approach (my humble thanks to Ogie, Daniel, and all the folk at Apolyton who have worked diligently on this approach, it is astonishingly effective!)

Actually, this can be an outgrowth of any of the above approaches, as it is impossible to do in the early game. The essence of the strategy involves growing a base to at least size five and using crawlers to feed the populace such that the entire base can be converted to specialists of the best variety available, netting you lab points or cash that are not subject to efficiency drains.

Specialist bases can be made anywhere, but see their greatest impact in far-flung corners of an empire—where inefficiency due to distance from the HQ base would eat up whatever energy you made via traditional means—and in newly conquered bases—**Note!** A base made up entirely of specialists **will not riot**, newly conquered or not. Your HQ base and those closest to it are more resistant to inefficiency drains, and will likely serve you better with at least some workers, but the further away from your HQ you get, the more valuable specialists become.

I'm quite sure there are a few others, but that covers the major categories. Remember too, that it is quite possible, and in fact, often desirable to have your bases be somewhat specialized. This manifests itself most obviously by local geography. It just makes a certain amount of intuitive sense to use that base you just built beside the borehole cluster to be the one to do the bulk of your prototyping, former and crawler building, cos it can do it so quickly. Likewise, a base surrounded by Nutrient Resource Squares (or in the jungle) would be a fantastic choice for an early game, "All Librarian" base, netting you a huge amount of research, regardless of how far it was from home. Again, the phrase "work with the game, not against it," comes to my mind. Work with and make the most of whatever the map gives you. Build on and improve that relentlessly and you will do well.

So, how does one go about deciding on and "defining" a focus? Exactly one supply crawler at a time, and make no mistake about it, it will take time. Time and resources to optimize each base to suit the needs of the style you've selected for yourself. Take that time, get your bases humming like well-oiled parts in the machine that is your Empire, and they will not disappoint you. Your goal though, should be to practice honing your game skills to accomplish the flowering of your particular style in the shortest possible timeframe.

Early Game Secret Projects

A number of truly powerful Secret Projects become available very early in the game, and we'll take a brief look at each of them in turn. Evaluate them against your favored strategy and see which of them fit best with your game. When you have a list of projects that are "essential" to your strategy, pursue them with a vengeance in your games! Understand though (especially in MP games) that you might not get all of the projects you'd like, so the important thing here is not to over-commit. That is to say, if there are currently 6 Secret Projects available to you, don't start working on all six at once! If you do, and someone beats you to any project, you are stuck with two options, neither of them very good. You can either opt to change the production at your base, losing half of the accumulated minerals you had built up toward that project, or you can have that base continue to build, with plans to switch over to a new

project as soon as you get a tech that grants you one. The problem here though, is if you do that, you effectively tie that base up for a number of turns where no further developmental work can be accomplished there....not a good thing at all. So, take your project work in small slices and try to only start a project when you are reasonably sure you can finish it ahead of everyone else.

And now, the projects themselves:

The Weather Paradigm (Centauri Ecology)

Dramatically reduces terraforming times, and gives you access to all of the advanced terraforming techniques immediately upon completion. This project will help you enormously no matter what faction you play! The ability to begin construction of Condensers and Boreholes inside the first hundred turns of play is....simply too huge to pass on! No matter what your style or faction of choice, this project should be very high on your list, and in MP games, whomever gets it will be far ahead of every other player in that game from the moment resource restrictions begin to come off.

The Human Genome Project (Biogenetics)

Another fantastic early game project! Talents are so vital to drone control, and this puts an extra talent at each base. If you favor Domai or Lal, with their fewer drones or higher number of talents, this project alone will enable you to forego the building of drone control facilities almost to the middle game, and if you're playing a drone-sensitive faction like Zak's researchers, the project will go a long way in undoing your chronic problems. Other factions will benefit greatly from it as well, though some may want it purely as part of a denial strategy (I'm specifically thinking Yang and Santiago here, who can easily control all their drones via police), still, no matter what the reasoning behind it, the fact is, this is a project that will be quite high on a number of people's lists!

The Virtual World (Planetary Networks)

Any project that gives you a free facility which would normally require an upkeep cost if you had to actually build the facility it gives is automatically an important project, and even if drone control is not high on your list of concerns, building network nodes probably

is, so why not have those net nodes serve two purposes, rather than just one? All in all, this is one of the most powerful early game projects around, both in terms of money saved by not having to build infrastructure, and in terms of control all the way through to the mid-game.

The Command Nexus (Doctrine: Loyalty)

Another project that provides free facilities, this too will be highly sought after by a number of players, regardless of style. Builders will likely spend long periods of time running Wealth, and the presence of this project will enable them to perfectly counter Wealth's singular negative. Also, Builders will want this project badly as part of a denial strategy against Momentum players, forcing the Momentum gang to take the time to build Command Centers if they want those morale upgrades. Momentum and Hybrid folk will also count this as a high priority, for obvious reasons. Their standing forces become 25% more lethal with its completion. More bang for your buck!

The Maritime Control Center (Doctrine: Initiative)

Comes a bit later in the early game, and is another project that provides free facilities. It's importance is directly tied to two things: What other factions are in the game (if the Pirates are playing, then you need this!), and how important a strong Naval presence is to your game. If Naval power is relatively unimportant to you, then skip this project, but note that whoever builds it will have ships with two (2) extra movement points, making Marine strikes of coastal bases that much harder to spot!

The Empath Guild (Centauri Empathy)

From a defensive perspective, the most important element of the game is to take what steps you can to ensure that your datalinks are not infiltrated, and this project grants infiltration access to whomever completes it, making it easily one of the most despised projects in the game. I have seen coalitions formed solely on the bases of eliminating the player who builds this project, which speaks volumes about the scope of its power. Build it if at all possible, just to deny anyone else access to it, and, if it appears

later that someone will take it from you, don't hesitate to burn the base to the ground to prevent it from falling into enemy hands! It really is that important!

The Merchant Exchange (Industrial Base)

A good project, but not a great project. For certain factions, it can be a godsend (Yang, Deirdre, and Cha'Dawn especially) but for others, it's almost a waste of time until energy restrictions come off (Example: Morgan—Running wealth gives him +1 energy per square anyway, and with a maximum of 2r pre-restriction lifting, a good portion of the power of the ME will be lost in the early game). Combine that with the fact that its impact is limited to one base, and you have a project which is useful in the early game, extremely useful in the middle game, but non-critical at any point.

Planetary Energy Grid (Adaptave Economic Systems)

Even if you never plan to stockpile energy at any of your bases, the fact that it gives you a cash enhancing facility for free (no maintenance cost) at every base is an enormous boon. This project is everything that the Merchant Exchange is not, and is much more valuable because of it.

The Neural Amplifier (Neural Grafting)

Another project that comes later on in the early game, and one of the best defensive projects in the entire game. Essentially, this gives every unit you ever build the equivalent of "Trance" ability, and can be further enhanced by actually building "Trance" units. For Marketeers, this one is highly prized, and for players pursuing a heavy Native strategy, it's equally highly prized as part of a denial strategy. Non-native based Momentum players (and some Hybrids) will generally consider this project of only secondary importance and will seldom pursue it with much vigor.

Citizen's Defense Force (Intellectual Integrity)

If Perimeter Defenses had an upkeep cost, this project would rank right up there with the others that provided free facilities, but since Perim. Defense works have no upkeep, the value of this project is somewhat diminished. Still, it does save you time,

especially if you have a large number of exposed bases, and so is fairly important, but non-critical, though you might expect a Momentum player to run for it as part of a denial strategy. (**Note!** If you plan on ringing your continent with coastal bases as part of a plan to deny enemy troops a landing zone, then this becomes a crucial project).

Planetary Transit System (Industrial Automation)
Even if you have no immediate plans to expand, this project is a must have from a denial standpoint! If you don't snag it, someone could quite easily "Borg" their way to dominance!

Xenoempathy Dome (Centauri Meditation)
Anyone who plans on pursuing a "Native" strategy, or anyone who is completely hemmed in by fungus in the early game really needs this project, otherwise skip it for something more essential. (**Note!** This project makes sneak attacks through the fungus a very attractive option. If you have it, combine the abilities it gives you with a few fungal payload missiles to create a highway into the territory of your enemy! Properly executed, there's almost no stopping this type of attack).

Planetary Datalinks (Cyberethics)
Seldom even built in MP games, unless it's a free-for all with six players. Good one to deny the AI though.

(How-To Note: Rapidly Building Secret Projects: The very best way to rapidly complete a secret project is to have all the bases in the immediate vicinity of the "Project Base" build crawlers and have them start harvesting minerals. In all likelihood, you will begin to run some eco-damage, but don't worry, it won't be for long! Remember that each crawler you have costs you a base of 30 minerals. Remember too, that most of the early game project cost between 200-300 minerals, which means that for a paltry ten crawlers (less than that, in practice), you can complete any of the early game projects! Your goal here is to keep building crawlers at an ever increasing rate until you have enough to send them all to the "Project Base" and finish the project. Alternately, you could simply set your nearby bases to building crawlers and shuffle them into the Project base upon completion, but this is slightly less efficient, although the upshot is that you don't have to worry with eco-damage creating fungal blooms and the potential for worm-rape. Also note that, if you have the cash, you can

get significantly more "bang for your buck" by spending some cash to upgrade the crawler to a more expensive variant, because when you cash the crawler in toward the Secret Project, you will get its full mineral value....note however that crawler-upgrading is regarded as a cheat in many circles, so check beforehand to make sure that's acceptable, and if not, just use "regular" crawlers as described above).

Comparative Turn Advantage
What can my economy really do for me, and why waste my time worrying about it?

Having already said that you can play the game without paying much attention at all to your economy, the question above is a fair one, and to answer it, I would say this: At the very heart and soul of Empire is the Economy. It supersedes the army, and even technological research and innovation. Do not misunderstand me on this. The production of war materials and research are vitally important to your survival and eventual dominance, but an Empire's ability to produce quantities of either is driven by the force and stability of that Empire's Economy. You must understand that players who use a strictly militaristic focus are playing the game from the previously discussed "Momentum" standpoint. Their key hope is that their program of relentless assault can end the game before some Builder or Hybrid player can build up a strong enough economy to stand against them.

Never forget these three facts:
1) Your Economy is the most versatile tool you have. In times of crisis, you can configure it to crank out massive amounts of cash to fund your war effort (or whatever), and in times of peace you can ratchet your research up through the roof.
2) Contrast that to military units, which are actually only useful in three very specific situations: If you are attacked, if you launch an attack, or if you can make your opponent believe you are about to launch an attack (i.e. feint—see below on creating turn advantage). Otherwise, they simply take up space on the board. They represent a certain amount of "potential energy." That is to say, the potential to cause harm to another Empire or to defend your holdings.
3) Technological advances are likewise "potential energy." By

themselves they do nothing for you. You have to actually build something to get anything useful out of them (a new prototype, base facility, secret project....something).

Factors of Production on Chiron You've already been introduced to them, and here they are again, this time, with a slightly different treatment:

Nutrients: Enables your population to expand.

Minerals: Allows you to build stuff.

Energy: Drives your research efforts and puts cash in your pocket.

In order to build a healthy economy, attention must be paid to all three.

Your economy is driven by the function of the passage of time acting against the three factors of production listed above. It's like plate tectonics, with time on one side and your productive factors on the other. You can vary your economy's effectiveness versus Time (bigger or smaller "quakes" = speeding up or slowing down) by adjusting your three factors of production.

Basic Economic Theory

The basics of Economic Theory are intuitive, but are outlined below.

Makin' Big Cities: Maximize Nutrient output over time. Note that without controls on growth (i.e., sufficient mineral production to produce anti-drone facilities), your base will suffer chronic rioting.

Makin' Productive Cities: Maximize Mineral output over time. Lets you build stuff very quickly. Too much mineral production leads to eco-damage, which in turn, leads to worm rape....something you don't want to see. ;-)

Makin' Bill Gates Cities (Lots of Tech and Cash): Maximize energy output over time. Generates money and research points very quickly, but comes with the ill-effect that it takes a long time to build all the base facilities you need to get to this point (i.e., it will take even longer if you don't balance this with mineral production).

Intermediate Economic theory

As I said above, basic management of the factors of productive

is intuitive (if you want the base to grow, give them lots of food....how hard is that?), but since it is clear that taking any of the factors of production to their extreme is probably detrimental in some way—to say nothing of the inefficiency it creates—it becomes obvious that some balance needs to be struck. He who has a clearer understanding of when to focus on which of the factors of production will almost always be able to create a stronger economy than he who is content to let the computer make production decisions. In other words, unless you want to hamstring yourself, don't use Governors!

Early game Economics:

Energy production is basically unimportant in the early game. You are starting from scratch. You have nothing. No infrastructure at all. What you need is a good balance of Nutrients (to grow your population pretty rapidly, and minerals to build your first, most basic facilities fairly quickly. Only when that has been accomplished should you begin to worry much over energy production or enhancement. For this reason, planting forests is probably the most important early-game terrain enhancing you can do. Due to mineral and energy restrictions, early forests will produce as much as early mines, and mines take 6-8 turns to build. Two forests which tend to expand on their own, or one mine? You don't have to be a student of economics to see which is more efficient, and efficiency is the name of the game (and this provides something in the way of a specific explanation of the terraforming choices mentioned earlier in this guide).

Of course, in the same breath, do not discount the value of mines and boreholes. Your spare formers should be working on both of these terrain enhancements as soon as you are able, planning for the day when the mineral restrictions come off, and enabling you to instantly shift your supply crawlers around to take advantage of new efficiencies brought about by your rising tech-level.

Once you get your most essential base facilities constructed you should probably shift into a more balanced mineral/nutrient mix (still not paying terribly much attention to energy) in order to facilitate population growth, while using your selected "focus" to heighten each base's per turn output of one of the factors of production in particular. Here though, certain base facilities can

make this more efficient (don't kick up your nutrient harvesting until you finish your children's crèche, otherwise you're just spinning your wheels). Also, monitor your growth constantly as your bases creep up on their maximum size, and adjust your nutrient output accordingly. You don't want any wasted effort if you can help it. Wasted effort and resource is an opportunity for your opponent to close the gap on you and possibly overtake you.

Early Game—Facility by Facility:

This is to simply give you a different perspective on the infrastructure theme. This list focuses more on which style you have adopted, rather than which faction you are playing, as every faction in the game can be adopted to any of the principle styles of play:

Recycling Tanks: High importance for any style, as the Recycling Tanks represents one of only three options for enhancing the productivity of the base square (the other options being to tweak your SE settings or increasing your Psych allocation to increase your Economy rating via Golden Age) **Note!** The Morganites, with their superior cash position, do very well indeed to rush these first, and if you are a big fan of the faction you would be well served in trading out your initial former build for the tanks! (Thanks and kudos to Enigma for eloquently making the point!)

Energy Bank: High Priority for Builders, Medium for Hybrids, Low for Momentum players. Builders will want this one as it will help with rush building all the other facilities. If I am at peace, my crawlers are in place, and I am not yet able to build Treefarms, this is what I build next.

Children's Crèche: If you're running Wealth (which hurts Morale), or any SE choice which hurts efficiency, this should be High on your list, otherwise, make it Medium.

Any and all **Research-Enhancing** facility should be high on your list!!! (Believers can get away with making these facilities Medium in priority).

Perim Defense: Medium Importance in fringe bases, Low importance in interior bases, but you'll wish you had one if a base without one gets attacked.

Command Centers: Hybrid & Momentum Players: The first Command Center is of High Importance. After that, Medium.

Builders: Low importance. (Best of all is to get the Command Nexus and not worry about it, but that can be said of any of the "Facility Projects" in the game!).

Naval Yards: Dependent on how large a factor naval superiority plays in your overall plan. If it's not a big part of your game, Low importance. Otherwise, Medium to High, again, depending on how strong a presence your strategy requires you to have.

Anti-Drone facilities: Only important if you're having drone problems.

And that's about it for the early/midgame (pre treefarm) facilities.

Mid Game Economics (a look ahead):

Energy begins to become important and nutrients become secondary. Even with a purely nutrient focus, your bases will still take a long time to grow, and by the mid-game, you've got other things to worry about (like slamming your tech advances down to four turns or less), so you might as well just accept that it'll be a while before your bases grow, and focus on more immediate and pressing concerns. Pick a strategy, stick with it, and give it time to bear itself out, building what facilities are needed to enhance your overall strategy. (Gaians will probably want Bio-Labs to build better mind worms, Hive will definitely want Robotic Assembly plants, everybody will probably be gunning for Tree Farms). The key to mid-game development is to build on your successes in the early game and enhance them with builds in the mid-game, and increase your energy output as you can. At this point too, facilities which reduce eco-damage are very important, because the last thing you want to run into is a massive worm-rape when you've got your forces pressing hard into enemy territory someplace. One ill-timed attack like that can really set you back. Note here, that the game has a peculiar mechanic built into it! It seems that each time your base is subjected to a "fungal bloom," the "eco-damage" threshold of your bases increases by one (1) mineral. Also note that eco-friendly facilities (Tree Farm, Hybrid Forest, Temple of Planet, etc.) constructed **after** you have experienced your first fungal bloom will increase your "clean mineral threshold" by one (1) for the base

that the facility is built at. This then, could be seen as an alternate path to take with regards to protecting yourself from eco-damage in the long term. Let the blooms happen, be ready with Empath troopers and formers to fix the damage, and let your mineral count climb over time! This approach, useful to all, would seem especially fruitful with the Morganites!

<u>Late Game Economics (a look further ahead)</u>:

By the late game, it's generally too late to make radical changes to your strategy (which is why the "Future Society" entries on the SE table really cannot be considered when formulating your factional strategy—they come too late in the game for that, and by the time you get them, you already have a pretty good idea what your standing in the game will be....they are more designed to enhance and build on what you've already done). Like the mid-game, your purpose here is to build on your previous successes, but in the late game you get a bigger suite of tools to do this (Future society choices, more exotic facilities, etc.) This brings to light a good point: More often than not, you will win or lose the game based on the choices you make over the first hundred turns or so. You are almost always more effective by focusing on your successes in the early game and building them, using them to launch you toward whichever victory condition is closest at hand....just run like hell for it, but keep your eye on a second victory condition, just in case somebody bloodies your nose.

Advanced Economic Theory

Advanced Economic Theory is all about creating Turn and Resource Advantage. What you will learn below will help you understand how to use your Empire's economy as a weapon against your opponents, and as an incredibly flexible tool for you and your allies, boosting your cash and research abilities to nearly unbelievable heights.

<u>Turn Advantage</u>:

Building stuff more quickly than your opponents (rush-building). Because your bases can only work on one thing at a time, the quicker you can finish each thing, relative to your opponents,

the greater advantage you will gain over them.

<u>Resource Advantage</u>:

Having more nutrients, minerals, and energy than your opponents. This is primarily done by making intelligent terraforming choices, and optimizing the outputs of the various factors of production for each of your bases, dependent on your current needs and goals.

<u>Winning with your Economy</u>:If you want to use your economy as a weapon, then you must do more than intuitively understand the three factors of production, you must master and control them. You must make them sing, and if you do, your economy will hum like you have never seen, and might have never thought possible.

The key to using your economy as a weapon is to create a turn (or time) advantage. The bigger the turn advantage you can create over your opponent, the easier it will be to defeat him. As you begin to take the steps necessary in creating Turn Advantage, you may find yourself wondering if what you are doing is having any impact on the game at large, but trust me, your doubts will be washed away when your Shard Garrisons are defending against his Missile Marines. Then you will understand and fully appreciate what turn advantage has done for you.

As previously stated, time is the engine that powers all the economies of Chiron. It is the catalyst, and the ultimate "limited resource," and he who makes the most efficient use of time will almost always win the game. There are several very specific things you can do to create turn advantage for yourself, and they are outlined below:

The essential element of creating Turn Advantage is energy, for it is energy which allows for rush-building, which is the chief way you create turn advantage. The second way you create Turn Advantage is to build new bases. If you have more bases than your opponent, you can accomplish more things more quickly than he. Even if you only have one or two more bases, over time, the difference can be devastating.

Expansion and Rush-building. Those are your tools.

The first, best thing you can do for yourself is to always, always,

always rush-build your formers and Recycling Tanks (unless you're already cranking them out in one turn, of course). The reason for this is as simple as it is elegant: The game is about resource management. Because of that, Formers are the most important units in the game. They can turn a completely average land square into an amazingly productive piece of property, which in turn gives you more resources to work with. In the case of Recycling Tanks, consider what you are doing: Essentially you are turning your base into a "Former" for the duration of the build time of the Tanks, and the end result in a +1/+1/+1 enhancement to the base terrain square.

Let us say, for sake of comparison that you and a computer opponent have both just founded a base with exactly the same amount of productive capacity (built on the same kind of land, and working the same kind of land). The square your citizens are working is currently generating 1-1(food/mineral). It will take you both 5 turns (about the average for a size 1 base) to build the former you're working on, but you have the cash to rush-build it, so you do. Watch what happens:

(How-To Note: Creating Turn Advantage:Turn 1- You issue the rush-build order. Opponent starts building his former. Turn 2—You move your former into position, and start working on your Recycling Tanks (20 turns to build). Opponent gets his former in four turns. Turn 3- Former begins to cultivate a forest (3 to go). Rec. Tanks in 19. Opponent gets former in three turns. Turn 4—Former continues forestry mission (2 to go). Rec Tanks in 18. Opponent former in 2. Turn 5—Former continues forming (1 to go). Rec Tanks in 17. Opponent former next turn. Turn 6—Former is done! You get +1 Mineral and +1 energy from that square. Rec. Tanks is now to be completed in 12 turns! Opponent moves former into position and begins constructing Rec. Tanks (in 20 turns) Turn 7—Your former moves again—RT in 11—Opponent forest in 3 turns. RT in 19 Turn 8—Forest #2 in 3 turns—RT in 10—Opponent forest in 2. RT in 19 Turn 9—Forest #2 in 2 turns—RT in 9—Opponent forest in 1. RT in 18 Turn 10—Forest #2 in 1 turn—RT in 8—Opponent forest done! RT in 12 Turn 11—Forest #2 done!—RT in 6 (rush build for 60)—Opponent moves former—RT in 11 Turn 12—You get +1/+1/+1 for the tanks. Your former moves again—Begin work on Rec. Commons.—Opponent starts work on 2nd forest square (RT in 10))

Okay, let's take a look at what just happened here: You spent 25 energy credits (the average cost of rush building a former from a

new base), and later spent another 60 to finish your recycling tanks early. Effectively, you used cash (85 energy credits, in this example) to speed up your economy relative to your opponent's, and here's what you got for your money:

You created a four turn former advantage over your opponent (you got four free turns of former activity that your opponent did not get, which translates into +4 minerals and +4 Energy)

You created a total of 10 turns of base turn advantage, netting you +10 Nutrients/+10 Minerals/+10 Energy over your opponent.

For a grand total of +14 energy/+10 Nutrients/+14 Energy. That's only a total of 38 (valuing them all at the same rate for simplicity), and you spent 85, so you may be wondering where the advantage is in that, but if you are looking at it in that way, you are missing the point. It's called Turn Advantage because it give you extra turns of production at the base in question. Turns that your opponent's base does not get. This is a good thing for you (assuming you are able to leverage that turn advantage to do something to further the ends of your own empire or something nasty to the detriment of your opponent) and correspondingly bad for your foe. The mineral, nutrient, and energy savings are only a bonus, the primary advantage is that your base is now freed up to begin work on other things, and his base is and will be tied up for next ten turns cranking out the stuff you're already done with. And how much did this wind up costing you? Again, valuing all the factors of production equally: You spent 85 credits, got 38 back, which means that your net cost for the turn advantage was 46, or 4.6 (round to 5) energy credits per turn's worth of advantage you got. If 5 bucks a turn isn't a bargain, I don't know what is.

Now that you have a ten turn base advantage, the question is "What are you going to do with it?" There are a number of directions you could take your advantage, in order to magnify it:

1) Research—Begin working on a network node or somesuch, and rush-build when it gets cheap enough for your liking. Every turn you have a network node and your opponent, that's x number of research points you get over and above your opponent.

2) Cash—Do the above with an energy bank to magnify your cash advantage over your opponent.

3) Control—If your base is verging on growing to a point where

Drones will be a problem, you can head that off by rush-building an anti-drone facility thus keeping your base more productive relative to your opponent's base.

4) Turn—If you want to magnify your raw turn advantage, rather than focus in on some specific factor in your economy, you can do that by forcing your opponent to change his mind about what he is doing (and by forcing him to change his mind, he may lose minerals, and in any case will be slowed down)

Going back to our previous example: You finished your Recycling Tanks a full ten turns earlier than your opponent, and after taking a look at your options, you decide that it's in your best interest to build a couple of those spiffy impact rovers you finished prototyping not long ago. Each will take you four turns to crank out, so you set about doing it.

By the time your first one is done, your opponent is six turns from finishing his rec. Tanks and you decide to see if you can spook him, so your rover drives over toward his base.

Now the ball is in your opponent's court: If his base is lightly defended, he just might switch his production to a Plasma Rover or Infantry garrison of his own. If he does, then you've just magnified your turn advantage over him, because he probably lost a few minerals to make the switch, and besides that, when he does get back to building his Recycling Tanks, he'll be starting from scratch, and in the meantime your base is getting +1/+1/+1 over his base every turn. That is how you use your economy as a weapon.

You never attacked him. Your troops never drew or fired. There was no loss of life. No battle. But you just won an important victory.

The lesson learned here: A given base can only work on one thing at a time. The primary way to create turn advantage over your opponent is to rush-build things, especially formers (so they can start improving your land more quickly) and base facilities which will provide you with a calculable benefit (i.e., you can say to yourself: If I finish this quickly, it will allow my base to begin working on something else, and net me +4 energy (or whatever) per turn).

Once you have a turn advantage, the you can magnify it by either running through another rushed facility (furthering your control, energy, or research edge relative to your opponent), or to

throw your opponent off balance via feint (if you actually attack then it becomes a skirmish, a separate issue from Economic Turn Advantage). You can do this by creating a military unit and sending it toward one of his bases or otherwise "bluffing" him into thinking that you are doing something he will not like. Depending on his situation, he may abandon his current project in order to respond to your perceived threat.

You might not yet be convinced that turn advantage is all that big a deal. After all, the gain in energy, minerals, and nutrients is relatively small, and if you don't have anything in particular you need to work on next, you may not believe turn advantage is all that important, and if that's the case, I'll volunteer to play you absolutely anytime you want!

Seriously, if you multiply your turn advantage energy/mineral/nutrient gain out over the total number of bases you have, the numbers begin to look more impressive, and if you multiply the number of "free" turns you gain in this way out over the number of bases you're doing this in, you'll quickly realize that you now have a large "window" of opportunity you can exploit in any number of ways, with your opponent being unable to respond (or, as mentioned above, if he does respond, then it will be at the expense of the projects he is currently working on, which will further enhance your turn advantage), and suddenly the benefits of turn advantage begin to crystallize.

Specifics of Rush-Building:

Rush-Building formers and selected infrastructure is such a vitally important element of the game, that more should be said on the matter. Micro-managers everywhere obsess over rush building, often planning the matter down to the energy credit....where to put those limited resources to get the biggest bang for their buck, and that is as it should be. Those players who spend the most time studying their economy, and applying their limited number of energy credits to the base(S) and builds that will net them the greatest benefit will be the players you begin to see regularly in the winner's circle. Having said that, here's the exact formula for rushing costs. You don't have to memorize it, but **do** mark this page, so you can refer back to it when you're trying to figure out how much to spend, the next time you're rush-building a unit or facility.

How-to Note: Rush-Building, mineral by mineral

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If M is the number of minerals required to fill the empty space in the production box before any minerals have been hurried this turn, then the hurry-cost per mineral is:

2 + M/20 ec for units2 ec for facilites4 ec for SPs

If the production box contains less than 10 minerals then these costs are doubled.

Once you have calculated the cost of the number of minerals you wish to purchase, round the cost up to the nearest whole number.

***

cost per mineral remaining=cost to hurry divided by minerals remaining

The lessons to be drawn from the Rush-Building concept:

If you are not rush-building your infrastructure and your opponent is, you're dead and don't know it yet because in short order, your opponent will have created such an enormous amount of turn advantage over you that you will lose all ability to compete with him. Having said that though, understand that while rushing alone is both valuable and important, there is yet more you can do with the concept but it takes some planning on your part.

Let's say, for example, that you've got a new base off and running. Your first move is to spend 25 credits to rush the base's former out the door. Well and good, but when the former is finished, you've got no "carry-over" minerals in your production queue, and your tiny size one base is only cranking out 3-4 minerals a turn, which means that it'll be at least three turns before you build up a sufficient number of minerals to get you past that dreaded "first row" of minerals (where rushing is at its most expensive). Therefore, if you know that after you build your former, you'll be wanting to move right on into building a Recycling Tank, why not overpay the price of completing the former, in order to get the maximum number of carry-over minerals (ten) in your production queue from the start? By overpaying, you set yourself up right away for being able to rush your next build at that base, which will greatly speed the base's early infrastructure.

Figuring out exactly how much to overpay when you complete a unit is a function of the formula above, and your current industry rating (which impacts how many minerals constitute a production "row" on the base screen), so you'll have to play with it a bit, but start with a 20EC overpayment and tweak from there. You won't be disappointed in the results!

Side note: From a historical perspective, the notion of over-paying represents a full about-face by the gaming community. When SMAC first came out, buying things at their "wholesale price" was all the rage, which was essentially underpaying the rush-build cost, relying on the base's per turn mineral output to complete the item in question, and while there may be times when this is an attractive option, for the most part, especially if you already

have a build order in your mind, and are looking to get through it with all speed, buying things on the cheap is an inefficient way to go.

Related Note—Upgrading units:

Here is the exact formula. I leave it to you to determine how best to use the information.

$$\text{Upgrading costs} = (\text{WeaponIncrease} + \text{ArmorIncrease} + \textbf{NewRowsCost}) * 10ec$$

* It is not related to your SE Industry setting, you always pay 10ec for each row you new unit costs, regardless of the row's length.

* It is not related to the cost of your old unit, you always have to pay for all the rows your new units costs.

Remember that when you upgrade you can't change: Chassis Artillery abilityEquipment (between them or with weapon & vice-versa)and that you cannot downgrade weapon or armor, but you can downgrade reactors.

Practice, practice, practice:

The fastest way to get better at the concepts outlined here is to put this article down and go play a Hotseat game against yourself. Study the time differences in various approaches. You will very quickly get better at determining exactly when to execute the rush order, and how to customize the general principles to your particular style of play. The whole really is greater than the sum of its parts, and your personal style, no matter what it is, has its own unique set of strengths and weaknesses, and when properly meshed with the principles you've read about in here, it will create for you a stronger, better playing style.

Resource Advantage:

Terraforming is essentially a game within a game, and can be as simple or as complex as you'd care to make it. I will not devote much time to this subject, because there are too many variables and too many differing opinions on what to do and how to do it when it comes to terraforming, so I will simply say this: Find a set of "rules of thumb" that work for you, and stick with them until such time as someone comes along who is capable of proving to you that they have a better way.

Rules of thumb that I use in my games:

Rocky terrain—If not on a slope, and inside a base's production

radius, make a borehole, if anything else, make it a mine and send a crawler to the site as soon as feasible.

Forests are a good source of minerals, and a good terraforming option in general. True, they don't net you as much as a mine once restrictions come off, but on the other hand, they give you both nutrients and energy, making forest squares very well balanced. Add to that the fact that they are eco-friendly and expand on their own, and they're almost always a good choice in my book.

Sea bases = Rapid growth and lots of energy. If you're looking to boost your research, expand into the sea and build **lots** of tidal harnesses. You will be pleasantly surprised at how much your energy production spikes up.

Minimize your use of mining stations for sea colonies. A better choice is to supply crawl your minerals from a mainland borehole, and focus your sea squares on energy and food production.

At elevations of 3000 meters or so, solar panels become **very** good energy producers. If you don't have any land like that, and if you've got some spare formers and cash, raise your land!

Chapter Three

Something Wicked This Way Comes

Getting Ready for the Bad Guys

As mentioned previously, the early game era is defined at the upper end by missile techs, with the bulk of these turns being played out with Laser and Impact weapons dominating the stage. Defensively, we see a great many scout patrols, and some distribution (fairly even, actually) of Synthmetal and Plasma troopers. About the only "other" factors to consider with regards to early game combat are Morale differences, the presence or absence of sensors and monoliths in the area local to the battlefield, perimeter defenses, altitude, and terrain. All of these things will be discussed in turn, and in time.

For the moment, however, consider the implications of the military. Your military represents a significant mineral investment which amounts to potential energy. By itself, the military does nothing at all, except soak up resources, in the form of ever-spiraling support costs (or, if you're playing a faction with a support bonus, the cost is expressed in terms of the number of turns **not** spend building additional bases of infrastructure, and in a certain "opportunity cost" by tying up free slots with troops, rather than formers). Keep building up units, and eventually you will paralyze your empire.

This is not to say that a military presence is unimportant,

merely to point out that the army's usefulness is limited to three specific circumstances:

1) To cause harm to an enemy and his infrastructure.2) To prevent an enemy from doing the same to you and yours.3) To disrupt an enemy's plans.

Beyond the ability to do those three things, combat units are just taking up space on the board, and until you have occasion to use them, they are costing you a premium in both resources and time.

The fastest way to ensure that your troops pay for themselves is to go beat up on somebody. Oftentimes, your attack forces will pay for themselves with the very first unit they destroy, but this alone is not sufficient reason to go to war. After all, SMAC is a relatively poor war game, lacking in some of the most fundamental elements that have been mainstays of wargame classics of the past (things like increasing support costs due to distance, unit facing and varying levels of fatigue and fortification, an unrealistic maintenance and support scheme, and the absence of a whole host of other elements make SMAC an average war game, at best). It is, however, an excellent Empire Building game, and war is a part of that process, so if you're at all serious about the game, then you had better spend some time thinking about war and the eventuality that you will be involved in one—and probably more than one.

To that end, the sections that follow will get you ready to deal diplomatically where possible, and if not, to fight offensively or defensively against the AI or a Human opponent, depending on who/what you find yourself up against in a game.

A Primer on Diplomacy:

(Single Player Environment)Builders desire peace. I focus specifically on Builders here (and to a lesser extent, on Hybrids), because for Momentum players, the only real diplomatic option that matters is a submissive pact, and while useful, there's not much to be said about that, so suffice it to say that Builders (and Hybrids) desire peace. The AI desires war. In almost every single player game you play, you will find yourself at odds with every faction at least once. The reason for this is simple: The factions were designed around a set of strong and conflicting ideologies. The number seven was not chosen at random, I do not believe. Five is regarded as optimal group

size, but seven is optimal for game theory purposes, and the factions (their ideologies defined by a total of three major variables—Politics, Values, Economy) interact with each other to set up a matrix where you cannot help but be diametric to at least two other factions at any point in the game.

To illustrate that point, let's take a quick look under the hood at each of the factions to see what makes them tick. Of course, you **will** run games where you see behavior that runs counter to this (I assume there is a measure of variability built into the parameters which govern the actions of the various computer controlled groups), but this is an excellent overview of the norm.

The Believers

Are pre-disposed to run Fundy. Any faction they meet who's not running Fundy will get the old "Your (insert government type here) is Godless and wretched..." message, and she'll be belligerent toward you more often than not. Also, the group is not allowed to take Knowledge as a value, so any group running knowledge will be automatically viewed with suspicion. In fact, the only way to truly get on her good side is to run Fundy yourself, which will, by the way, put you at odds with every other faction in the game.

The Hive

Pre-disposed to run Police State (Go figure), and only has one diametric, but it's a kicker....Democracy.....probably the most popular choice among the builder crowd. Run Democracy, and there's simply no avoiding making this faction mad. The only real way to get on this faction's good side is to put yourself in a Police State, and even then, I'd not trust Yang any farther than I could throw the Unity Core.....

The Spartans

Pre-disposed toward Power. Aversion to Wealth and Knowledge. If you run either of these, she won't get along well with you. Wealth, and she'll regard you as weak, Knowledge and she'll say you're "cooking up" some dark and evil secret in your labs. If you run Power as a social choice, this lady will respect you almost as a matter of course.

Morgan

Run Green or Planned, he's a jerk. Run Market (which he's pre-disposed to in the game) he's a happy camper. Frankly, he could care less if you're a Police state or a Democracy....and of all the faction leaders, he's least upset by Fundy (other than Miriam of course).

Lal

He'll be **very** uncooperative if you're a police state or Fundy, and tend to get along with you if you're running Democracy (and that is, unsurprisingly, what he is pre-disposed to).

Zak

Run Knowledge, you get brownie points, run wealth, you lose them with this character.

Deirdre

Predisposed toward Green. Run Green as well, and she'll play nice. Run Market or Planned, and she will despise you.

Cha'Dawn

Not surprisingly, he's(?) pre-disposed to Green, per Deirdre. Be nice to planet, he'll love you, but run Wealth (and to a lesser extent Market or Planned), and he'll go ape.

Aki-Zeta

Generally a pretty easy AI to get along with. Avoid Fundy, and she seems more-or-less okay. Run knowledge, and you get extra points!

Roze

As an anarchist, she's not much into police or power. Run either of those and she'll have a fit! Run a Democracy and you'll soothe her feathers.

Domai

Doesn't care for Knowledge or Green, but he seems okay with about anything else.

Svensgaard

Much like Santiago. He'll love you for power, get ticked at Wealth and Knowledge.

H'minee

No particular aversions, but if you're human or Marr, she'll get in your face....oh wait, that amounts to everybody!

Marr

Aversion is Democracy, but if you're human or H'minee, he'll...oh, I already used that line....:)

So when the game begins, those factors (everyone's SE settings in relation to everyone else's) make up one of the key components in determining how everybody gets along with everybody else. Another key component is strength of arms, relative to the other factions. The gist of the game is this. In general, the #2 guy and #1 guy are designed **not** to get along. #3 guy plays 1 & 2 against each other, and 4-7 go on a hunt for allies of convenience, essentially forming "blocks" of nations around the three strongest.

Of course, alliances will not be made (or at least not kept for very long) with factions who are at odds with the faction's core ideology, which complicates this picture somewhat. And then there is the factor of past treatment. If you have dealt fairly and non-threateningly with the faction in question in the past, even if you are at odds with them ideologically, you can eke out at least a few brownie points.

So.....if all of that has you **completely** bewildered, let me summarize briefly. The AI's "diplomacy engine" seems to be built around three main factors: First, a set of tensions created by the interactions of social choices on the SE table. Second, a comparison of strength, relative to the faction(s) they are contacting, and third, small consideration for how they have been treated in the past (also, there is a random element tossed into the mix, representing their "mood").

In the early game, when you are encountering a faction for the first time, likely they will be pretty friendly because you don't have the techs to make any SE choices they would object to. Take

advantage of this, and make treaties early with people you know you will eventually have SE conflicts with! At least you can buy yourself some time with them and get some commerce income from them.

Note too, that every contact you make with a faction adds to this "web" which is spun out as the game develops....every interaction colors all future interactions....I don't have a specific formula on this, but it's undoubtedly "point-based" (i.e.., if your "rating" with a given faction falls below X number of points, then the group will declare war....running an SE choice they're in favor of nets you so many points, running one they're opposed to causes you to lose a certain number, violating their borders probably has an impact, etc..)

At any rate, those are the basics of the AI's Diplomacy Engine as I understand it. Precisely how you use the information will depend on your playing style and the situation of the moment, but here's a handful of advice, and some things to get your mind turning on the subject:

1)Before you talk to a given faction (assuming you are initiating contact), take a look at your SE settings and then consider then in relation to the other faction's defaults, and do a mental comparison of your overall power in relation to theirs. These two items will give you a pretty good image of what the conversation will be like before you even accept the call.

2)Certain factions respond better to certain inducements. An outline of this is below, but note that you might be called out to back up a threat you make, so use this list as a guide only....if Yang is a gazillion times bigger than you, don't threaten to crush him like a bug!

Yang – Threats
Santiago – Threats
Lal – Good will and friendship
Morgan—"Name your price"
Gaians – Good will and friendship
Miriam – Responds well to nothing
Zak – Technology (not surprisingly)
Cha'Dawn—Threats
Aki-Zeta—Technology
Roze—Technology or "Name your price"

Domai—Technology or Threats
Svensgaard—"Name your price"
Aliens – Technology

3)Take care not to contact factions too often. Even if you're pacted, this seems to strain the relationship. In game terms, this mostly means navigating around AI units you see in the field. Unless you're at war with a faction, if you see a unit of theirs coming, steer well clear.

4)Don't ignore a faction when the call you unless you are **much** more powerful than they are! They despise it, and you'll quickly find yourself in a war.

5)If a faction you have something in common with offers you a pact against a faction you know you are at odds with presently, or will be in the future, think carefully before accepting the offer! If you **do** accept, be mindful that certain things will be expected of you, and should you refuse to aid your ally sufficiently, the relationship could head south rather quickly—in the worst case, your ally will drag you into a war with someone you don't really want to fight, and then, because you're not "helping enough" declare vendetta with you. The commerce income from such a relationship is very attractive and hard to pass on, but you must weight those benefits against the potential trouble that an entangling alliance could get you into. Consider—If you're playing Builder, you're most natural allies in the game will be Morgan, Zak, or Lal....all three pretty good builders themselves. An early-game pact with them against, say, Yang, could be the start of a relationship that will last you for a good long while....perhaps not the entire game, but certainly long enough to be profitable. It could also lead to your being dragged into a war with a large and powerful Yang before you're ready, and if you do not come to the aid of your pact-mate, you may well find yourself fighting them both.

When the Heathens Come Calling

Generally, they'll want to trade technology, and so long as they tech they're asking for is not one of the key ones (air power, fusion, enviro econ) go for it....that's one less tech you have to mess with researching, and chances are good that you can make better use of the technology than your computer opponents. Whether you give in to any other demands they make will depend mostly on your

situation at the moment, but, in general, until I am secure in my defense, I will give in to any reasonable demand.

Violating BordersA very common complaint where the AI factions are concerned is the fact that they love to send units trolling around in your territory. Sadly, there is no good way to deal with this, unless the faction owning the units is an ally. In that case, demanding a withdrawal will work about 85% of the time. If the faction in question has a truce with you and you demand a withdrawal, unless you are overwhelmingly more powerful, you will wind up in a Vendetta with that faction. About the only other alternative is to use probe teams to secretly buy the units off (waiting til a period of sunspot activity will ensure that you won't get caught!), but, depending on the point in the game, and the effectiveness of your probe teams, that is not even close to being a perfect solution.

The Diplomatic Meta-Game

Much more development needs to be done in this area, because, at present it is too easy to take undue advantage of the AI, and I suspect that this is the reason not much work has been done in this area from a strategic standpoint, but, if there is one area that would add an entirely new dimension to the game, then this is it.

As it stands now, you can have quite a bit of fun playing the Meta-Game without doing anything that would be considered a "cheat," and it is certainly well worth practicing, as there will come a day when the AI will be good enough to make this aspect a true challenge....might as well practice while you can....

To play the Diplomatic Meta-Game, essentially you set yourself up as a "bridge faction," sharing a thing in common with two other factions, and brokering a long lasting peace or three-way pact between you and these other two. It takes a bit of practice, but consider this:

Let's say you're playing Lal and you want to practice your meta game. Your natural allies are Morgan and Zak, so you switch to Dem/Market/Knowledge......which ticks Santiago and Deirdre off at you, and both eventually wind up declaring war. You've traded with Morgan in the past, so when you come calling again with a pact

offer after the war starts, offering some cash as an inducement, he will more than likely agree to your proposal. Jointly, you and Morgan start pounding on Santiago and Deirdre, and eventually fight them to a truce. Using this newfound strength as leverage, and offering some particularly juicy tech trades should put you in good shape to wrangle a pact out of Zak.....now the trick is to play the instrument of diplomacy long enough to **keep** your pact brothers to the end of the game.....

Unethical Stuff

Here are a couple things that many, if not most people regard as taking unfair advantage of the AI or of the game mechanics in general. Fun stuff to play around with, but don't be surprised if you get called on the carpet for doing it in a Multiplayer game:

Trading a cheese-ball size one base of yours to your pact sister's size 14 base with nine secret projects.....and the AI falls for this every time. You can pact/trade your way to the best bases in the game in short order if you do this.....of course, it's not a terribly challenging way to play, but it's amusing enough to sit through once or twice....

Switching your SE settings just before you talk to the AI (to gain a few extra "brownie points,") and then getting a refund on your money by switching back the same turn. Has the advantage of making it pretty easy to net good treaties for yourself, but again, in Multiplayer, don't be surprised if people cry foul.

Ethical (?) Stuff (at least from a game standpoint!)

Here are a few interesting ways to make use of the Metagame that you might not have thought of.....just a teaser to get your brain churning on the subject....and besides, I don't want to give away **all** my secrets!

Instigating controlled wars—The setup works like this, let's say your target is Yang. Make a pact with....whomever....somebody Yang would likely have a beef with (Lal's a good choice, thanks to his democracy), and then, in your contacts with Lal, urge him to begin attacking Yang....offering money, some limited techs, or whathaveyou. The idea is to get Yang's forces off balance fighting Lal, and give yourself an umbrella of time in which to build your own army up in, and then strike him from some new and unexpected

direction when you are ready.

Doom to the trusting—This is a fun way to play, and it gets exponentially harder after your first betrayal. Basically, it is the controlled war theory in reverse. You **want** a wicked reputation by game end. Make friends with whomever you wish to destroy. Pact with them (even if it means running SE settings you don't like for a while), lead them into dangerous waters (i.e.., get them to start a fight with one of your supposed enemies), and when they begin the attack in earnest, play the role of the turncoat, switch your SE settings to mirror the faction your former ally is fighting and offer to help.....now you've got him wedged.....doom.

Worm Rape/Rescue—Make a ton of worms and turn them loose in a rival's territory, and contact him after he loses a base or three to the relentless assault. If you've got a truce with the faction (and esp. if they are fighting somebody else), you'll be amazed at how much nicer they are!

Worm Rape/Attack—A good pre-cursor to a war effort (and a strategy drawn directly from one of the SP movies, by the way!). You want to fight somebody, but you don't want to make the first move. Build your army and have it waiting in the wings for the opportunity, and once your force is ready, amuse yourself by raising, sending in, and freeing wave after wave of wild worms......a good way to fight an attrition battle while preserving your "standing" force....and an especially good delaying tactic/holding pattern.

More Diplomacy Notes (Multiplayer Environment)

The sky is, quite literally the limit here, and there is no way that one single document can tell you what to expect, so I'll not even make the attempt. What I will say is this:

The two primary types of games you'll see in an MP game are "Pre-Selected Teams" and "Free-For-Alls." In pre-selected teams, there's not as much truly intriguing diplomacy, because the pacts are set at game start, and it's an "us-against-them" game from turn one. In Free-For-All games though, there's no telling what you'll find. You may get an early alliance with a faction that, in a single player game, would **never** ally with you, and that alliance might be fruitful for the entire course of the game, however, human opponents are wily and you must always be on your guard against treachery. If

you display weakness (or even perceived weakness) in the face of a human opponent in an MP game, you're just asking for trouble.

Diplomatic actions tend to be just as fluid in MP games as they are in SP, but they are not bounded by anything other than the skills and wants of the participants in a game. I've played games where I was given techs as an incentive simply **not** to get involved in a conflict. Sometimes, I kept my word....sometimes not.

I've made force total agreements, settlement direction pacts (agreeing not to colonize in a certain direction or on a certain area of map coordinates in exchange for the same consideration).

Literally, anything you can imagine can be put on the table and an agreement crafted around it, but again, always remember that your ability to make such agreements "stick" is directly proportional to the number of guns your opponent believes you can bring to bear on the situation if the agreement is not kept. Essentially then, the art of MP diplomacy is the art of illusion. It does not matter what the true state of affairs is, and that is a commonly held viewpoint of people new to the MP environment (myself included). The only thing that matters is what the players in the game believe the situation to be. If you are weak, but project strength (and, in the absence of infiltration, no one calls you on it), then you will be treated as though you are strong. On the other hand, if you are strong, but the perception is that you are ineffective at projecting your power, that strength may not hold much water. To that end, it falls to you to practice exuding an aura of strength at all times (unless—and there are cases when this is desirable!—it plays into your plans to feign weakness toward some specific purpose). The essence of diplomatic relations in MP are simply these elements:

1) Make your opponents believe you are dealing from a position of strength (even if it's not true).

2) Find out what your rivals want, and find ways of giving it to them....for a price, of course.

3) Determine how important your rivals hold their desires. The more important they consider them to their overall plans, the higher premium you can charge to meet those desires.

4) Goodwill goes far. On occasion (but not so often that it begins to degrade your position), it is desirable to simply give some small boon to a potential ally. They will not forget.

6)Diplomacy is about human interaction. If you've got a reputation as a back-stabber, like it or not, memories last longer than a single game, and you may find yourself stacking the deck against you in later games by running roughshod over allies in the game you're currently involved in.

<u>Metagame notes for MP Games</u>

MP Diplomacy is dynamic, and much of the wheeling and dealing will likely take place outside the gaming environment, generally in e-mail exchanges between parties that have met on the map, and are therefore allowed to communicate freely under game rules. Often, if three or more parties are involved in negotiations, you may find yourself being invited to a chat room (or ICQ-ing) someplace to hammer out some type of collaborative plan or agreement. If and when this occurs, it is always a good idea to agree beforehand to log the meeting, so that everyone has a record of what was said and what was agreed to....saves arguments later. Plus, if you see someone violating some part of the agreement, you can take action against them!

There is no way anyone can "teach you" the Metagame....it's more a feeling. You can talk around the subject, but it never seems to cut to the core. The best way to learn it is to simply immerse yourself in the stream and feel the currents of the game flowing over you. Instead of merely listening to what is being said at such meetings, try to read between the lines. See what's not being said. Determine **why** certain things are being said. Discern the reasons that certain parties want certain things. Do that, and you will be in a much stronger position in the game, able to predict what your rivals may do when suddenly denied that which they have worked hard for, or how much they might be willing to give you in exchange for meeting their desires.

Good luck, and I'll see you in the truce tent!

*Note! Once more, for a detailed treatment on the subject of the Metagame, turn to page 189. You almost cannot talk about any aspect of Diplomacy without mentioning the Meta-game at least in passing, but there is much more to be said on that subject!

A Primer on Combat
The Mechanics of Battle

Before we move into more advanced combat discussion, it is important that you have an intimate understanding of the forces and factors involved in determining your success or failure in battle. A look at the tech tree quickly reveals a 2:1 ratio of attack to defense favors, favoring the attacker across the board, making the prospect of fighting a defensive based war appear daunting indeed, but those numbers by themselves do not tell the whole story, and there are any number of ways you can help even things out. Read this section closely and consider how to tie these concepts into your overall game, and then pour over the notes on the various early game military units. Even if you're the most pacifistic of Builders, the fact of the matter is that you need to spend some serious time in the Design Workshop to get familiar with your options, and with what you'll likely be facing.

The two principles you need to be focusing on here are:
Know Thyself,
And
Know Thine Enemy
Two phrases you've undoubtedly heard before, but here's what is meant and implied by them:

<u>Know Thyself</u>

What is it that you wish to accomplish, either offensively or defensively? What are your real goals? If you can't answer the question, don't even attempt an attack or a defense, because your efforts will lack direction and focus, and you will be easily defeated. Make a list of specific goals, and plan your attack/defense strategies to meet them. (Example: I know my opponent is using a Rover-Heavy force, so I want all of my frontier bases to have no less than 3 ECM garrisons, and I'd like to have blocking units set up to stall his advance for at least two turns, until I can assess the size of the force and respond accordingly). You see how much more informative that answer is than a generic: "I want to defend all bases."? That's the kind of thinking you need to be doing.

(Attack Example: My opponent has built a string of three

coastal bases on the eastern side of his continent, giving me easy approach to them. Infiltration reports reveal that each base has three best/best garrisons and two probes. I have four cruiser transports at the ready, and now must focus on building Missile Marines to launch an assault, with an eye toward capturing all three on the same turn).

Know Thine Enemy

What does he want? Why does he think you are a good target to attack? If you can answer those questions, you may be able to change his mind. What kind of force is he using? Can I design a defensive counter to that? If so, what will it take in terms of mineral investment? Again, those are the kinds of questions that win games.

The Multiplicative Value of Bases

While it's true that weapon strengths (given comparable tech levels) are twice as good as armor strengths, the existence of the base itself, and enhancements built at the base go a long way in evening the score. The most fearsome weapon of the early game is the Impact Rover. Armed with nerve gas pods, this little attacker packs a major punch for minimal investment (baseline value = 6, as much as 9 if the Rover in question is an Elite....that's impressive indeed).

Defensively, you have High Energy Chemistry, giving you Plasma Armor with a defense factor of 3 (baseline). Your base itself provides you an inherent 25% defensive bonus, and if you've built your base on a sensor array, that gives you an additional 25% bonus that your opponent can't do anything about. The presence of an ECM garrison in your bases will give you another 50% bonus vs. his elite attack rover, and a perimeter defense will grant you yet another 100% bonus! Multiplied out (and remember, it seems that combat factors are multiplied, not added! Important to note!), that gives your defender a value of something in the neighborhood of 11! So much for the 2:1 advantage for the attacker, eh? Any guesses at what the result of that combat will be?

Quite simply, if you properly defend your bases, there's no way that your opponent can reasonably expect to trade blows with you 1:1, even if he attacks with an elite X-rover (assuming similar levels of

technology). It will take at least two attack rovers to kill one of your garrisons. This is not the kind of battle your average momentum player is looking for, and if that's the position you've built yourself to, chances are good that the opposition will simply elect to leave you alone. Add to this an active stance with regards to patrolling your lands (which will give you plenty of advance warning when the enemy is making his approach), and you are in a strong position indeed, as you will have the time and cash to bolster the defenses at border bases, upgrade your probes to armored variants to help with defense, and perhaps even recall a former or two until the danger passes, which could give you a total of ten or more defenders at your threatened base!

What about outside the base though? Surely with a 2:1 advantage in base strengths, the attacker can get his licks in someplace! And you would be correct. Outside the base, your plasma garrison is virtually fried if he meets an X-Impact rover, but even here, if you see him coming and have a bit of time, there are things you can do to help even the odds. First, head for the rocks. Fifty percent bonus for defending on rocky terrain or in the forest. Second, keep your forces inside your sensor net. That's another 25% bonus. Third, fight from a higher elevation. If you make him attack uphill at you, you get another 12.5%. Now, assume that your defender is "Disciplined" and the X-Rover is elite, and the numbers come out to be something like:

Attacker – 9, Defender – 6.3. You'll lose, yes, but your opponent won't be in great shape either. (Of course, here we're talking about your Infantry garrison against a Rover-based attacker, and against a faster opponent, don't count on being able to net yourself all of those bonuses. Chances are, you won't).

The lesson here:

Do not expect that you will win many defensive engagements with your opponent if he catches your units outside their base. You won't. What you will do though, is stall your opponent's advance and weaken his forces before they can even reach your base, buying you time to ready further defenses, and remember, time is very much on your side. An early game "large" attack force will usually not contain more than ten or twelve units, counting artillery support

and probes, and if, by sacrificing a few well-placed field units, you can stall the advance of his attack group, you buy yourself time to move spare garrisons to the embattled base, armor unarmored defenders (canaries with teeth), and ready additional probe teams.

Another thing to keep in mind is that your opponent is not the only one who can take advantage of attack strengths, and in almost all cases, your opponent's attack force will be lightly armored or totally unarmored, meaning that if you can but hold the base for a single turn against his attack, you will have a chance to counter-punch, knocking out his weakened defenders, (except for the last one, which, if you have the energy, you can subvert), and in that way, very quickly be rid of the attacker's army. Note too, that you have one very important advantage on defense, and that is, if your opponent kills a garrison, the other garrisons in the base take no collateral damage. Most often, your opponent's attack force will be in a single square and stacked (usually on a road), so when you start hitting back, every unit you kill will damage all the others in the stack, and, since your opponent is on your turf, about the only advantages he will have will be terrain ones, which won't help much if his attack force has no armor.

In later sections, you will find more information on stalling your enemy's advance through your empire, buying time, and counter-punching for maximum effect. For now, it is enough to get your mind turning on the principles of battle itself. The mathematics that drive it, and to know that, as a defender, your lot is not as hopeless as it might initially seem. Just remember that the more turns you can stall the attacker's advance and hold onto your embattled base, the less likely your opponent will be to take it at all. Each turn tips the scales further in your favor, so if you're fighting defensively, it behooves you to become a master at delaying tactics.

If your opponent uses Infantry to assault your base, he'll get an additional 25% bonus on the attack, but such attacks are harder to set up. Unless the units are elites, he'll have to either park just outside your base for a turn (giving you the opportunity to strike first), or begin the attack from one square away (meaning that he'll be at a 33% disadvantage, which more than compensates for the 25% bonus he got by using infantry in the first place). Either way, infantry attackers are easier to deal with than rovers (which can

begin from three squares out, and still hit for full strength), though you do lose your ECM bonus if fighting an infantry based force.

If you have probes in your bases (and you'd better), then you will also want to have at least one unit of Artillery at each base (preferably on a rover chassis, to enable you to move them around easily), since one of the most common ways of weakening enemy probe teams is via shelling in advance of the probe attack. With an artillery unit standing by, the shelling never occurs, and the two "field guns" simply duel each other, which again, buys you time.

When planning your defense, serious thought needs to be given to your standard base layout. If your bases are five squares apart (optimally spaced), then you will want to utilize a "Rover-Defense" model, enabling your spare garrisons to move from base to base in a single turn. Infantry Defense is impractical with your bases so far apart, as your forces will be vulnerable for the turn they spend between the bases, and, you will not be able to reinforce an embattled base in a single turn.

With bases spaced three (or less) apart, your defensive options increase (in addition to becoming easier), and you will be able to use a mix of Infantry and Rover garrisons, which in turn, will enable you to get anywhere from 4-6 additional defenders to a battle site in a single turn. This, combined with the presence of the previously mentioned "canaries with teeth" (formers, crawlers, and other innocuous units which can be armored in a pinch and make stout base defenders) will most often more than match your opponent's attack force, making it difficult, if not impossible for the attack to succeed.

Turning the Tables

Looking at things from the attacker's point of view—Before you launched the attack, it is assumed that you successfully infiltrated the enemy's datalinks, and therefore, know what you are getting into, and since that is the case, it makes sense to assume that you have designed your attack force accordingly (taking into account the possibility of additional defenders being built during the time it takes for your attack force to arrive at the base you have targeted for capture or destruction) and before you commit your troops to battle, it is always wise to take another look to see what your opponent has waiting for you.

As the attacker, your very best friend though, is the element of surprise. Knowing that your troops have no ready way to receive reinforcements, and knowing too that your initial attack force will likely be dead long before said reinforcements could arrive anyway, your goal is to establish a stronghold quickly (i.e.—in a single turn) and to hit your opponent totally unaware. Therefore, it is paramount that you keep a close eye on the base(s) you have selected as your target, and watch for changes. If you don't think you can take the base with your current force, hole them up somewhere and build additional troops to add to the attack force before starting the attack run and giving away your intent. Better still, send a smaller, secondary attack force to make a demonstration against some other part of the empire, or subvert a small base on the opposite side of the empire in an attempt to divert your enemy's attention away from your true objective, and when his attention is diverted, drive in fast and hard, and take the base before the defender has time to do any of that fancy defensive footwork.

If you have a few units with left over moves, and if your goal is to hold the base, then send one or more of them out in the direction that the expected counterstrike will come from to stall the advance of the counter-strike force and give you time to rest your units and build more. If it doesn't look like you can hold the base, then sell off the most expensive facility your opponent has there, and burn the base to the ground, then withdraw your force to a less accessible part of the continent. You're still a threat, in the sense that you're on your opponent's soil with significant force, and that alone will likely throw him off balance (in addition to the fact that you've already "won" in the sense that you have denied him one of his production centers). Over time, such attacks will give your opponent a "death by a thousand cuts." No single victory is decisive, but over time, you will steadily whittle him down, and ruin his carefully constructed infrastructure.

Basic Combat Theory (MP and SP notes included)

First understand that there are only two types of warfare you can possibly enter into—An offensive action, or a defensive action. Beneath those two types of warfare are a number of "tools" you can make use of, and I'll cover the basics below:

The Basics

So, you went and picked a fight with somebody? Or, someone decided to pick a fight with you? That's okay, and it's all part of the game, but like anything else in SMAC, if you're going to fight, you're better off having a plan of action, and it is my hope that this section will give you just that.

Attack and Defense in the early game

Prior to clean reactors, the size of your army is directly related to two key factors: First, your support rating. The bigger it is, the bigger your army. And second, your total mineral outputs. Because of these factors, attack forces (and base garrisons) tend to be relatively fewer in number during this stage of the game, which is why early game attack forces seldom number above 10-12. Now, the exact number of attackers or garrisons you will have at your disposal will vary depending on your situation, but here are some general guidelines to use.

Builders

Preservation of a large portion of your industrial capacity is vital to the rapid completion of your infrastructure. To that end, you will want relatively few garrisons, relying instead on "token forces" (usually one at each base), prototypes, and early game "clean" units such as crawlers and probe teams which can be armored if needed to help bolster defense at beleaguered bases. This is also why armoring your formers is important as soon as you have the money and time to do so. You need the formers to perform terrain enhancing builds for you, so why not have them pull a bit of double duty? By armoring them up, you create a backbone of units that can serve several purposes at once. Terraforming in times of peace, and helping with base defense if you are attacked, which will buy you time to build "proper" defenders.

Also note that for Builders, since money is generally no object, most, if not all of the garrisons in your frontier bases can easily be outfitted with best/best configurations—making your garrisons able counter-punchers—but in general, unless you've just got cash coming out of your ears, it is wise to leave your spare troops in the

interior as common trance scouts and empath rovers until you see the bad guys approaching, and then, after analyzing the force, you can upgrade to whatever will provide the best defense against that attack force, and move them into position. Of course, to make that work, it means you will have to rely on a network of "clean units" (usually probe foils) to constantly patrol the various approaches to your holdings. If you don't feel like doing that, then upgrade everybody you can to best/best, and simply bulk up your exposed bases, but this is generally viewed as too static a posture, and opens the door for attack.

Hybrids

With flexibility again creeping into the conversation, you probably want to preserve a healthy chunk of your industrial output, but not with the same zeal as the Builder crowd, who sometimes flagrantly ignore defensive concerns for the sake of rapidly developing that all-important infrastructure. Commit no more than one third of your total mineral outputs to the construction of attack and defense forces. For most mineral heavy bases (figure 15 minerals as a baseline), this means you can support five units after you eat through your "free" slots, and still have ten minerals per turn for building. That's not bad, and even if you're running Democracy, you will still be able to field a significant number of troops. Unlike the Builder stance, you will probably want your entire force ready to go at a moment's notice, which means that, rather than having a group of Trance Scouts sitting in the safe zone, you'll upgrade your troops as you get them, and assign them where you suspect attacks are likely. The forces not relegated to passive defense will be out trolling for the enemy, or perhaps carrying the fight to him via small scale task forces (escorted transports, loaded with rovers).

Momentum

Jack up your support rating to as high as you can get it, and build troops until you eat up all your free slots. Then, designate about a quarter to a third of your "paid" slots for transports, formers and the like. This will give you, hands down, the largest armies on Chiron in the early game, and should enable you to

dictate terms to your rivals whomever and wherever they are. Delegate some minimal portion of this to provide for your own defense, and send the balance of them out hunting. Remember that, at this point in the game, minimal defense is about all that will be needed against a Hybrid attacker, and Builders won't be predisposed to hit you unless you make trouble for them first, so at this point in the game, your biggest concern is finding other Momentum players and hitting them before they can hit you. Knock another Momentum player out of the game, and absorb his empire into your own, and you create economies of scale simply by having more bases than anybody else.

The first and most important thing to discern when preparing for war is: *Who is my enemy?* In most cases, that's a pretty obvious thing, but sometimes it can be trickier than you might first realize. True, your immediate enemy is the guy who just dropped half a dozen missile rovers in your territory, but you have to ask yourself: Did he do it because I made him mad, or did somebody else put him up to it?

Before you can coordinate a worthy defense, you need to know the answer to that question. If you got framed for someone else's probe team action, you might be able to end the fight with a bribe and get back to doing whatever you were doing before you got interrupted. Then again, maybe not.

The second most important thing you need to determine is: *How many enemies am I fighting?* Nothing is worse than being forced to fight a war on multiple fronts, or take on several different opponents at the same time, so if you are suddenly confronted by a new and powerful adversary and you're neck deep in another war which is taking up large amounts of your Empire's resources, then sue for peace somewhere, or see to it you bring the war you're already in to a very rapid conclusion.

Specifics: Fighting a Defensive War

The overriding purpose of fighting a defensive action is to preserve your bases and make sure they do not fall into enemy hands. Builders, you'll want to read this. The best way to fight a defensive war is to be ready for it at any moment. This means prototyping regularly and often. It means making sure that all your

bases with even minimal exposure have garrisons sporting the best available armor (and AAA capability, as soon as you get it). It means making sure that your frontier bases (with greater exposure) have at least twice the garrison strength of the bases in your interior, and it means making damned sure you've got a core of attack-capable troops (probably the guys you still have hanging around from weapons prototyping). It would also be helpful if you had some artillery units handy, so as to shell damaged units until your attackers can get in to finish them off.

To fight a defensive war, about all you need is up to date garrisons, a small standing army, and some probe teams. If you have those things, your opponent will need a truly large force to successfully invade.

When faced with an attacking army, here's what you do:

Look at how your enemy is approaching. Try to figure out which bases are most threatened, and consolidate your defenses there.

Move probe teams up to take advantage of any misstep by your opponent. If you can find a single unit in a square and subvert it, you've just made yourself stronger and your opponent weaker, and time is on your side. Your opponent has to bring reinforcements in from some distance, while yours are arriving right at the scene of the battle.

Upgrade any formers you have in the area to armored variants and use them to mess up his Zones of Control. This will stall his advance, and armored formers in the forest or on rocky terrain are very hard to take out.

Fight from your bases as much as possible, or, barring that, make sure your best attack-troops can end their turns back inside a base so as to decrease their exposure.

Defend any Monoliths close to the battleground with the best garrison forces you can get there, to deny your opponent that resource to heal damaged troops.

Use armored formers and crawlers to envelope or cut off a part of the enemy's army. Once it's isolated, you can deal with the smaller elements of the force one at a time, smashing one while the other tries to get through and rescue it. This will take pressure off of your bases and give them more time to crank out units.

Attrition is your friend, when you are fighting a defensive action. Your reinforcements are close at hand, and it's likely that his are not. Grind your opponent down slowly. Make every square he advances into a very expensive proposition. If you make the advance expensive enough, he'll either give up and go home, or you'll wipe out the entire army. Either way, he'll likely find someone less-prepared to pick on, which is exactly what you want.

If it appears likely that you cannot hold a base, then burn it down. Adopt a scorched earth policy and retreat back to the next line of your bases. Leave your opponent nothing to work with. You can rebuild later, once the threat is gone.

Take note of the composition of your enemy's army. Is he using lots of artillery? If so, crank out the best attack rovers (no armor) you can get to the field quickly, and wipe them out. Is he using lots of rovers? Great! Upgrade your garrisons to Comm-Jammers and laugh at him as he tries in vain to take your bases. Is he infantry-heavy? Again, build fast-attack rovers and meet him in the field. (This is the main reason that Momentum Players get beaten. They tend to focus on very narrow army construction....most often, they make **lots** of rovers with little to no armor and the best weapons they can afford. That's okay, but the first time they take their all-rover force into a prepared opponent's territory will be the last they see of their much cherished army).

Destroy anything that might be of value if it seems likely that your opponent will take a given position. Deny him access to your bunkers, sensor arrays, and even forests. Again, once he is gone, you can rebuild all that.

If your enemy brings a colony pod with him, do everything you can to take it out before he builds a base. If it's too late to prevent that, try and slip an armored probe team in to subvert it, or, use a foil probe team, as the base will often be coastal, and therefore vulnerable to that.

Build one or two transports and drop off some sturdy defenders (and one or two decent attackers) behind your enemy. This will give him something else to focus on besides the bases you're trying to defend, and, if he doesn't focus on them, it will give you a new direction from which to strike. Either way, it will help your cause.

Put probe teams in all your bases, and more than one in your

exposed bases. Count on your opponent trying to infiltrate you, and if he does, he'll have to contend with one or more probe teams first. Do not make that an easy thing for him, and if you have technological superiority, you will want to preserve that at all costs. Probe teams can do that for you.

One final note about fighting a defensive war is this: Best of all is if you can stop your opponent before he even lands his troops. To that end, when you get missile techs, build a few and put them on your borders in "patrol mode." Any unfriendly ships come toward your territory, the missiles will take them out, saving you a whole lot of time and trouble.

Fighting an Offensive War

If you want to take the fight to your opponent, there are several things you can do to make your life easier. First, and by far most important, is to infiltrate his datalinks (assuming you're not planetary governor). You need to know what kind of defenses your opponent has at the ready, and what's in his production queues. Information is the most powerful weapon you have.

When preparing to fight, you need to make sure you don't bite off more than you can chew. Start small. Select one, maybe two objectives and bring sufficient force to secure those objectives.

The most important thing you will need in order to fight an extended action on someone else's soil (outside of an army, of course) is a base of operation. That could be a coastal monolith, or perhaps an isolated base. Either way, before you proceed with a general invasion, you will want to make sure you have a place to bring your battered forces to get them combat ready again.

Your best bet is to subvert one of your opponent's small border outposts and use that as your staging point. You take the base without fighting, you preserve that base's garrison, and you give yourself a staging ground.

Second best is to bring a colony pod with you when you land the attack force. Just be sure your army contains some covert operatives, so your newly founded base does not get subverted out from under you!

Last, would be to make use of a Monolith in the area as your staging ground. If you can take one easily, it gives you a place to

repair your units quickly, but it still does not solve the reinforcement problem if things get dicey. Still, it's better than nothing, and if it's what you have to work with, then it's what you have to work with.

Construct a well-balanced attack force. Mix it up to confuse your opponent. Don't rely exclusively on infantry or rovers, because there's an easy counter to that. A mixed force is significantly harder to defend against.

Make sure you have enough cash to support the war. Nothing is worse than going off to fight only to find out you can't support your army with covert ops because you're strapped for cash. You must balance your rush building program with saving cash if you know you will be going to war soon, because it's an expensive proposition. You need funds to rush build garrison troops in conquered bases, and rebuild infrastructure. You'll also need funds for troop subversions and such, so make sure you have the bankroll to support your war effort (I'd recommend at least 1000 EC per base on your "hit list.")

Create a diversion. If your plan is to take two coastal bases on the eastern side of your enemy's empire, then start your war by subverting a base on the western side to get his army off balance (or, land some troops on the western side to start making trouble). If you're really devious, create a number of diversions so that your opponent will pull himself apart trying to deal with the various threats you've created (additionally, the more diversions you set up, the more difficult it will be for your opponent to discern your true objective).

Make use of artillery to take out sensor arrays and to hammer beleaguered defenders in the base you're after. Never give your enemy the chance to rest his troops.

If your goal is conquest, do as little damage to the infrastructure as you can get away with. If your goal is to simply hurt your opponent for some larger purpose (i.e., an ally of yours is on the way with the real invasion force), then do as much damage as you can before your forces get whacked.

If you're not at technological parity, use your probe teams to get you there. If you already are, use them (your probe teams) to stall his production or destroy infrastructure. Anything to give you an edge.

The quicker you can secure your objectives, the better off you

will be. You don't have a ready supply of reinforcements (unless you've planned very far ahead), and even if you do, your opponent can get reinforcements more quickly than you can, so win your initial battles quickly, then drop to a defensive stance to protect your newly acquired holdings. Once you are entrenched on your opponent's land, you are much harder to deal with than if you're simply a marauding force.

Never miss an opportunity to subvert enemy troops, formers, crawlers, or what-have-you. Every unit you subvert can be put to some kind of use (even if all you do is upgrade the former to an armored variant and use it to make sure your units are at least double-stacked).

<u>Additional Combat Notes specific to the MP Environment</u>
The essential elements of warring in SP work for MP, with a few key differences:

First and most importantly, your opponent will not have perfect knowledge of where all your units are. Likewise, you won't know where all your opponent's units are, so you need to be **much** more on your guard for surprise attacks, or attacks from unexpected directions. It's standard practice for human opponents to relieve pressure on a given area by opening up a new theater of action on a new front. You either respond to it or get flanked. AI's will never do this. When they attack, they attack clumsily, and in linear fashion. Your human opponents generally will not, unless they are very new to the game, and even then they'll learn quickly. Be ready for that.

Expect your opponent to do strange things to try to throw you off balance. Sometimes, those strange things are colossal failures, and they actually wind up making your job easier, but sometimes not, and if not, write down the things that worked on you, and try using them yourself! It's one of the very best ways to learn.

Remember too, that the amount of damage military units can cause in terms of lost production and infrastructure are all out of proportion to how many minerals they cost. Essentially then, you get a lot of bang for your buck. Never forget that, and do not take even a scout patrol wandering through your territory lightly. It can be upgraded in an instant and strike! (something else the AI will never do).

Chapter Four

A Closer Look at Early Game Units

Ground Pounders-N-Garrisons

Infantry units form the core of most of the armies on Chiron. They are relatively inexpensive to build, capable defenders, can be configured to make good counter-punchers, and in some cases (specifically in the cases of Elites and Marines), they are superb units for making base assaults. Because of that, it's important to take a look at your various early game options.

<u>Defensive Possibilities for early game infantry</u>
Depending on how you climb up the tech-tree, it is entirely possible to get Neural Grafting in the early game, and if you do, this will greatly expand your options where garrisons are concerned, because it will enable you to creatively mix and match defensive options, which will allow each of the garrisons you have to fill a number of roles, but before you can focus on what types of garrisons you want to build, it's important to know what your options are. Of course, that is largely driven by just how many techs you have, so not all of these options may be available to you right away, but all the ones listed below are easily obtainable in the early game.

Synthmetal Armor

Better than nothing, but not great by any reckoning. Unless you are under early fire from a rival faction, you're best bet is to prototype a single combat unit with this (to get the Morale upgrade), and then spend some cash to upgrade that higher-morale unit to some more useful configuration. Synthmetal is normally relegated to units which normally do not come with armor (probes, formers, and crawlers), to enable them to gain combatant bonuses—and to negate the 50% non-combatant penalty—and Morale upgrades for surviving battles.

Plasma Armor

The best defense money and minerals can buy in the early game, and the technology which the vast majority of your defensive strategy will be based. With a baseline defense of three (3), further impacted by the presence of defensive builds (Perim. Defenses, and Sensors, primarily), a Plasma-Garrison will serve you well. Also considering that Laser weapons are the same price as none at all, and considering that most attackers prefer lightly or unarmored units (relying more on speed than the ability to hang in a fight), a 2-3-1 Garrison will give you the ability to survive a hard hit, and then hit back when it's your turn (giving you a 2:1 advantage against that unarmored Impact Rover).

Pulse Armor

More expensive, but also providing an additional 25% bonus against Rovers, which are the favored attack unit in the early game (they don't call it a "Rover Rush" for nothing!). Good to keep a few of these guys around if you're expecting trouble, but better still to keep a sharp eye out, and selectively upgrade your "regular" Plasma Boys on an "as-needed" basis.

Resonance Armor

Like Pulse Armor, above, it's also more expensive than "regular" Plasma Armor, but provides an added 25% defensive bonus against Psi-Attackers. If you're under fire from a "Planet Heavy" faction (Caretakers, Gaians, or Cult), or if the native worms are paying you repeated visits, Resonance Armored garrisons (especially when

combined with Trance ability), will enable you to stand well against them, even if you're running a Free Market Economy.

ECM

A wonderful defensive ability to give your garrisons, as it grants you a 50% defensive bonus against those cursed Rovers! Of course, the key here is that the ECM bonus gets stronger as your armor factor increases (An ECM Synthmetal Garrison would defend with a baseline of 3 against a Rover of any type, while an ECM Plasma garrison would defend at 4.5). Also a wonderful offensive tool, as a Rover under fire from an Infantry unit armed with ECM will not be able to withdraw from the battle!

Trained

One free Morale upgrade, amounting to a 12.5% increase in capability!

Non-Lethal Methods

Depends on what kinds of Social Choices you're running. Under Market, this won't do anything for you, but under Planned, each garrison with this ability counts double for purposes of Drone Control.

Deep Radar

The ability to "see" out to two spaces is primarily useful for units serving in a scouting role. In base squares (especially in bass built on top of a sensor array), it's a redundant ability.

Polymorphic Encryption

Doubles the cost to subvert the unit. By extension, if the unit is inside a base, it increases the costs of subverting the base. Something to keep in mind if your last probe team just died.....

Nerve Gas

Adds a big 50% to your attack value! No defensive bonuses here, but if you are attacking a base with an X-unit, and you kill the defender, the base loses population quickly, making this a menace indeed!

<u>Trance</u>
Gives you an additional 50% bonus against Psi-Attackers

<u>Empath</u>
Good for counter-punching units which will be fighting worms. Empath ability has no effect whatsoever in a purely defensive role, however. If you make these guys, you need to be attacking with them!

<u>Amphibious Pods</u> (Marines)
Enables Infantry units to attack from sea squares. Essentially, this enables troops ferried in via a transport to attack from the ship to the base. Under these conditions, Infantry attackers are actually superior to Rovers for base-assaults, as Infantry get an additional 25% bonus when assaulting a base, and the Infantry's ability to attack is in no way affected by the movement of the Transport that brought him to the battle. This means that your Transport Foil (movement of three), can begin his Attack Run from three squares out—outside the sight range of even a coastal sensor array—and strike at the base, effectively giving Marines a greater range than Rovers, except where the Rover is moving along a totally uncontested road. Head to the "How To" section on setting up Marine-Based attacks to learn more!

Amphibious pods also provide a defensive capability in the sense that infantry units with pods stationed in coastal or sea bases can actually launch attacks against enemy ships adjacent to them, making them good counter-punchers.

<u>Bombardment</u>
In a word: Artillery. This enables you to "snipe" at enemy troops before they actually get near your base. If you can stall your opponent's army two squares out with a sacrificial unit, you can attack and weaken those lightly or unarmored units, inflicting light to significant damage, depending on what type of terrain you catch the units in.

As you can see, these various options can be combined to create garrisons which are either fairly generic and capable of

being upgraded to a specific configuration when you know what you will be facing, or money permitting—and especially if you get Neural Grafting in the early game—you can create 2-3 defenders in your fringe bases which will almost entirely shut down specific types of attacks. Just imagine the difficult time your opponent would have assaulting your base if it contained three garrisons, each configured with Resonance Armor, High Morale, and ECM capabilities. That, combined with the presence of a Command Center, Children's Crèche, Sensor, and Perimeter defense (and a few probe teams to prevent the base from simply being stolen, or your defenses ripped out), would make the base nigh invulnerable to all but the most overwhelming of attacks. Furthermore, Neural Grafting enables you to begin work on the "Neural Amplifier" Secret Project, and, when completed, that will give all your units a 50% defensive bonus against Psi-attackers, rendering your bases nearly immune to attacks by native life.

(How-To Note: Designing cost effective garrisons—The goal here is to avoid having to actually build these high powered garrisons. Far and away a better choice is to build an inexpensive unit and use cash to upgrade him to something more useful the following turn. To that end, it is important to note that a Trance-Scout patrol costs you exactly the same amount as a "regular" scout, and gives you significantly more defensive capability for your ten minerals (before industrial bonuses or penalties are considered). For that matter, since Laser weapons are the same price as none at all, you can cheaply build a 2-1t-1 scout, and upgrade him from there to whatever configuration suits your needs of the moment).

Attack Troopers

Of course, Infantry need not be relegated to defensive or counter-punching roles, and (especially in the case of Marines), your Infantry can be configured into a potent attacker in his own right.

From a purely "Mineral" standpoint, it is often cheaper to build one defensive unit and one offensive unit, and this is frequently the route taken by those on the attack—and why the bulk of their attack force has little or no armor. Sure, they will bring along a few stout defenders, but by and large, their attackers will be all guns and no shields. For Builders and Hybrids though, more interested in defending hearth and home, the equation is a bit more complex than

that. Support costs are also an issue, and because of the presence of support costs, if you're looking to defend your bases and be able to hit back hard, it is quite often in your best interest to make each one of your units able to fill any number of roles. Thus, if you've got the resources to pull it off, try to arrange at least one unit in each of your frontier bases to have a "best/best" configuration. That is to say, the best armor and the best weapon that money can buy. This will enable that single unit (and that single mineral's worth of support cost) to fulfill a variety of roles. Plus, when you find yourself on the attack, your well-rounded troopers will serve you well, enabling the unit that takes an enemy base to sit back and absorb the next turn's counter assault, if one is forthcoming.

Play in the Design workshop, and, as you get more tech, design a variety of units that you think you may someday need. Better to do all that when you're at peace than have to rush through it when a mixed force of Rovers, Infantry and MindWorms show up on your doorstep demanding attention!

Native Life

As you progress your way up the tech-tree, you will find yourself able to grow your own mindworms, beginning with the standard variety, later adding spore launchers and IoDs, and finally Locusts. All the native life forms are more expensive to build than their non-native counterparts, and you're generally better off improving your Planet rating and trying to catch a few, as opposed to paying the build cost. Nonetheless, there are times—especially depending on your faction of choice and where you are in the tech-race—when building worms is the way to go!

How-to Notes: Deciding when to use worms: A very simple rule of thumb to plan by is this—If you're ahead in tech use it, if not, go native! If your overall strategy calls for spending long periods of time running "Green," worms, especially IoD's, will be a boon to your military apparatus. Add to that basic consideration the SE choices of your opponent. If your opponent is running Market, worms will be a boon to your attack force! Finally, if you're playing either of the "Green" factions—The Gaians or The Cult of Planet—native life forms should almost always play an important role in your military.)

RoversRovers make up the backbone of most strike forces. They are fast and maneuverable, and anything that can be done with infantry, can be done with their more expensive cousins, rovers. Where Infantry excel at striking at

bases (with their 25% additional bonus), Rovers excel at striking hapless units out in the open, getting a 25% bonus on the attack there, so long as they're not in rocky or forested terrain. The Rover's main strength though, lies in its ability to begin an attack run on a road, relatively far from the target base, and still strike for full power. Thus, it is possible to approach the target unseen and take the enemy by surprise—before he can selectively take out roads and impede your progress. This ability is of paramount importance, and if you practice making attack runs in this fashion, you can often hit your target before the defender has a chance to do anything tricky. Rovers enable you to exert a measure of influence and control over the enemy's own infrastructure, denying him selected squares, controlling choke points, and having sufficient moves to go around attempted blocks, if those blocks have not yet been fully established...if they have, well, read the "How-To" in the Zone of Control section for ways around that! (Pg. 186) All in all, if you're planning to launch an attack, you will find the added speed of Rovers will serve you well in a variety of circumstances.

Naval Power in the Early Game

Early game Naval Power falls into two distinct categories: Pre-Doctrine Initiative, and Post-Doctrine Initiative. Both are important, if Naval Superiority plays a role in your game strategy, but Navies in the Post-Initiative world are vastly more dangerous! Still, both eras of Naval Power will be given a close examination.

Ships of the Line

One of my favorite "Pen and Paper games" is Starfleet Battles, and I have found that much of the knowledge I picked up from years spent playing that game transferred nicely to SMAC and SMAX. Thus, I have adopted the ship designators from that game to here, and you will find them below. I mention this simply to provide a frame of reference, and provide some common definitions and shorthand for terms you'll run across later in this document.

Frigate (FF)

Defensive craft, built on a foil chassis. Good for scouting and providing cover for probe foils in the pre-air power world. Usually has max armor, gun or laser as a weapon, and whatever defensive special abilities are available. Commonly seen in an escort role—as per probe foil cover, above.

Destroyer (DD)

All guns, minimal shields (go with whatever shielding level will not raise your cost). Also built on a foil hull, these craft are the ones that do the bulk of the sea battling in the early game.

Heavy Destroyer (HDD)

The best money can buy. Max armor, best weapon, a menacing ship, frequently found as the flagship of early game fleets. Later replaced by Battleships (see below) or other "capitol ships."

Light Cruiser (CL)

Built on a cruiser chassis, this craft fills many of the same functions of a frigate, but with more speed and maneuverability. Generally Light Cruisers will be outfitted with middle of the road armor and weapons, so they can be mass-produced cheaply, and upgraded to other configurations as needed (in the early game, this will almost universally be Synthmetal/Laser cruisers).

Cruiser (CA)

The mainstay of fleets in the post-initiative worlds. Taking advantage of relatively low armor costs for ships, these fellows generally have the best shielding and weapons that money can buy, but skimp on special abilities. They're the workhorses of the post-initiative fleet.

Battleships (and specialty cruisers)(BB – Battleship Designation)(CC – Command Cruiser Designation)(HCA – Heavy Cruiser Designation)

Utilizing best/best configurations, and mixing in a variety of special abilities, these ships are top of the line, and before the advent of airpower, they are the fastest, most maneuverable, most powerful units on Planet (arguably even besting the greatly feared IoD!).

Light Transport (TL)

Designed on the old-style foil hull, these boats are slow and don't hold much in the way of cargo, but are nonetheless useful in a number of situations. These include exploration, recovery of

unity pods, commercial shipping concerns (transporting colonists and terraformers), and in sufficient numbers useful for launching assaults (although they are limited to two (2) cargo spaces).

Heavy Transport (TH)

Pretty much as above, except the units are outfitted with best/trance, to give them a greater chance of surviving to reach their objective if their escort ships come to a bad end.

Destroyer Transport (TDD)

A transport based around the cruiser hull, and generally running unarmored, or lightly armored at best (standard Destroyer doctrine), the TDD is faster and able to haul more cargo, making it much better suited for the launching of assaults against coastal bases. Also, this configuration is ideal for the mass-transit of large amounts of civilian equipment from island to island, enabling you to ferry across a colony pod, former, base guard, and supply crawler all at once.

Cruiser Transport (TCA)

Again, based on the cruiser hull, but outfitted with the best defensive measures money and tech can give them, this is the classic "heavy assault" cruiser, taken into the hottest of hot spots—with support—and fully capable of performing independent, clandestine, small-scale operations with a detachment of Marines.

Isles of the Deep (IoD)

The hands-down most versatile, attack-capable unit in the game, IoD's are extraordinary! They can attack well, defend well, and serve as a transport! They're more maneuverable than the foil-based ships—especially considering their ability to move freely through fungus—and can heal "in the field" (again, fungus), rather than being tied to trying to limp back to a base to effect repairs. If you don't have at least one in your early game navy, then you need to switch to Green and send one of your FF's to go play in the fungus till you catch one!

<u>Sealurks</u>

The native equivalent of a destroyer, if you're running one of the "Green" factions, a sprinkling of these can be a handy addition to your fleet.

Navies in the "Pre-Initiative" world

During this time-frame, the principle purpose of your navy to expand your knowledge of the world around you. Exploration and defense is significantly more important than the ability to launch an attack, so your most common foil based ships will be probe teams and trance frigates (enabling them to stand a reasonably good chance of surviving an IoD attack). If you've started on a small landmass, or have pod-scattering turned on, you'll likely see a number of heavy transports in the water as people race to pop those sea pods!

Because of the versatility and usefulness of IoD's, one of your primary early-navy missions should be to arrange for the capture of one. Generally, this means switching to Green and sending one of your FF's to go play in the fungus until you find one, then go for a capture, and when you **do** capture one, he'll likely serve for quite some time as the flagship of your fleet, being the best all-around unit you've got.

Naval engagements during this point of the game will be mostly confined to light skirmishes as people unroll more and more of the map. Assault-wise, with foil-based transports and no marines, your best bet will be to make use of rovers, as they will be able to unload and still attack on the same turn, though you will likely need at least two transports worth of Rovers to mount a significant threat, and more than that, depending on your objectives.

Navies in the "Post-Initiative" world

Once you get to Doctrine: Initiative, things begin to get a lot more interesting, navy-wise. First and most importantly, you get the new Cruiser Hull, which gives you ships with more movement (and in the case of transports, more cargo space).

Second and nearly as important, you get a wonderful Secret

Project which, when built will give you Naval Yards in every base (effectively adding 25% to the attack strength of your units), and giving them two additional points of movement. If navy plays even a modest role in your overall strategy then this is a project you don't want to miss out on!

Finally, and nearly as important as the first two, you get Marines, and the ability to launch infantry strikes at coastal bases from distances well outside of sensor range. This is important because unless your opponent is actively searching for you and/or patrolling his coast, you will oftentimes be able to slip up to the base and overwhelm it with your Marines before he even knows the attack is coming.

(How-To Note: Taking an enemy base with a Marine Strike! Pretty simple really, but here's how to set it up: Infiltrate, and determine the number of defenders at the target base. Bring a number of Marines along equal to the number of defenders +2 (in case things get dicey). Position your TCA in such a location that is off the beaten path, shipping wise (so your opponent likely won't stumble into your task force during his turn), and a number of spaces distant from the base so that you can move the transport into the base once you capture it—note however, that sometimes, this is impossible to set up, and if it is, then plan to leave the transport just outside the base until the next turn (if it lives that long). On your next turn, move the escort ships up to the base and fire an initial volley to soften up the defenders, then move in with any probe teams you might have brought along to strip out any Multiplicative enhancements that will make taking the base more difficult—note here, if you think you can win without doing this, then by all means, leave them in place, as it will make your own defense an easier proposition—finally, move the transport up and start hammering the garrisons. With luck, you will have planned correctly, and have 1-2 Marines to take the base with, and with a bit further luck, you'll have one final transport move to get the ship inside to relative safety!)

Marine assaults are very difficult to defend against, and once one player has Doctrine: Initiative, only constant and diligent patrolling will keep the coastal bases safe, as there is no way that a defender can build enough garrisons in all his coastal bases to prevent you from sweeping in and overwhelming one (or more) of them. Your opponent is of course, welcome to try, but it's a battle he simply cannot win so long as you have infiltrated his datalinks.

Fleet-wise, things get a lot more interesting as well, because

by this point in the game, a good portion of the world has been explored and people are beginning to consolidate their positions. Mostly, this means bigger fleets, more ships, and more versatility. Once again, spend some serious time in the Design Workshop, putting together units as described above in different configurations. A flexible, well-balanced fleet plying the waters off your coast will give you the ability to protect your coastal bases, while posing a real threat to your opponents, with the ability to slide away from your holdings and project significant force deep into the heart of enemy territory.

From now until the advent of air power, your navy will give you power and flexibility unmatched by any other military unit in the game, and even when needlejets and choppers establish their dominance, naval units can combine their flexibility with these new tools to create a power unmatched by air dominance alone.

(How-To Note: Rapid Prototyping. Again, the trusty supply crawler is your best friend. When you have a new weapon or armor to prototype, I almost always recommend doing the prototype on a Rover Chassis, as this will give you a well-trained, mobile attacker/defender when you upgrade him to best/best, and again, when the Prototyping base starts work on the new weapon or defensive system, have a crawler standing by from a nearby base to "cash in" at full mineral value to speed the completion of the prototype. That way, you can begin upgrading your forces the very next turn!)

Covert-Ops (or: Fun with Probe Teams)

Probe Teams are terrific little units. Almost as versatile and useful as Formers and Crawlers, and as the first "clean" unit you get in the game, learning to use them well and wisely is of prime importance.

Flavors of ProbesOutlined below, you'll find a laundry list of some of the various types of Probe Teams I use in my own games, with notes on how to implement their use, and why they're used in the first place. Read, absorb, and then figure a way to mesh the thoughts here with your existing game style. I promise you it will strengthen it!

The "Data-Guardian"

This is a probe built on an Infantry chassis, whose role is

entirely defensive in nature. His sole purpose for existing is to prevent an enemy faction from coming over and making off with your state secrets (techs). For adequate defense, you need two probes, good defense is three, and outstanding defense is four or more, as this will enable you to stand against all but the most determined covert assaults, and compared with the Probe Foils or Rover-Based Probes your opponent will likely be using, he's cheap too! The most common use of defensive probes is to simply leave them in the base. That way, before any techs (or bases) can be stolen, your opponent must wade through your probe teams.

There are times, however, when you will find it desirable to (at least temporarily) move your defensive probes from their bases, the most common of these being any time your enemy leaves a single, unstacked troop in range of the probe. If you've got the money for it, go out and subvert the trooper, adding it to your force total. Remember that the attacker only brought so many units with him, and the more units you can steal away, the more quickly his attack loses steam. Data-Guardians should also receive a full range of upgrade options to make them more multi-functional.

Is your opponent hitting your base with artillery (either land or sea-based) to weaken your unarmored defenders, and make successful probing more likely? Then give your Data-Guardians light armor to mitigate the damage. Did he approach with an overwhelming number of attackers? If so, give your probes both ECM and Max Armor (as he's likely got at least some Rovers in the mix), and bulk up your garrisons in the short term that way! (Two important Game notes: An armored probe team does **not** count as a garrison unit for purposes of drone control! Also, other probe teams ignore any armor value your probe teams have, making the usefulness of armor on probes somewhat limited, but in a pinch, they'll serve you well! Imagine losing an impact rover to a silksteel probe! How embarrassing....).

The "Vagabond-Class" Probe

Is the standard, rover-based, offensive Probe. Good for use as a "clean" explorer for those running Market and wishing to maintain full use of their industrial capacity, and an essential addition to any attack force.

The "Hunter-Class" Probe

Built on a Foil chassis, this is a "swing" unit, often found serving in both offensive and defensive capacities. Defensively, this is a great way to subvert rogue attack ships intent on shelling your terrain enhancements and roads out of existence, while offensively, it enables you to reach out and touch an enemy faction on another continent with relative ease. Note however, that mass-probe operations with foil-based probes will be much more mineral intensive investments for the aggressor than for the defender. In all probability, the defender is building Infantry-based probes at a much cheaper rate than your foil probes, but in this kind of warfare, it's the information that is the prize, not the mineral cost. All of the attack options available to the Vagabond probe team apply equally well to the offensively used Hunter probe.

The "Seeker-Class" Probe

Built on the Cruiser chassis, this provides you with greater mobility, enabling you to strike from further off the coast, thus increasing your chances for avoiding detection. Because of their cost pre-Fusion Reactor, don't count on having many of these, and the ones you **do** have will almost always be assigned offensive roles—operations against bases very far from the probe's launch point, taking advantage of this ship's greater per-turn movement. Another popular use for this type of probe is fleet support, as they can keep pace with your fast-attack ships.

The three keys to making a successful probe foray are Objective, Mass, and Support, and each of these are explained below:

Objective

Before you set out to probe, know your objective! If this is your first visit to the enemy base, then it is of paramount importance to infiltrate his datalinks! Nothing is more important than this, even if you are far behind in techs! And now that you know where your opponent **is**, it's fairly easy to send more probes to that location. Once you have infiltrated, the specific objective of your probe action will be determined by the type of raid being made. If it is a

purely covert operation, then most likely the next most important mission will be to grab techs and the enemy world map. After that, it will be on a case-by-case basis, but such things as draining energy reserves and disrupting production queues (especially at a base where your opponent is working on a Secret Project or expensive new prototype) are attractive options. If your probe teams are part of an invasion force, then you will want to take stock of the enemy's Multiplicative defense factors (Aerospace Complexes, Perimeter Defenses, and so forth), and knock out as many of them as you can in order to give your attack units an edge in combat against the base.

Mass

Once you find an opponent, don't make a "casual" probe raid. Hit him fast and furious. You now know (thanks to infiltration), exactly which bases have probes, and how many (and of what type). Thus, it is easy to design a probe force of sufficient size for each base you plan to hit, and be virtually guaranteed of success. And, again thanks to infiltration, you know precisely how many techs ahead of you your opponent is (if any), so don't just hit him for one tech! Plan to hit him in numerous bases on the same turn, with an eye toward getting **all** his tech that you are lacking and his complete world map to boot! Yes, this could conceivably take a fair number of probes, but the time spent building them will be more than made up by the tech and information windfall you receive!

Support

Sending Probe Teams out by themselves is seldom a good idea. First, if your enemy discovers them en route, Probe Teams are easily killed on the high seas. Second, once they arrive at the target base, they will very likely be confronted by enemy probe teams. That's bad for you because it means that you'll have to duel with them to gain access to the base.

Bringing along one or two attack ships to accompany your probes is a fine (and many would argue, essential) way to both ensure that your probes get to where they're going and give you a leg up when it comes to accessing the target base, by firing on the (likely unarmored) probes in the base just before your probes hit

it. His probes will be damaged, yours will not, and you'll have an easier time killing them.

(How-To Notes: Executing a stellar Probe-Action—Mass numbers of probes can support each other by simply hitting the base one after another until all the enemy probes have been eliminated, and, if you've counted correctly, you'll still have one probe left to get into that base and grab some techs or what-have-you. But probes-supporting-probes is not always the most efficient way to go. If your probes are part of a land attack group, bring along a few units of artillery to snipe the base in advance of your probes going in. If your opponent has not armored his probes, then the artillery will damage his units, making your probe teams' job easier. If he has, and if you have enough arty with you, some damage will still be sustained, and by sending your probes in first, to eliminate his extra "armored" defenders, it will make the job of your regular attack force easier. If attacking from the sea, bring along one of your FF's to bombard the base (and provide a measure of protection for your probe-foils) to soften up the enemy probe teams before sending yours in!)

Chapter Five

The Middle Game

This is the heart and soul of Alpha Centauri, and if you've run a good, strong opening gambit, you will be well prepared to reap the benefits of it in the mid-game, but don't despair. If you suffered some unexpected setbacks in the early game, there is yet time to put things right and rescue the game. Just understand that if you have not built a solid foundation by now, the road ahead will be tougher for you, relatively speaking.

By now, you will likely have made contact (and perhaps repeated contact) with most of the other factions, and your initial bases are all up and humming along quite nicely. Now you're probably itching to expand again, either by conquest, or by building more colony pods to finish filling up your continent. Either way, the stronger your early game was, the easier you will find things now.

Growth in the Middle Game

You can certainly choose to go back to the section on expansion in the early game and simply use those ideas to continue expansion across the continent. The expansion paradigms listed there are all quite strong, and any of them would serve you well. Keep in mind though, at this point, you are likely to encounter a rising drone problem as your expansion efforts continue, and this will

only worsen with each additional base you build. Not that it should stop you from doing so, but it is something to be mindful of as you continue to increase your Empire's holdings.

One of the centerpieces to strategy in the Middle-Game is getting yourself ready to execute a population boom (mentioned earlier), and a bit more should be said about that, because it is such a powerful thing to do. It will, over the course of 7-10 turns of game play, take you from being an average power, to rocketing ahead of everyone else on the chart.

<u>Myth</u>

Not everyone can Pop-Boom. Used to be true, but no longer in the SMAX universe, thanks to a timely bug fix! People point to Yang (who cannot use Democracy) and Morgan (who cannot use Planned) and declare them weaker factions because they cannot execute a pop-boom. They can, but it takes a bit more work to set up.

By the Middle-Game, and sometimes before, you are ready to execute a population boom, and of course, the sooner you do it, the stronger you will be. The mechanics were spelled out in detail earlier, but if you're not sure you remember, I'll mention them again here. All you need to "Boom" is at least +2 extra nutrients at each base and a +6 Growth. For most factions, +6 Growth is as easy to come by as building Children's Crèche's everywhere, and running Planned/Dem, but if you're playing one of the factions that cannot run one of those Social Choices, then you'll have to rely on Psych Allocation to throw your bases into Golden Ages and pick up your final +2 Growth that way.

Infrastructurally, there are two principle ways to get enough food to sustain the boom. The easiest way is to build Treefarms (and Hybrid Forests, as your bases get larger). They provide you with Psych, energy, and ecology bonuses anyway, so they're always good investments, and they make your forest squares more productive (each forest providing you an additional nutrient, post Treefarm). Another possibility though, would be to simply crawl enough food in to support the growth.

There are also two primary ways you can structure your booms, Single Phase and Dual Stage. Both work well, and it mostly depends on what level of infrastructural development you've managed to get

to before you're ready to execute the boom.

In single stage booming, before you start, you want to have your Hab-Complexes already in place, spending the boom-turns building drone control and Psych-enhancing facilities to keep the exploding population well-mannered. With hab-complexes in place, you simply boom all your bases up to maximum size (14 baseline, bigger for Lal and the guy who gets the Ascetic Virtues project, smaller for Morgan) in one shot, then drop back into whatever SE configuration you want to take full advantage of the significantly larger population. Specifically, in a single stage boom, you want all essential infrastructure in place at the outset, save for Hybrids, which you will build as you spring up to size fourteen.

For a two stage boom, you want to grow your bases to max. pre-hab complex size, then pause to build additional infrastructure, starting again when you get everything but Hybrids built, then proceeding on to maximum size. Note that a two stage boom does not work for Morgan, as most of his bases will **be** at size four (his max, before hab-complexes) relatively quickly anyway. Personally, I prefer a two stage boom, because I can execute stage one of it fairly early in the game, to get a jump in population, going for the second stage as soon as I can rush sufficient infrastructure in place to support the growth.

The main strength of the Population Boom is that it can triple, or quadruple your Empire's population in **very** short order, suddenly making you capable of doing things you never even dreamed of, and that is why it is mentioned here, as the very first point of the Middle-Game, as this will, in all likelihood, be when you can position yourself to be ready to do it. Powerful as it is, there are just too many other things that need doing in the early portions of the game (getting new bases set up, building enough of an infrastructure to support the larger population, etc.) to worry about growing a handful of bases to maximum size, and a boom too early, can actually work against you (example: If you boom while you're still in your initial stages of expansion—a thing which would be hard to set up in the first place—yes, your bases get big, but when you stop booming and continue to build colony pods, your bigger bases won't recover lost population points as quickly, eroding much of the advantage you gained via the early boom).

One common strategy is to Boom all your initial bases to maximum size, then crank out another slew of bases, get them built up to the point that they can handle the influx, and then Boom again. Do that, and you will find yourself with an absolutely gigantic empire!

More Expansion Paradigms

Many of these ideas share things in common with what you've read in the earlier section, but the presence of an established core of bases in your heartland enables you to do things you were simply unable to do earlier, so there are a few new ideas tossed in here to reflect that. Browse them over, select one that is to your liking, and that meshes well with your particular playing style, and run with it! You will soon find yourself with bases from coast to coast (if you're alone on your continent—if you're not, you might want to skip this section and read more on making war, as that will likely be what you are facing).

Bear in mind that expansion is not necessary to win the game. You need but check out the results in the OCC Hall of Fame to discover that it is quite possible to Transcend on the hardest possible settings with a single, size seven base, but expansion **does** give you more flexibility and options, and it is the natural inclination of a thriving empire to expand, so most likely you will be doing just that. When you do, your expansion will work better for you if you go into it with a plan, rather than take a haphazard approach.

There are a number of perfectly valid expansion strategies in the game, and the list below is by no means exhaustive. These are, however, the ones I've seen most commonly employed. I'll list them out, and make notes about each one. Here goes:

Thin Expansion

This policy is very closely related to "Expansion Paradigm #1" listed in the early game section. It basically says, "Now that I am up and running good, I want as many bases as I can get, and I want them as quickly as possible." Likely, if you are going with a thin-expansion scheme, you are foregoing the building of scout patrols to escort your colony pods, and just focusing on the pods themselves. A sometimes risky move, true, but, the advantage to it is the fact

that you can get a great number of bases established in relatively short order, and set them all about the task of building a viable infrastructure. A purely thin expansion program will have you building your newest bases four squares apart from each other. Yes, there will be some overlap, but how often is it that you actually make use of all 20 of a base's productive squares anyway? Thin expansion trades a little bit of late-game productivity for the speedy construction of new bases.

Thin Expansion works best for Builders and Hybrid players. A momentum player will lose too much time in building mass numbers of colony pods. Besides, from the mindset of a momentum player, why build a new base when you can conquer one that's already up and running? A very good point, if you're playing the game that way.

The Rover Defense Model

This plan—which may or may not be incorporated into a thin-expansion scheme—says that you want all your newer bases spaced no more than six squares apart, to facilitate their defense with Rovers serving as garrisons. This also works out quite nicely, as with optimal spacing, there will be no overlap between bases, meaning that eventually (sometime in the Late Game), each base will be able to make use of all 20 squares of production. Keep in mind, however, that rovers are significantly more expensive than Infantry, and pursuing this model will make your garrisons much more expensive. Still, if you are running a classic Builder Game, the added expense won't really be that noticeable.

The Yang Model (Thin Expansion with a vengeance!)

So named because the AI generally plays Yang in this very fashion. It runs similar to the Rover Defense Model, but the bases are stacked even more closely together—Specifically, three spaces apart. This has a number of Mid-Game advantages, and only one (relatively minor) Late-Game drawback. There is significant overlap in all your bases (as with the Thin Model, above), but again, how often is it that you actually make use of all your squares of production anyway? And, this model has the advantage of allowing you to make use of the "Rover Defense" thinking with much more cost-effective Infantry units. Under this approach, none of your units ever need

end their turn outside the safety of a base, unless you are scouting, or moving to make a pre-emptive strike. One other very strong selling point to this style is that you get so many bases up and running on your starting continent that you become very hard to damage. When you're running the "Yang Model," it's simply not going to hurt you much if you happen to lose a single base, and if that base is taken over by an opponent, he will find keeping the base (which is undoubtedly surrounded by a good number of your other bases) a very difficult proposition.

The Optimize First Model

This says that before you build any additional colony pods, you want to make all the improvements you can in the bases you already have. This is a classic builder scheme. Expand slowly, but make each base a wonder. It probably means that you won't be expanding until well into the Middle Game, so even builders tend only to use this approach if they find themselves alone on a relatively small landmass.

Thick Expansion

The opposite of thin expansion (go figure), this approach says that the building of colony pods is important, but of equal importance is seeing that it gets to wherever it's going, and making sure that you can rapidly create an infrastructure for the new base when you get it there. Likely, this means building an escort for the pod (which becomes the garrison, once the base is set up, saving the new base time), a former (so terraforming can begin immediately, if not before the base is established), and perhaps one or two supply crawlers to enhance the output of the new base's production (generally mineral production, but I've seen nutrient production enhanced as well). This has the advantage of making use of your existing bases' strong infrastructure to build the stuff that a fledgling base would have to spend a number of turns working on before it could even start it's infrastructural development, saving the new bases time, but it is slower than a "Thin Expansion" plan, as it ties up your bigger bases building more units.

Terraforming 201

Once your formers have tended to the basic needs of the bases you have up and running, there is yet more to do. As you advance up the technology tree, more and more terraforming options become available (and if you managed to beat everyone else to the Weather Paradigm, then a great number of advanced terraforming options become available to you quite early on). Now is the time to take advantage of those new capabilities, because again, you're in a race against time with the other players, and the quicker you get started on optimization of each terrain square on your continent, the quicker you'll pull impossibly ahead of your rivals, no matter who they are.

To that end, it's time to revisit the terrain squares you've already done some work on. Got some nutrient specials? You probably forested them in the early goings, and, pre-restriction lifting, that was more than good enough, but now that you've come further up the tech tree, a condenser/farm would probably serve you better in a square like that, and it would certainly enable you to toss a crawler on that square an net yourself a **lot** of food from that square alone! (easily enough to feed five units of population, between that an your base square).

High elevation energy resources? Might want to consider a solar collector there, and another crawler. Better yet, if you've got a region of high-altitude terrain in your territory, you might want to consider the construction of an "energy park." That is, an array of Echelon Mirrors and Solar arrays for your Supply Crawlers to harvest from. If you choose to construct one, keep the following points in mind:

1) You will see your best results using alternating bands of Echelon Mirrors and Solar Arrays.

2) In order to achieve optimal output, all Echelon Mirrors and Solar Collectors must be inside your borders (and, for the sake of protecting your investment, it is generally a good idea to build such a park well into the interior of your empire).

3) Again, to maximize the return on your investment, the crawlers working the energy park should be homed to a base near your Headquarters (minimize efficiency drain), and preferably

homed to a base with one or more Secret Projects which enhance lab outputs!

Rocky areas you've been ignoring? If they're on level terrain, and inside your base radius, that's a good candidate for a borehole. Otherwise, it's a fine choice for a mine.

Note here—Boreholes are very efficient producers of resources, as they will net you a whopping 12 resources (mineral and energy), but only if you use workers on them! Half of a borehole's productivity is wasted if you use crawlers there! Not to say you'll never want or need to, but in general, boreholes are best left to the workers, and "single resource" squares (mines, solar panels, farm/condensers) left to the crawlers. In that way, you net yourself the most gain possible for each worker and crawler you have out harvesting. So, optomizing the squares you're already working should be high on the priority list for your busy formers.

After that, look to defense. Find ways of protecting the time you've invested. This means building (and occupying!) bunkers in key areas, making airfields to consolidate your aircraft in key areas where they are capable of supporting multiple bases, tidying up your road network, placing a few extra sensor arrays to act as early warning systems, and sometimes planting fungal barriers to hide a few units in as a nasty surprise for a would-be adversary, to slow his advance down certain paths, or to "channel" enemy forces to a certain location.

Once all that is done, your formers **still** aren't finished, as now it's time to unleash them on the rest of the continent!

Every square of land on your continent is a potential production center, even if it lies outside the radius of any base you have. If your citizens cannot reach it directly, you can optimize the square with your formers and toss a supply crawler out on it to make it start working for you, and that task will keep your formers busy for years! Remember that only one supply crawler can work a given square, so take a look at the square you plan to develop and see what makes the most sense to go there. If it's a rainy square, it will serve you better to put a farm down to increase nutrient output. If rocky, build a mine, etc. and so forth. Fairly intuitive stuff, but when you're in the thick of the game, sometimes it's easy to lose sight of that. Take your time, and make sure you don't!

At this point too, you should really consider operating your formers in teams (go back to the first section on terraforming and re-read the notes on "Gang-Forming," it'll help you here. The main reason this is good for you now is that you increase the speed with which an individual terrain square becomes "ready" to be worked, and if your base is cranking out a crawler to come to that square and start harvesting, it's important that your formers be finished when the crawler arrives. By operating in teams, you can ensure that happens. Keep in mind that so long as even one square on your continent has not been optimized, you are not getting the most you can out of the productive capacity of your continent.

A Former's Work is never Done.....

But, you say: I have terraformed my entire continent, and I've got supply crawlers everywhere that my bases can't reach! What more could I possibly do?!

Formers can find ways to keep busy the entire game, actually, and here are some of the better uses you can make of them.

Mag Tubes

Come late in the middle game, in general, and they greatly ease your ability to defend your holdings. You should have no less than two different mag tube routes which reach to all parts of your empire (in case one of them is severed by a marauding enemy).

Tap to Aquifer

The ability to construct rivers inside the production radius of all your bases is enormous and will add another +1 energy per square to your coffers (in addition to adding another boost to your research times). This can be carried over to any squares outside the production radii of your bases upon which you have crawlers harvesting energy.

Expand the continent

A very good idea, once you've done about all you can do with your starting landmass. You simply raise more land (preferably in the general direction of the faction that has been giving you the most trouble). As the new land appears, have your formers optimize it, find a base that isn't too busy, build another colony pod, and slowly grow your empire toward your enemy (migrating troops along that route if you feel the need to provide protection for your band of

formers and colony pods. And remember, you don't have to actually finish the land bridge until you're good and ready!

Flavors of Formers (Designing the right model for the job)

Far and away the biggest terraforming bang for your buck comes from the standard infantry-based, fission former, and in truth the bulk of your terraforming will be done by these guys. But as the game grinds on, there are a number of alternate configurations I have found useful, and will outline some of the ones I use frequently here, along with some notes on why I consider them useful.

Rover-Formers

Generally, I wait until I get Fusion reactors to build these guys, and having a few tossed into your mix can do wonders for you! First, they're fast, and able to scoot around your existing infrastructure like nobody's business. That's key, because by the midgame, your former teams are generally operating quite some distance from your core bases (which is where your newly made formers will likely be coming from). At this point, if you were to simply build another infantry based former, it might take him 8-10 turns simply to arrive at the site of the terraforming, and that's usually unacceptably long. The solution then, is to build a faster former, and get him out working for you!

Vel's Peace Frogs

So named because, one evening while playing and sucking down tequila, I came to the conclusion that, given their greenish color and squat appearance, they kinda looked like....well....frogs....or it could have just been the tequila and my imagination. Give a former Synthmetal armor and trance and suddenly you've got a "combat unit" in game terms. Doing this (and giving them a fusion reactor upgrade while you're at it) gives you a unit that is at least 120% better in a fight—with a reactor upgrade—and at least 170% better in a fight vs. psi-attackers. Add to that the fact that the former now gains Morale upgrades for surviving battles, and it's easy to see why this is a good upgrade! Not to mention, if you've got a beleaguered base, tossing a few of these "roving defenders" into the base just might be the thing that lets you hang on for that badly needed turn!

Vel's "Super-Frogs"

If they didn't get a Fusion upgrade before, they definitely do now, along with super-former ability, silksteel armor (better if I can afford it!), and clean reactors! This enables my lowly formers to stand toe to toe with missile troopers and win, and it'll tear the heart out of a chaos trooper....the attacker will almost always win, but he won't be in any kind of fighting shape afterwards, especially if I place my unit right (high ground, terrain and sensor bonus, sometimes a bunker bonus too!), and sometimes I get lucky! How embarrassing for the bad guys, to get all torn up by a crazed former driver!

Fungus Busters!

These guys (usually built on Rover Chassis) get Anti-Fungal Tanks and Superforming ability, meaning that they can clear fungus in 1-2 turns! (base of six, halved to three by the tanks, and halved again by the superforming ability to 1.5)

Super Sea Drivers

Super formers (armored and clean) on a Cruiser Hull. Designed to work hotspots and sometimes accompany my fleets to do nasty things to the landmass of the enemy.....

A note here about the use of sea crawlers

The sea is a vast resource for both nutrients and energy. Often largely untapped because of the vulnerability of sea formers and crawlers, and the vulnerability of coastal bases themselves. If you plan to make sea forming a part of your overall strategy (and it's so efficient that you really should), then you will probably want to begin as soon as you get your initial infrastructure I place in your core bases. Speed is of the essence here, however, because as soon as rival factions begin making contact (especially in MP games), your sea formers are at risk every turn they remain in the water. The best bet then, is to build one per coastal base (and if you have followed my earlier advice, then you'll not have terribly many of those), and have them terraform toward each other. When they meet, begin operating them in teams to more rapidly complete the terraforming of particular squares, and, at the first sign of trouble, haul them back

into base, or run toward active fleet elements which are probably lurking nearby.

A strong long-term goal where sea formers are concerned is to use your land-based formers to create an inland sea, moving the sea formers into it just prior to the completion of it. Once established, you will have a relatively safe area from which to harvest huge amounts of nutrients and energy, and it is quite possible to feed the entire empire from the food stores of the inland sea alone! Or, if you have been blessed with rainy terrain and an abundance of resource specials, then focus on tidal harnesses in your inland sea and crawl in vast amounts of energy. If you do this from your HQ base, or from bases quite near it, you will quickly be in a position to get multiple techs per turn, based solely on the strength of your seaward "energy park," and from a time-to-terraform standpoint, it takes significantly less time to put into place than does a land-based energy park (less money too....it gets expensive raising land to 3000+ meters!)

If rivals begin sniping at your sea formers before the inland sea is completed, and if you do not have clean reactors, you are generally better off moving the surviving formers back to bases and disbanding them to help speed whatever builds you are currently working on (saving support costs), with a plan to rebuild them later.

More on Supply Crawlers

By now, you've probably got quite a number of supply crawlers floating about in your empire, adding to your base's native ability to harvest nutrients, minerals, and/or energy. You have seen first hand the benefits of building them, and are probably quite a fan. It should not be difficult to convince you then, that Supply Crawlers are the second most useful unit in the entire game, but it has been my experience (from watching and playing against many of the members here in the War College), that supply crawlers don't get utilized nearly as much as they should. This section then, provides some additional notes to get your mind turning on the subject of the Supply Crawler, in hopes of demonstrating a few uses for the sturdy little units that you might not have already thought of.

The number one best use of Supply Crawlers is obvious: To boost the nutrient, energy, or mineral production of a given base. Generally, I go for increasing energy output in the middle game,

and if you do so with a vengeance, multiplied out over several turns, you will find your energy reserves spiking up two or three hundred energy credits per turn.....multiplied out by your energy banks and such, they tend to pay for themselves very quickly.

Some notes here—Keep in mind that if you have a base with the Merchant Exchange in it, and that base builds a supply crawler, the unit will get the +1 energy bonus in the square he is harvesting from, making the ME base a very attractive one to build crawlers from. And, if the ME base also happens to be your Headquarters, then that base will not suffer any inefficiency, which means that you get to keep 100% of the energy harvested. This can set you up quite nicely to turn your HQ base into your primary research place (build the supercollider and theory of everything there, and you've got a positively evil amount of research. Add the network backbone, and the base can probably net you a tech all by itself every turn).

The second best use I have come up with (and this frustrates the Hell out of my opponents here at the college, though strangely, I have not seen them copying the idea) is to make an armored crawler, drop him down on a "choke point" (narrow strip of land leading to a rival's territory) to harvest energy from a forest (on a sensor array). Now you're getting 3 or more energy per turn, and keeping the bad guys at bay at the same time, and an armored crawler in the woods on a sensor array is a pretty tough cookie. Give him Trance ability to defend against worms, and he'll probably be there for a good long time. Stack him with a heavily armored infantry unit or a probe team to subvert passers-by, and you're really cooking!

Third thing: Coastal Crawlers rock! It's entirely possible to ring my entire continent in crawlers harvesting minerals from coastal squares, forcing enemy landing parties to have to fight just to get a toehold! (Oh, and did I mention that as soon as I get clean reactors, there are most always two units there, one being a AAA Garrison, and a bunker!) Makes it almost not worth the effort, knowing that you'll likely lose at least one, and have two more damaged attackers, just to land, but then, that's what I'm shooting for! Of course, all that takes time to set up, but once it is, most attackers will simply look elsewhere. Of course, an alternative option would be to drop in, but with bases 3-apart, blanketing the continent, and Aero-Complexes at

every one of them, there are no squares that drop troops are able to drop into....the defense network is just too tight.

If the bad guys do get through though, crawlers are excellent units for messing up the invasion force's zones of control, because in addition to doing that, they're also harvesting resources for you.

Another good idea would be to make the choice not to work the square in your base's production radius containing your sensor array, putting a cheap armored crawler on that square to draw resources for you. Protection from sniping.....

Secret Projects in the Middle Game

There are a **ton** of these, and I'll give each a brief mention, just to be fair....

The Supercollider (Applied Relativity)

If your middle game is not energy based, then it should be. Research and technology are so vital to the middle game, and a project like this....one that doubles lab outputs at a given base....how can you **not** start drooling over the prospect?! No matter what your faction or pre-disposition, build it before someone else does!

The Ascetic Virtues (Planetary Economics)

Handy for everyone, of course, but Lal gets a real booster out of it, enabling him to get obscenely large bases well before Hab-Domes. For Morgan, it's a kicker too, all but eliminating his small base problem. Note too, that anyone who makes use of their Police rating to control drones will find this an attractive project. If you can engineer a +3 Police rating, drone problems will all but vanish for you, and this project provides one third of what is needed!

Longevity Vaccine (Bioengineering)

The clean reactor tech also gives you a cash cow. If you have the Merchant Exchange someplace, toss this onto the pile as well, and you'll have a base that can single-handedly pay for the infrastructure at a lot of your bases. If not, it's fairly useful but certainly not critical, though for Zak (when he's not running Market) the drone control is nice.

Hunter-Seeker Algorithm (Pre-sentient Algorithms)

Even in the SMAX world, where the power of this project has been weakened, it should still be considered critical to every player in the game. Even those factions who have probe-immunity will want it from a purely denial standpoint, making this one of the most sought after secret projects out there.

The Pholus Mutagen (Centauri Genetics)

Unless you're one of the "Native" factions—and to a lesser extent, Morgan—this one's only marginally useful, though the ecology bonus will help you jack your mineral counts up slightly higher, but once you hit somewhere around 40, you really don't need that. Still, if you're playing Gaian, Cult, or Morgan, I'd put it fairly high on the list, and if you're playing against one of them, you'll want to pick it up just so they can't.

The Cyborg Factory (Mind-Machine Interface)

In the SMAX world, MMI is probably the most desired tech in the game. Not only does it give you choppers and thinkers, but it also gives you **two** secret projects! Awesome ones at that! Bio-enhancement centers are expensive from an upkeep standpoint, and they improve morale of **all** your units, making this project a must have, no matter who you are!

The Cloudbase Academy (Mind-Machine Interface)

If you want to get and keep air-superiority, GET THIS PROJECT! If you plan to make use of satellites in your game, GET THIS PROJECT! If someone else gets this project, GET THAT BASE! If you can't do that, nuke it. It's that important. Note though, that if you get this project people **will** gang up on you, and if they don't you almost can't help but win. Not only do you get two extra points of movement for all your aircraft but you get a morale boost, make it harder for people to use drop teams on you, and your satellites automatically have their maximum impact at all your bases. Simply too good to pass on.

The Theory of Everything (Unified Field Theory)

Another lab-doubler, and every bit as important as the one

that comes before it. Get it. You need it. Trust me.

The Dream-Twister (The Will To Power)
Even if you have no intention of making use of Psi attackers, you need this project so that the Worm lovers don't come over and pay you an unwelcome visit. About the only time you don't need this one is if you have the Neural Amplifier, but even then, it might be good to pick it up for denial. Also, if you're into Navy at all, grab this one! Your IoD's (which are already awesome) will be all but unbeatable!

The Universal Translator (Homo Superior)
Did somebody say free techs?! If you don't go for this one, you erode your tech position, allowing others to catch up, and if you're behind in tech, and happen to get to Homo-Superior first (thanks to your path up the tech-tree), this may be just the thing that enables you to catch up!

The Network Backbone (Digital Sentience)
For the money, it's not as good as it should be, because its value is too much tied to world size. Nonetheless, because it helps research, it should be fairly high on your list. Cyborgs don't need it, because they're already immune to the negatives of Cybernetic society, but it's still nice for the research kick.

The Nano-Factory (Industrial Nanorobotics)
Anybody who has a standing army of any size at all (and you'd better, by this point in the game) will want this project! Not only does it dramatically lower your upgrade costs, but it also—and more importantly in my opinion—allows your forces to fully recover in the field. You just can't get any better than that!

The Living Refinery (Advanced Spaceflight)
At this point in the game, support is usually only an issue if you're running Thought Control and even then, with Clean Reactors it's not that big a deal. Nonetheless, clean reactors are expensive, and if you're running SE choices that lend you support anyway, this is a good way to be able to build large numbers of

"non-clean" troops (which means that the ability slot formerly occupied by "clean" can be filled in with something else. For that reason alone it's quite handy, and if you're playing Miriam, mark it down as a must-have!

The Cloning Vats (Biomachinery)
I can't think of a single reason not to build this project, except perhaps for the fact that it will make you the target of envy and, in all probability attack, but hey....enjoy it while you got it!

The Self-Aware Colony (Self-Aware Machines)
The influx of cash you get when your maintenance costs are halved makes this project one of the fastest to pay for itself. If you're going for the economic win, this is crucial, and it's pretty important in general, because by this stage of the game, you've got a **lot** of maintenance every turn. A good investment, no matter how you slice it.

Clinical Immortality (Matter Ediation)
Talents = Drone control, and at this point in the game, you've probably got a sprawling empire and this is just the thing! It's certainly not crucial (not even for Zak, by this stage), but very nice to have if you can free up a base for it.

The Space Elevator (Super Tensile Solids)
If you're planning to make heavy use of Satellites to enhance your factors of production, or if you entered the space race late and want to play catch up, this project will be a huge boon! Otherwise, even as a denial project, it's only average.

The Singularity Inductor (Controlled Singularity)
Comes too late in the game to really be useful. By this point, you've got more mineral production than you need anyway. This is an average project, at best, and too expensive for the relatively short lifespan it has.

The Bulk Matter Transmitter (Matter Transmission)
Another pricey, average value project. Yes, it's handy, but it's

usefulness is limited, both in the fact that it only provides 2 minerals for each base, and by the lateness of its arrival in the game. One thing though, if you've got a high number of bases, it'll pay for itself pretty fast.

The Telepathic Matrix (Eudaimonia)

Most people stopped having drone problems a long time ago, and this project comes too late to really be of outstanding benefit for the money, but it does cut down on the need to micromanage your bases. The probe bonus is an utterly useless feature of this project, as by this point, your probes are elite anyway. They can't get any higher. Average, at best, but handy if you're tired of micro-management.

Manifold Harmonics (Secrets of the Manifolds)

This project makes fungus the best terrain in the game. Unfortunately, if you're like most players, you've just spent the entire game minimizing the amount of fungus in your empire. It's a good project, don't get me wrong, but unless you're playing one of the Native-lovers, it's not a great project.

Net-Hack Terminus (Self-Aware Machines)

Again, the probe bonus comes too late in the game to do you much good, as you really have to try hard **not** to have elite probes, but if you missed the HSA, this one's not bad to get.

Developing Your Style

It's obviously too late in the game to change your faction, and you've already settled on a particular style of play for this venture, so shifting gears at this point would be a pretty expensive proposition, both in terms of money and time, so you're much better off taking a close look at what you've already got in place, and seeing where you can take it from here.

Look closely at your empire. See where your strengths are and play to them. Magnify them. Do you have a big army, perhaps the biggest on Chiron? Take steps to increase it further still, but again, do not forget that having a big army does nothing for you in and of itself. You have to actually Do something with it in order to make

it pay, so consider what you want to do with this big force you've got developed.

Are you getting technological advances in record time? Great! But there is probably a way you can get your advances even faster than you are currently. Look things over and see where you can improve yourself.

Also, at this point, you will want to pay close attention to your weaknesses. After all, your rivals are probably getting restless and actively probing all the other factions for weaknesses, so if you've got a few (and you will....you always will), take care to cover them, or minimize them as much as you can. Make yourself as uninviting a target as possible.

Bend and flow with the playing style you have chosen for yourself. Work with it, not against it. I cannot offer you too much in the way of specifics here, because each game will be unique in it's ebbs and flows. All I can say is this: You have the framework and the foundation in place. If you work with your strengths and advantages, if you magnify them, while at least seeing to it that your weaknesses are not easily exploitable, you will find yourself in a strong position indeed, and that is the very essence of developing your style. Set yourself up in a position of dominance and security. Go back and re-read selected sections of this guide as applicable to your current game and situation and apply them to magnify your strengths and cover your weaknesses.

Play carefully, yes, but more important than even that, play decisively. **Do not** second guess yourself. Make a decision and ram it down the throats of your collected opposition. (If it turns out to be wrong, I promise that you won't do it again!) Dictate terms to them with your play style as much as you can. Even if you are playing the most passive of Builders, you will find yourself in a position to do this by selectively strengthening certain of your rivals with technological advantages, while keeping other rivals down by refusing them.

Developing Your Focus

To a degree, the lay of the land outside your bases production radii will determine how those squares are terraformed, but where the differences are minimal (i.e., an arid square isn't going to be

terribly productive, no matter what you build on it), make the selection that will further the ends of whatever "focus" you have adopted for yourself. Every crawler you put out in the field harvesting will magnify your focus by that much more. It's an incremental thing, and spread over all of your bases, so you will likely not fully realize just how big an impact they are having, but once you have a few dozen crawlers out there collecting resources for you, stop for a moment and take stock of exactly what they are netting you every turn. You will find that they are paying for themselves very quickly indeed, and every turn after they pay for themselves is pure profit for you in one form or another!

Again, the trick to making the best use of your crawlers is to stick to your focus as much as possible. If you've opted for a mineral focus, then get busy making as many mines as you can (and boreholes harvested by your workers) and watch the mineral production at all your bases go through the roof! Same with energy, but that is a little easier to see as you can watch the total income of your empire climb steadily higher, rather than having to check the mineral output of each base. Either way, the trick is to not get complacent with it. Anytime one of your bases has a little free time, use it to crank out some more crawlers. Even if you don't have any squares ready for them to work yet, you can keep them around for when you do have some more squares ready, and in the meantime, if an emergency arises, remember that your crawlers can be "cashed in" for their full mineral value to help rush build a prototype or secret project you find yourself in need of.

Creating Economies of Scale

Actually, if you've followed the advice in the Guide up to this point, then you've already created economies of scale, and this is just a little blurb to point that fact out to you. Economies of scale is "the prize." It is your reward to yourself for all the hard work you've been neck deep in since the beginning of the game. Take a look back at the road you've been traveling and see how far you've come. You began with two colony pods and a scout and you've wrangled that into an Empire in every sense of the word. You have been fast, efficient, and diligent, in both the building of your infrastructure, and in the maintenance and improvement of your defenses. You've

taken an active stance in world affairs, getting out there in one way or another (even if it was just with probe foils), exploring the map, recovering Unity Pods, finding (and Infiltrating!) rival factions, talking, wheeling, dealing, and otherwise flexing the steadily developing muscles of your Empire.

Sure, there have been growing pains along the way. Skirmishes, and perhaps even hot skirmishes or limited wars, but you've survived those, learned from them, and have all the essential elements in place. Your bases are hugely productive and efficient. Your army is top of the line. In short, you are ready to dictate terms to the rest of the Planet. If diplomatic dealings are more in keeping with your personal style, you can now bargain with almost anyone from a position of solid, steady strength. If your main interest is warfare, you can now strike out fast and hard, and more importantly, you can keep the pressure up as long as you need to, something that those with lesser developed nations cannot do, nor can they stand long against those who can.

It's been a long, oftentimes risky road to get to this point but now it's time to reap the benefits of your efforts.

Sometimes, you can play the statesman. Dealing from a position of vast strength and stability, it may be possible to bend others to your will simply by making prudent "suggestions." Often though, others will be envious of your position, and will have nothing to do with your diplomatic overtures, and if that is the case, so be it. At this point, the prospect of warfare should not be a thing that frightens you, and to that end, you'll want to pay very close attention to the next section, because no matter how peace-loving you are at heart, there will be others who will not keep the peace. Now is the time to take the fight to them.

Chapter Six

Middle Game Units

New and Improved Ground Pounders-N-Garrisons

One of the key differences between the early and middle game is the overall size of the battles that will occur. In the early game, a large attack force is, at best 10-12 units, but by the middle game, this will often be considered nothing more than a sharp skirmish. Especially with the advent of clean reactors, it will take an ever-increasing number of troops in the field to pose a significant threat to an enemy, and because of that, strike forces can often double or triple in size! Do not confine yourself to designing small or medium sized attack forces in the middle game! It will only get you into trouble, and you'll find yourself losing the strike force you so carefully put together!

Also remember that, with the arrival of Magtubes, taking and holding an enemy base becomes a daunting task indeed. Unless you sever all routes into and out of the base when you take it, your rival will be able to speed his own attackers from all parts of his empire to the site of the battle and take the base back with overwhelming force if he wishes. Therefore, in the middle game, unless you over-staff your attack forces by a considerable margin, you might be better off to take the enemy base, sell the most expensive facility and then

simply burn it to the ground.

In the middle game, you get a staggering array of new offensive and defensive options available to you, and on the whole, your forces become much more specialized and deadly. I'll not attempt to cover all the various options, as there is no firm way to tell for certain when various options will become available. This is simply due to the fact that by the middle game, the advances and capabilities you have available to you at any given point are directly related to the path up the tech tree you have chosen. Some players might get "Blink Displacement" in the middle game (not likely, but you never know!), while others won't see it until right near the end. However, the most commonly occurring, and most frequently used options will be covered here:

AAA Tracking

The mainstay of the middle-game. This is the ability that keeps the nasty needlejets and choppers from running roughshod over your defenses. Put one or two of these guys in each base (and even more in border bases) and your enemies will think twice about risking their aircraft.

Clean Reactors

The favorite ability of Builders everywhere, this is the holy grail....the ability which allows you to field a near-infinite sized army, and probably one of the most unbalanced abilities in the entire game. The ability to create military units which do not require support costs is **huge**.

Sophorific Gas Pods

Reduces any troops hit with the gas by two morale levels (effectively reducing them by 25% in overall effectiveness). This is a great ability, and perfect for your first strikers and counter-punchers!

Dissociative Wave

Eliminates special abilities! Absolutely awesome!

Blink Displacement

Allows attacking units to ignore infrastructural enhancements

and the Multiplicative effects that come with them!

Armed with these abilities, and a stunning variety of new armor types (silksteel, photon wall, probability, and R8 being the most commonly seen armor types in the middle game) and weapons (gatling, missile, chaos, fusion, tachyon, and shard), plus the addition of at least two new reactor types in the middle-game (Fusion and Quantum), your troopers see a staggering array of power and potential, and in general, they get cheaper to build!

The same basic principles that worked with early-game unit design work now, but with so many more options, you will likely spend an increasing amount of time in the Design Workshop pouring over options. The most important thing is to stay focused, and try to avoid designing too many different unit types! Just design what you need, or what you think you will need, based on studying the infiltrator data of your rival factions. Take a look at what forces they have in the field, and design your attackers and defenders accordingly, and remember, it's generally best to begin by building a cheap "shell unit" and upgrading to what you need! This will enable you to build large numbers of troops quickly and configure then on an as-needed basis. Also remember that, if you're going to do it that way, you'll want to keep your relatively defenseless scouts in protected areas of your Empire so some hotshot chopper pilot doesn't come along and toast a dozen of your cheaply built troops before you get the chance to upgrade them!

Rovers and Hovertanks

With the discovery of Hovertanks, Rovers become pretty much obsolete, but if you've done some early-game fighting, you've likely got a core group of Rovers with really good morale, and it's in your best interest to keep them up to date with the best in technology, but from an overall versatility standpoint, Hovertanks are far superior, as they get an extra point of movement, and can move across any type of terrain for a cost of only one movement point. In rugged terrain, this can triple the maneuverability of your fast attackers, which is crucial when making attack runs.

Other than that key difference though, anything that works for your garrisons, will work for your Rovers and Tanks, so keep the same mindset when designing your mobile defenders and battle groups!

Needlejets and Choppers

Death From Above! Warfare in SMAC has four distinct phases, and air power represents the most deadly of the lot.

Phase one is in the earliest stages in the game, when almost everybody is confined to infantry units. Skirmishes during this phase of the game will be slow, tedious affairs, as you probably won't even have much infrastructure in place yet.

The advent of Rovers (Phase two) expands the field dramatically (and gives the Spartans an early leg-up in battling, since they begin the game with Rovers!) as mobility increases, with firepower increasing in tandem with that greater mobility.

Phase three is the rise in supremacy of naval units and Marines, rendering Attack Rovers less useful, but certainly not obsolete, and finally, air power. The terror of Chiron.

Against a technologically inferior opponent, the presence of needlejets and choppers (Phase four) can quickly reduce that rival Empire to nothing. Your jets get a 100% increase in attack-advantage, and can simply sweep the enemy garrisons away, enabling you to send in a simple Recon Rover to take the now-empty bases. With MMI and Choppers, this is even easier to do, thanks to the Multiplicative attack value of choppers. The ability to fly up to a base, attack half a dozen times, and head home is enormous, and if you get this tech before you opponent gets the corresponding defensive techs (Air Power to build Aerospace Complexes, and Advanced Military Algorithms to build AAA garrisons), you can count the game won in 10-20 turns, tops.

As per Rovers and Tanks, anything the Infantry units can do, Needlejets and Choppers can do with a vengeance. You don't have to get fancy with these units, and you don't generally have to worry about armor, since your aircraft will seldom be spending much time outside the base (and if they do, more often than not, they defend with their weapon value, not their armor value), so just put on the biggest gun you can afford and start blasting!

(How-To Note: Designing good Aircraft: Most people naysay the idea of using armor on Needlejets, and in the SMAC world, it is true that armor costs were unusually high for jets and choppers, but in the SMACX world, that is

no longer the case. Given that, and given the damage that unarmored units are prone to take via artillery strikes, I find it useful to put synth-armor on the majority of aircraft I plan to send into hot zones. In this way, I provide a measure of protection for them while they're in the base for nominal cost. I consider it cheap insurance, but, in the same breath I will say that human opponents tend to use less artillery than the AI, so use your own judgment here. You can win a great many games simply by tossing a big gun on a Needlejet or Chopper chassis!)

Probe Teams

The same basic probing principles work here, but a quick note with regards to your probe teams. It is vitally important that you upgrade the reactor types of your probes! If you don't, your defensive position is severely degraded in the face of enemy probes with better reactors! Don't make the mistake of overlooking your probes when you are doing force upgrades!

More advanced Naval capabilities

You get two important advances for your navy in the middle-game. Exactly when you get them will, of course, be determined by the path you choose when making your way up the tech-tree, but both are quite powerful, and will dramatically enhance your position in certain situations!

Subs (UU)

Worthless against the AI, because they know where your units are anyway, but against a Human opponent, nothing could be finer! A Submersible transport does not even need an escort to slip in and cause havoc, which opens up whole new realms of possibilities, and enables you to get sneakier than ever! Imagine sending off a large (and very visible) task force of ships covering a transport or two toward one end of an enemy's Empire, all the while, and completely unseen, the three submersible transports you built and loaded to the gills with Marines are steadily, stealthily making their way toward other key points of the Enemy's empire!

The Aircraft Carrier (CV),(CVE), and other configurations

This is the game-ender. The perfect synthesis between air power and naval supremacy, and with a balanced task force led by

a Carrier, you can conduct extended operations (especially if the carrier and transport(s) accompanying it have repair bays), and effortlessly project your power to any corner of the globe.

(How-To Note: Designing an Advanced Attack Fleet—Fleet composition varies from game to game and purpose to purpose of course, but if you want to put together a fleet that can meet a variety of threats and provide you with enormous versatility, here's a composition that will serve you very well indeed: Begin with one capital ship (Battleship, Command Cruiser, or Aircraft Carrier), two "flank ships" in some or other cruiser configuration, two destroyer class vessels, and four frigates. Add to that 2-3 probe vessels of whatever configuration you desire, and a pair of transports, loaded with clean scout marines. If possible (and against human opponents) augment this with a few subs taking up flanking and slightly forward positions around your core fleet. With 14-17 ships in the fleet, yes, it's big, but with clean reactors that's not a problem, and the sheer power of a fleet like this will put you in a position to dominate your opponents at sea no matter who they are! And, if you can construct 2-3 such task forces, you can be virtually guaranteed of naval dominance! (Personally, I like having four such task forces....two to guard my holdings, and two more "detachable fleets" to send out to conduct training exercises near hotspots).

Missiles and such

Many people consider missiles to be weapons of last resort. They're "one shot" weapons that can serve you well in certain situations, and net you very little in others.

Specifically, the best use of missiles is against an incoming enemy transport, but transports will seldom be coming in alone (unless controlled by the AI), which means you'll need several missiles to knock out all the elements in the approaching fleet. Considering the cost of missiles, that is impractical. Generally you only want to use them when you know you will be knocking out more minerals' worth of production than it cost you to build the missile, and because of that, if you spot an enemy fleet approaching, covering a transport, your best bet is generally to send a chopper out to tear through the defensive elements of the fleet, interceptors to be rid of any and all air cover the fleet might have, and then use the missile to send all the Marines to Davy Jones' Worm-Locker.

Generally, missiles are poorly used against well-defended bases, as it is entirely possible for a stout AAA defender to withstand six

or more missile attacks before being destroyed. In this case, you lose an inordinate amount of minerals for only minimal gain. If you find a relatively new, underdeveloped base, certainly let the missiles fly, but against most mid-game bases (especially with Flechette Defense Systems and the like), it is a waste of your productive capacity even to try it.

Finally, a word or two should be mentioned about Tectonic and Fungal Payload missiles. These generally come too late in the game and are too expensive to net you much in the way of benefit, but there are a few interesting ways they can be used, and some of the possibilities are outlined below.

Tectonic Missiles

1) If an enemy has built a sea base just off your coast, and you don't have a navy handy, a tectonic missile can be used to create a land bridge to the base, enabling your ground forces to get in and do their work.

2) If an enemy approaches with an attack fleet, the tectonic missile could be used to eliminate them in a single shot, by "dry-docking" them permanently.

3) Need a quick land bridge to a nearby continent, but your formers are too busy doing other things? Lob a few tectonic missiles and you're in business.

4) Want to rapidly terraform some terrain up to create an energy park? Build a few and use them on the same location inside your borders. Instant mountains!

Fungal Payload Missiles

1) Need a quick barrier to slow down an advancing enemy. Spray the area with a few of these, and watch them bog down!

2) Are you playing a "native" game? If so, and you need a quick fungal bed for worm-farming, this is a handy way to do it, as it frees up your formers to do other things.

3) Are you close enough to lob missiles at your Builderesque rival? If so, muck up his terriforming efforts with a few of these babies and watch him scramble!

4) If your opponent a diehard marketeer? Again, toss a few of these at him, and watch the fun!

The Planet Buster

Ahhhhh heaven! The ability to be rid of an enemy production center, lock, stock, and barrel. These are weapons of awesome power and even more awesome cost! Mostly, they're best used in a deterrent mode (just like real life), to prevent your opponent from being rid of your bases (since he knows you will simply do the same). Remember that Planet Busters are built on an "aircraft" chassis, which means you can build airfields at various points around your Empire and effectively create "Missile Silos" (heavily guarded, of course), to prevent an opponent from nuking a base just to be rid of your own Planet-Busting capabilities.

(How-To Note: Getting and keeping a stockpile of PB's—Thanks to the extremely high cost of the Planet Buster, many players consider them impractical builds, even with an extremely high mineral count at your bases, but there is a way to quickly and fairly easily build up your arsenal. It takes a bit of timing, but is well worth the effort. Simply do this, when you are ready to build your nukes: Determine what number you want to have at the ready (as a rule of thumb, I go with six), and begin six prototypes of PB's, sending supply crawlers from nearby bases to speed the prototyping process along. As you near the halfway mark in the completion of your PB Prototypes, divert all crawlers to one single base and rapidly complete the prototype. When you do, the next turn, the price on your remaining PB's in production will drop (since they no longer carry the proto-penalty), and you will have all six of your PB's ready to move to silos).

Note too, that your PB deterrent degrades considerably with the advent of Orbital Defense Pods (ODP's), so if you're going to use them, do it before your opponent can launch his defensive satellites, as they are **far** cheaper to build than your Planet Busters, making the weapons undoubtedly useful, but only for a specific window of time, unless you can keep him from building ODP's at all (by building more of them yourself).

The Space Race

This brings us to a fascinating, but often overlooked element of the middle game. Controlling the orbital belt of Chiron.

Satellites are wonderful ways of bringing in extra resources, made even more wonderful thanks to the Cloudbase Academy project, which enables all of your bases to take full advantage of the satellite you have in operation, and a great many players rely heavily on the nutrient production that Hydro Sats bring down to keep their populace fed, as this goes far in enabling them to set up most, if not all of their bases as "Specialist Bases." Knowing this,

and knowing that ODP's can be used to knock out enemy satellites, in addition to protecting your bases from Planet Buster attacks, the war in space can be an exciting one indeed.

The fact is, satellites can be enormously beneficial to your empire, creating a huge windfall of resources, and even impacting the smallest bases (and that windfall increases as the base grows!). However these new capabilities also leave you open to new risks, specifically in the form of ODP's which enable your opponent to trash your satellites and degrade your position, so if you plan to make use of satellites, then you'd better also plan to defend them! To that end though, the first person in space can generally dictate terms to those who come later, but only if you keep a constant watch on the number of satellites being launched by your rivals.

Chapter Seven

The Art of War

Organizing your offense/defense on Chiron

(A more in-depth look at attack and defense schemes) There are at least some would-be generals out there who are itching to get started causing trouble, but they're not quite sure how to make sure they've got their bases covered when it comes to defense, and they're not 100% comfortable with the notion of designing an adequate attack force. It is my hope that this section will help. This is by no means the only way to go about it, and I am quite sure that there will be some major disagreement in the particulars laid out here, but that's okay too. I have found that these principles work very well for me. Not to say they're the only way to run a war, but I have tested them exhaustively, and I know they will serve you well, so here goes.

It cannot be stressed enough that the advent of Clean Reactors has a huge impact on battlefield mathematics. Simply put, there are going to be a **lot** more guys in the field than there were previously, and you need to take that into account.

In the early game, it might have been possible to catch 4-5 worms, or build a 4-pack of Impact rovers and pretty much demolish someone's empire. That is no longer the case and if you think it

is, you're in for a rude surprise as even newly founded bases will generally have enough offensive/defensive punch in them to turn your attack force of 4 into just so much fertilizer.

Having said that, let me also add that this will not magically nor instantly happen, and this paragraph is specifically for Momentum gamers. By the middle-game, a Builder is almost finished with infrastructure at all his bases. Certainly he's got Crèches and Treefarms everywhere, with the rest of it falling into place quickly. If you're going to hit him, do it now, because once he's finished with his infrastructure, he'll be raking in several hundred credit per turn (or more!), and able to crank out clean laser infantry and recon rovers in a single turn at every base, upgrading them from there. This then, represents the last window of opportunity you have to hit a Builder with a relatively small force and have any hope of succeeding. If you can't or don't, then pull back and build up yourself. Remember that you have the edge in terms of size, but the moment the Builder player turns his attention to the building of his military, he'll almost always have you in terms of technology and overall quality. The point though is, the Builder is pretty much starting from scratch building his military apparatus, and none (or very few) of his troops will be battle-tested. An attack now, before the burgeoning military apparatus is in place could very easily net you a number of wonderfully well-developed bases, making the early stages of the middle game the most dangerous time of all for the Builder. He'll be working fast to improve his defenses, so don't delay!

If infiltration was extremely important in the early game, it is vitally so at this stage. You definitely **don't** want to go around starting trouble until you have a clear idea of what you will be going up against, so if you have an opponent you have not yet infiltrated, stop! Don't do a single thing until you infiltrate those datalinks and see what he's got waiting for you. If you attack blind, you're just asking to get thrashed. Worse, your opponent will likely track you back to your homeland and give you a firsthand lesson on the proper way to do it!

It's also interesting to note that by this point in the game, the various playstyles begin to blur and merge together, as Builders begin to focus on militaristic concerns, and Momentum players (if

they are unable to launch that final attack into a Builder's heartland) begin to draw back in the face of the ever-increasing sizes of Builder and Hybrid armies. Essentially, everybody who survived to the middle game begins to play the same way, each relying on early game successes to propel them through to the end. Who will win? Will it be the Momentum guy who went out and doubled the size of his empire by running over a rival Momentum player, or found a Builder early and punished him for his lack of defense? The Hybrid who is a good deal ahead with regards to infrastructure, but still needs to play a bit of catch up where the army is concerned, or the Builder, who has a sterling infrastructure, but is probably still far behind in terms of military? Hard to tell, but it'll all get sorted out in the middle game.

Defense in the Middle Game

When planning the defenses of your empire, there are really only four things you need to take into consideration. If you are attacked, you will either be attacked by:

Infantry
Rovers
Worms

Stuff from the sky (missiles, choppers, and needlejets, planet busters) Sea bases also need to worry about attacks by ship, but for purposes of examining sea bases, we'll treat ship assaults of them like infantry attacks.

And of course, any base may come under fire by artillery (which cannot kill any of your units, except in the case of an artillery duel), but it **can** prevent your units from healing up.

With clean reactors, it is both possible and easy to cover all of your defensive bets, but that alone is not enough. It is never a good idea to have only one unit protecting a base from a specific type of attack (at least not if the base is in an exposed area), and this is one area where early-game styles will continue to influence mid-game thinking (even though the various styles are beginning to blur together). The numbers below are just benchmarks, and certainly not set in stone, but they'll give you some reckoning of what you can expect, or the kinds of defenses you can shoot for.

Builders will be primarily interested in protecting their

investment. They've put a lot of time and effort into each base, and don't really have any interest in giving it all away, so even their innermost bases will sport stout defenses. Expect to see no less than 4 strong garrisons with overlapping defense functionalities at non-exposed bases (an example of this might well be: 6-<3r>-1, 6<3p>-1, 4-<4t>-1, 4-4-1(ECM)), plus an artillery unit (6)-2-2, a counter-punching rover (6-<4>-2), and one or more aircraft (interceptor and/or chopper) (<6>-2-18) & (6-2-12).

That, combined with sensors, inherent base defenses, possibly perim. defenses (for the later addition of tachyon fields), crèches, morale enhancers like command centers and aero-complexes, soon-to-be-added geosynchronous survey pods, and the like makes for a tough nut to crack indeed, and you can expect that exposed bases will have no less than double that in short order, if they don't already.

The good news for everybody else is that the Builder will be so pre-occupied with perfecting his own defenses that he'll still be content to let everybody else alone unless you go start trouble with him, and with that kind of force sitting around (multiply those numbers out by 12-15 bases and hold onto your jaw), he's probably **not** the guy you want to start trouble with unless you can take out a large percentage of his force in a single shot.

Hybrids will cut a few defensive corners to put more attackers in the field more readily, and a good rule of thumb here would be 2-3 garrisons in non-exposed bases (similarly configured to the above), a counter-punching rover, and 1-2 aircraft, again, as mentioned above. Artillery at non-exposed bases would probably be considered not worth the investment, and either skipped, or built and moved to fringe bases, and once that was set up, the Hybrid would likely set about building a comparably sized force to send on the prowl.

Momentum players would keep true to their "attack-to-defend" doctrine, knowing that most Builders won't attack them anyway, and few Hybrids either, so long as they maintain initiative and keep a threatening force in the field, so Momentum base defenses will be a token garrison, whatever police units are on-scene to help control drones, and any newly built troops that have not yet been assigned to attack groups and are still lurking on the home front. Defenses for a Momentum player are very much measured by the size and

character of the force they are currently fielding. If it is strong, then few opponents will be capable of defending against it and launching a strike against the Momentum player's homeland anyway. In essence then, Momentum gamers drive the defensive needs of everyone else in the game, a fact you should never forget! The mid-game and beyond may well belong to the Builder in terms of economies of scale and overall efficiency, but the it is the Momentum player who's in the driver's seat when it comes to determining how much of that sterling industry must be set aside for the continual production of military units!

Vertical Investment

Drone problems created by continual expansion and the logistics of defending an utterly huge Empire both work together to somewhat limit the sheer size of your holdings. At some point, it's just not worth the added investment to build yet another base, and this is truly the essence of the Builder's game....focusing on getting the most that you can out of the bases you have, maximizing their outputs with cunning terraforming, good crawler use, and the minimization of drones, however all of this investment needs protecting if you mean to keep it, and, once the needs of the bases themselves have been met, this becomes the cornerstone of defensive doctrine. Protecting vertical investments (or, from the attacker's point of view, sniping at vertical investment).

The goal of every defender is, simply put, to make yourself as uninviting a target as possible. Do not leave crawlers or formers unescorted. In the post-clean-reactor world, there is simply no excuse for it, and it will only make you appear sloppy or weak before the enemy, which may well invite attack. Project strength at all times, even when you think no one is watching. Very likely someone is, and you just don't know it yet!

To that end, if you are content to stay on the defensive, or if you have a high degree of vertical investment (especially true of Builders, and to a lesser extent, Hybrids), then the bulk of your efforts in the middle-game should be a focus on building your army. You want troops everywhere, and I mean everywhere! Supply crawlers need to be covered (and double stacked with) AAA garrisons, and when your formers get around to it, build bunkers and sensors nearby too!

Put guys in bunkers along the coast to give your opponent few, if any landing options, and where you **do** leave landing options, plant "fungal funnels" and hide a few hard hitters inside (along with the occasional probe team).

If you're a diehard Marketeer, set up a single punished base, and build tons of Penetrators and Choppers (mentioned above), make them all clean (of course) and re-home them to the Punished Base....no more discontentment due to drones! Same with the navy if you're a Marketeer. Set up a punished coastal or sea base and re-home your entire navy to there. Keep an active stance and maintain vigilant patrols.

There is no one "right way" to go about setting up the defense of vertical investment, however. That will vary from game to game, and oftentimes, from moment to moment. About the only thing you can do here is study the map, look at possible approach routes to your empire, and plan from there, keep in mind too, that the wider you can cast your defensive net, the harder it will be for an enemy to land on your shores at all, so if there are some small, as yet unused islands surrounding your homeland, send formers over (with cover, of course) to build airstrips, bunkers, and sensors, and build yet more troops to hold those positions. This is especially valuable when you have a smallish island containing a monolith, as it will enable you to repair damaged troops after a fight, although, if you aren't that fortunate, then a rover with a repair bay works in a pinch (though you'll only be able to repair one unit at a time).

Finally, once you think you've got all of your defensive bets covered, take another look around your holdings and see if there are places you may be able to set up Zoc-Blocks to stall a potential enemy advance.

Attacking in the Middle Game

Stout as the defenses can get, the fact is, defenders often overlook something, and it is the job of the attacker to show them in decidedly less-than-subtle ways what it is that they overlooked. To that end, after you infiltrate, study your opponents. See who's doing what. Is someone lagging? Not paying enough attention to defense? If so, that represents a potential opening for you.

Keep in mind though, that at this point, it will probably be

quite difficult to take and hold a base, so your real objective here will be to simply hurt the enemy by denying him one of his production centers. Especially in MP games, outright conquest comes early on. The survivors in the middle game are generally pretty evenly matched, and actually conquering another faction is a hard thing to do unless you are significantly larger, or have help, so diplomatic concerns become crucial.

If you are determined to attack someone, the first thing you need to do is to isolate that player diplomatically if at all possible. Limit the amount of help he can expect to get from other players in the game. You might be able to do this by cutting a deal, and/or offering to divide up your target's Empire with another player in exchange for assistance or at least non-interference, but beware! Once the attack begins, your opponent will likely be doing the same thing!

The second thing is decide exactly what your objectives will be, and stick to those objectives. Do not get so caught up in the battle that you wind up overextending yourself and losing your attack force, but in the same breath, don't let a golden opportunity slip through your fingers. As the attacker, you have the initiative, and frequently, you have the element of surprise. Use both of those things to overwhelm you opponent at key points in his Empire, hold onto that territory if you can, and make further strikes from there. If at any time it appears that you cannot keep what you have taken, simply burn the base down and kill him slowly. Better that than letting him retake the base.

Also, as mentioned in the "Defensive" segment of this portion of the document, since "occupation attacks" are increasingly difficult to arrange, you might want to satisfy yourself with degradation attacks, i.e., attacks on that aforementioned vertical investment. Builders leave themselves open by virtue of having a **ton** of units outside of bases (crawlers and the units they have covering them), and regardless of built in special abilities, those units simply do not have as many multiplicative factors as units in bases, making them easier targets. By sniping continually at a rival's vertical investment, you create a constant drain on his resource pool as he struggles to maintain it via replacement. This is good for you, as it keep him too busy to launch a counter-offensive.

As to the exact size, composition, and nature of your attack force, there's no way to give a "blanket" answer to that, as it will be entirely driven by what defenses you have set against you. The best way to ensure your success though, is to attack with more troops than you think you will need. As a rule of thumb, always take in at least one more Needlejet or Chopper and two more ground pounders than you think you'll need to accomplish your objectives. If you have an easier time than expected, then you've got a significant force on the enemy's turf for further operations, and if you run into trouble, you'll be glad you brought along the extra troops!

(How-To Note: Giving a Builder a Hearttack!—It's been mentioned earlier in the guide, but one really amusing thing you can do to your friendly neighborhood Builder (and this actually works on anybody, but Builders tend to be REALLY anal about their terraforming) is to lob tectonic and fungal payload missiles at him to muck up his much-cherished terraforming. It's expensive, and it most likely won't net you any long-term gain, but it will keep the Builder hopping—kinda like in those old Westerns where the villain rides into town, heads for the bar, and invariably draws his six-shooter and fires at some poor guy's feet, forcing him to dance—, and therefore too busy to even think about you. It also might provide the opening for an attack, especially if you see that he stops building troops to get more formers in the field....)

Advanced Combat Tips and Strategies

Combat is the epitome of chaos and unpredictability. When armies clash, even if differences in technology make it clear from the outset who the eventual victor will be, there is absolutely no accounting or predicting what will occur between here and there. If you think you can predict the subtle nuances, ebbs and flows of a combat situation with any degree of certainty at all, my recommendation would be to open up your own psychic hotline.

Having said that, let me stress from the beginning that this article will not even attempt to cover every conceivable combat situation you might find yourself in. Simply put, I'm not that good. Not even close. What I **do** hope to accomplish with the writing of this article is to stretch your mind a bit. To perhaps change the way you look at both tactical and strategic situations and provide some tools for judging the overall effects of choices made by both

you and your opponent. If these tools are applied correctly, then you need not worry if you encounter an unexpected situation in combat, as you will feel more than comfortable improvising your way out of it.

Early on in the Strategy Guide, we touched on the first two principles of battle:

Know Thyself,
And
Know Thine Enemy

That is the foundation for what lies ahead, and you can rely on those principles with absolute certainty. If you do not know yourself, you have no way of assessing your own capabilities, and if you do not know your enemy, you have no way of understanding what you are up against. If you have neither of these, how can you hope to fight a war?

If you're fairly new to the game of warfare, you might ask: "How exactly, do you "know yourself?"" Specifically, you should know things such as:

*How big is your army, including garrison forces?

*If you were to launch an attack right now, this turn, how many units would you have available, and what would they be?

*Do you have a means of getting your forces to an enemy's homeland (transports, landbridge, psi-gates, drops, or some combination of all of the above)

*How many bases can you afford to commit to the war effort to replace lost troops?

*How long can you afford to fight a war?

*What is my level of technology, relative to my opponent?

*How many total bases do I have, relative to my opponent?

*What are you hoping to accomplish by entering into this war?

If you cannot answer at least these questions, then you're probably not yet ready to fight, and if you DO fight, you will likely be fighting an uphill battle. Likewise, initiates to the arts of war might ask "How exactly, do you know your enemy?" And I would say, specifically, you should know or do these things at a minimum:

***Infiltrate your opponent!** (Nothing is more important than this!)

*How many bases does my enemy have? Is it more bases than I have?

*How large of an army can my opponent bring to bear on me? If he is attacking, how will they be arriving (drop, psi-gate, transport, as above), if he is defending, how good is his infrastructure?

*How long can my opponent afford to fight a war?

*What is my opponent hoping to accomplish by going to war with me, or, how will my opponent likely react to my attack? (is he likely to hit back hard, or does he have a tendency to shrivel up and surrender quickly)

Again, if you can't answer all of these questions at a minimum (and there are plenty of others), then you're not ready yet.

Let's take a quick look at the fourteen factions in the game and see where their battle strengths and weaknesses lie. This is fairly generic of course, but it is enough to get your mind turning on the subject:

The Hive
Strengths: LOTS of troops & quick replacement times (+1 growth and industry)
Weaknesses: Possible lagging research (lack of energy), and limited probe team actions (again, lack of energy)

The Morganites
Strengths: LOTS of probe actions (good money), likely to have technological superiority (good research)
Weaknesses: Small army (support problems), likely to have lower morale (probably running wealth)

The University
Strengths: Likely to have the best tech-level in the game (**great** research)Weaknesses: Probe vulnerability

The Gaians
Strengths: Tied for the best Psi-force on Chiron (with The Cult of Planet)
Weaknesses: likely to lag in techs (can't run Market, can't get +1 energy per square until late game)

The Believers
Strengths: Strongest attackers on Chiron & Superb Probe Teams. If running Fundy, immune to subversion.
Weaknesses: Lousy Tech means initial skirmishes (pre-probe ops) will likely be lost, regardless of fanatic bonus

The PeaceKeepers
Strengths: Baseline. Peacekeeper troops have no notable strengths or weaknesses. I suspect they were the baseline faction
Weaknesses: (see above)

The Spartans
Strengths: Magnificent fighters, either offensively or defensively. The best, most well-rounded fighting force in the whole game
Weaknesses: Harder to train replacements (industry penalty)

The Cult of Planet
Strengths: Tied with the Gaians for the best Psi-force on Chiron
Weaknesses: Lag in tech and replacement times (industry and econ penalty)—this will also limit probe actions.

Cybernetic Consciousness
Strengths: Good research will likely mean better firepower, techsteal ability when capturing a base.
Weaknesses: Lower than average growth rate and difficulty booming may mean smaller industrial base.

Data Angels
Strengths: Units are expensive to subvert (and invulnerable with the right tech). Thanks to sharetech ability, weapons tech will be at least par, if not better.
Weaknesses: Over-reliance on probe teams may lead to a smaller than average standing force.

Drones
Strengths: Mammoth industrial capacity equals lighting quick

troop replacement times

Weaknesses: Lagging tech means inferior firepower, at least in the opening stages of battle.

Pirates

Strengths: Kings of the sea! Unmatched naval power thanks to faction-specific bonuses

Weaknesses: Sea bases are more difficult to defend, able to be taken by a larger variety of craft and chassis types.

Caretakers

Strengths: Inherent defensive bonus and probable tech edge. Bases are largely useless if captured.

Weaknesses: None notable.

Usurpers

Strengths: Inherent attack advantage (per Believers), and probable tech edge. Bases are largely useless if captured.

Weaknesses: None notable.

Building on those basic concepts, we find the first principle of victory:

Use your native strengths in battle

Thinking along those lines, it is easy to look down the list, and come up with some basic strategies with each faction, and they'd probably look a lot like this:

The Hive

Use superior numbers to overwhelm your opponent. Don't give him time to do anything cute or subtle with his greater energy reserves.

The Morganites

Buy his empire out from under him, one piece at a time. Use your ease of getting to +1 Energy per square (Wealth) to your advantage and adopt Native strategies to force your rivals away from Market economies, giving you a significant energy lead.

The University

Strength through superior firepower.

The Gaians

Strength through little squggily worms—use a prevalence of Native attackers to force your opponents away from Market economies to equalize energy flows.

The Believers

Attack relentlessly. Never let your opponent breathe, and allow any enemy base to escape the wrath of your hungry probe teams.

The Peacekeepers

Chuckle while your opponent tries to figure out how the hell to attack you, and chip away at him all the while, looking for the opening to drive the stake through his heart.

The Spartans

Meet your opponent in the field with care and cunning. Kill him and dance away before he can return the favor. Nobody can do that particular dance better than you.

The Cult of Planet

The same basic strategies that work for the Gaians work for you. Use them! Guerrilla tactics are your best friend, and your ace in the hole!

Cybernetic Consciousness

Use your techsteal ability to rip through the tech-tree and terrorize all neighboring factions. Of all the factions, you are the least probe-dependent.

Data Angels

The underrun is your best friend. Arguably, you are even better at this than Morgan.

Drones

Forget troop losses. You can overwhelm with sheer numbers

even better than Yang. Do it.

Pirates
Sea Power of any kind is magnified in your hands. If anybody is foolish enough to build coastal bases in your vicinity, take them from him. Keep everybody else's navies bottled up.

Caretakers
Expand relentlessly, and "defend" your way to victory!

Usurpers
Attack relentlessly, per the Believers, except that while they're wasting minerals building probes, your tech parity or supremacy will enable you to focus on building a bigger, better army.

Of course, there is another way of looking at the same equation, and that brings us to the second principle of victory:

Exploit the weaknesses of the enemy to defeat him.

On the surface, that seems easy enough, but you will find that it is far easier to say it than to do it.

Thinking in terms of the "second principle of victory," it's pretty easy to glance down the list, zero in on the weaknesses of the different factions, and devise a method of beating them. If you do that, you will likely wind up with a list that looks something like this (Keep in mind that, at this point, we're still talking in pretty generic terms, and that these particular strategies are drawn from the notion of using each faction's weaknesses against itself):

The Hive
Wear him out with Probe Teams. Drain what energy he has to keep him utterly helpless in that regard and eliminate what rush-build capability he has. Defend your bases with multiple probes to prevent him from stealing techs. Subvert his troops to even out the numbers and fight him with his own forces.

The Morganites
Use raw numbers to overrun the smaller Morganite army. Simply sweep them off the map.

The University
Probe vulnerability and Chronic drone problems make University bases cheap to buy. Subvert their bases whenever possible to get a foothold. Steal techs with your probe teams to get technological parity, then blast them off the map.

The Gaians
Probe-guard your bases to keep your techs safe and crush the Gaians with superior technology and money (something you will likely have in greater supply than they will)

The Believers
Kill **any** Probe-team you see, even if you have to leave a unit exposed to attack to do it. In a fight with your probes, they'll win and grab tech, and if they do that, you lose.

The Peacekeepers
See how they're being played. The troops themselves don't have any real weaknesses to exploit, so you will have to wait on their commander to make a mistake, if you're looking for something to take advantage of. In the absence of that, play to your own strengths, and hit him hard and often in the field.

The Spartans
Use attrition. Likely, you will be replacing your troops a good bit faster than he'll be replacing his.

The Cult of Planet
He's got no money, and he can't replace lost troops quickly. A drawn out fight is not something this faction wants to see. Crush him with that, and drain away what money he has with your probes!

Cybernetic Consciousness
Lower growth rate and a tougher time booming may leave this faction with less industrial capacity (or capacity which is enhanced via crawlers). Hit their mineral-harvesting crawlers, and out-produce them, smothering them with numbers.

Data Angels
Polymorphic Encrypt your troops to make them more expensive for her to buy. And in the same vein, give her some middle of the road targets to buy. Stuff that's maybe a generation old. Good enough to be a threat (making it likely she'll buy it out from under you), but also fairly easy to kill when she does. Keep her money tied up that way, and hit her relentlessly. Odds are good that she's got a smaller starting force than you.

Drones
Another low-tech faction. Keep your bases probe-guarded, deny him access to your research, and keep the guns blazing. Industry or not, you can kill (and subvert) them faster than he can make them.

Pirates
Thanks to the high vulnerability of sea bases (pre-Tachyon field), it should be no problem for you to achieve local air superiority, blow his navy out of the water, and waltz into his bases.

Caretakers
Gas 'em!

Usurpers
See above, coupled with subversion whenever possible. Good morale troops are always valuable, no matter how green and ugly they are!

Taken together, these two lists should give you a pretty solid foundation upon which to build your attack and defense strategies. That's not to say that you won't ever encounter oddities, or things that won't fit into these generalizations. You might find a Hive player who's got money coming out of his ears, or a Morganite with a massive, clean, elite army, or....the list goes on and on. Keep in mind that the lists above are not, and were not meant to be ironclad, but I feel certain you will find that they hold true far more often than not, and they will serve you well as a beginning point to devising your battle strategies. If you study these lists diligently, and find ways of executing the ideas they contain, you will win a great many

more games than you lose. You will, in short, be a very good, solid player.

You will not, however, be a great player.

In order to be a great player, you must strive to consistently achieve the third principle of victory:

Best and hardest of all, is to use the enemy's own strengths as weapons against him.

If you can learn to do this consistently, you will be all but unbeatable, and in time, I will attempt to teach you what I know about it. I am certainly not saying that I'm the most qualified person for the job. I don't even begin to know everything about strategy and tactics. In fact, the only thing I can point to on my "resume" that might make me even remotely qualified to talk about this particular subject is the fact that I win a good many more games than I lose. At any rate, it is my hope that you will be able to take what I know about the subject and incorporate it into your own unique playing style, and from that, come up with a solid, reliable set of battle principles that serve you well. But there are other things which must be discussed before we get to the specifics of the third principle of victory. It is enough for the moment that you are aware it is out there.

Before we start discussing exactly how to execute a battle plan (and eventually, how to use your enemy's strengths against him), some common understanding of terminology seems in order. What follows is a list of specific, named tactics, and notes on how, when, and where to apply them. I have included a "Baker's Dozen" of these strategies for your enjoyment. There are literally hundreds, if not thousands more, but part of the fun of practicing to be a good general is uncovering new strategies for yourself, and learning to blend their execution in perfectly with your particular style of play. Note that there are no "bad" tactics or styles of battle listed here. All of these are exceedingly powerful and have been time-tested and proven. It falls to each of us, students of battle, to learn the best times and situations to use these different approaches, and when we arrive at an intimate understanding of how to best use these attacks, we approach that previously mentioned level of greatness.

Demonstration

A show of force against an enemy in the field. A demonstration can consist of any number of units, in any configuration. It is one of the mainstays of battle. The main uses of a demonstration are two-fold: First, to intercept an invading army before your infrastructure and bases come under fire, and second, to wear down enemy forces as a set-up for a future siege or another attack made by one of your allies.

Siege

An attack on an enemy base. Like a demonstration, a siege can consist of any number of units (but the numbers tend to be larger for sieges than for demonstrations for strategic reasons), and the units might be made up of any number of chassis-types and capabilities.

Feint

A "fake" siege or demonstration. The point of a Feint is to make your opponent believe you are going to launch an attack someplace, draw a portion of his army toward the site of the perceived threat, and then hit him somewhere else, unexpectedly.

Overrun

A specific type of attack, aimed at pushing deeply into enemy territory. Where a demonstration tends to be rather akin to a parry in a duel, an overrun is a stab toward the soft underbelly of the enemy. It's intention is to deny your enemy the use of specific terrain features that are inside his territory (a borehole, a valuable nutrient square, a monolith, or some landmark such as that, or, to isolate an enemy base and make it more vulnerable to a siege).

Roverrun

An overrun attack composed of a "Rover-Only" force. Unlike the overrun, which tends to emphasize a well-balanced attack force to kill the enemy and hold off any possible counter-attack, the Rover-Run's goal is to wipe the enemy force out and use speed and maneuverability to avoid any possible counterstroke the enemy

might have planned.

Underrun

An overrun with a small number of ground troops, supported by large numbers of probe teams. The goal of the underrun is to slip a small number of troops into enemy territory to cover the vulnerable probe teams and steal your way to the biggest force you can, using the subverted enemy troops to occupy enemy territory and putting the enemy in an interesting predicament. Does he attempt to steal the troops back and drain his energy reserves? Or, does he attack his own men, effectively working against himself? Either way, it is one of the hardest attacks to pull off, and also one of the most potentially devastating.

Rolling line

A subset of the siege or demonstration. The rolling-line technique involves relatively large numbers of units and implies an extended campaign. The idea of the rolling line is to have enough units to be able to attack enemy positions every turn, and at the same time, be able to pull your damaged units back to some safe zone to recover, then rotate them back to the front lines again. In this way, you could conceivably keep the attack running forever. It's most practical use is in sieges of Hive bases, where the good chairman is likely to have upwards of thirty units in his most forward positions. You can take a base like that, but you'd better use a rolling line to do it, or he'll attack you on his turn, and wipe you out completely.

Scorched Earth Retreat

A desperate defensive gambit. When you know you cannot win the day, and you cannot hold your positions, destroy **everything** that might be even remotely useful to your enemy and pull back to a stronger position.

Scorched Earth Overrun

Similar in its execution to an overrun, but your objective here is not to occupy enemy territory. In this case, all you want to do is deny your enemy resources. Most often, this is used when your

opponent is significantly larger than you are, and you are attempting to even things out (you know you are not strong enough to hold any bases that you might take, so you are not even going to try....you're just out to hurt your enemy's ability to produce war materials).

Drop and Chop

So named by Korn469, who is a fine gamer by any definition. The basic strategy calls for breaking the enemy's empire up into zones, isolating those zones with drop troops, and attacking bases in each zone with a mixed force of choppers and your drop forces. It is a somewhat risky attack in the sense that your drop troops take damage on landing, and you will generally use this to attack into the core of an enemy's empire, but when executed correctly it can be every bit as dazzling as a well-played Underrun.

Stonewall

A "Rolling-Line" in reverse. Your objective here is to hold the enemy at bay indefinitely by positioning your troops in such a way that troops on the front line can pull back to a safe zone to recover, and then come back to the front to continue the defense.

Nettle\Skirmish

A sneaky, limited form of a demonstration. Your main goal here is to prompt the enemy to do something drastic and rash. Generally, you only need a few units with good movement rates (needlejets, hovertanks, and rovers) to nettle your opponent, and the goal is to prompt him into action before he is truly ready. Annoy him so bad that he'll come after you not fully prepared, and then you can smash him hard for his impatience.

Flank

The oldest trick in the book, and still popular because it can be devastating when done correctly. The flank is another subset of a demonstration, or rather, it is two demonstrations occurring at the same place, at the same time. The goal is to make your first demonstration against enemy forces to tie them down while your second demonstration force moves up from a different direction to seal off all chance of retreat (see the upcoming discussion on

zone of control) Flanks are not used to simply hurt your enemy, they are used to crush his field army entirely. You should not be using flanking maneuvers if you want to leave any survivors, because you'll be hard pressed to find any after a properly executed flank.

So that's enough to get you started. I've kept the specifics of each attack intentionally vague, because there are so many variations on each one that you could literally write a book on each attack-type. And, as much as I enjoy writing, I think I'll steer clear of all that.

(How-To Note: Executing a Battle Plan—Specifically, we'll discuss executing a battle plan against a base, a one-turn siege, actually, and I leave it to you to use the principles here to figure out the optimal ways to execute the other types of attacks mentioned above. Once you've selected your target, once you've infiltrated the datalinks, and once you've determined what your objectives are, the very next thing you should do is determine exactly how you plan to get your forces where they need to be. Will you make drop troops, or rely on transport tactics? Or, will you use tectonic missiles to create an instant land bridge and simply walk across? Whatever your answer to that question is, it will determine how you proceed.

Once you have the "delivery method" worked out, you'll need to design your actual attack force. Odds are, conditions will change between the time you begin moving the force forward and the time they actually arrive at the scene, and since you have no way of knowing exactly how much conditions will change, you will need to estimate. A good rule of thumb is to bring 25% more troops than you think you will need, but troops are not the only consideration here. Does the base have a lot of Multiplicative effects? If so, you'll need probe teams to strip them out, and make besieging the base easier, which means you'll also need at least one unit of artillery (and at least two if the base you're planning to move against has artillery of its own). Are there any defenders at the base with really nasty special abilities? (and there probably are!). Are there any holes in the base's defensive structure (i.e.—did he fail to include Trance or Empath garrisons?) If so, plan at least some elements of your attack force around that, with an eye toward hitting with those elements first, to eliminate his best defenders.

The next question you need to prepare an answer for is: What do I plan to do after the battle? If you plan to try and keep the base in question, then you'll need to have some cash handy to rapidly re-build the infrastructure your probe teams got rid of, and in fact, if you're planning to stay, you'd better bring along a few extra probe teams to move in and occupy the base with your troops, to prevent an easy buy-back).

Also, you'll want to move a few units out side the base to sever roads and

mag tubes, to make it harder for the enemy to respond to the attack. If you're not planning to stay, then it doesn't matter. Sell of the most expensive facility at the place and burn it down.

When attacking, the order of the units is crucial! The first units in should be your artillery to soften up any unarmored defenders at the base. Second, send in your probes! Third, send in the attackers you designed around any weakspots in the defender's garrison force. You want to do this because, in all likelihood, you'll strip out his AAA defenders first, which opens the door for the Fourth element in the attack, sending in your choppers! Once the base has been stripped of it's Aero-complex, and after the last AAA defender is dead, the choppers will make short work of whatever's left. Just don't get carried away! Make sure you leave one move for the Chopper so he can join your forces in the base. Fifth, after the base is empty, move the rest of your forces inside, proceeding as planned above with regards to what your goals are for that base. And that's it! With luck, your planning has paid off, you took the defender by surprise, and walked in pretty-as-you-please!).

Zones of Control

One final bit of discussion needs to occur at this point, and make no mistake: If you want to win and win consistently, if you want to do things with your army, and win battles that you really have no business winning, then you'd better learn how to do this, and learn well. I'm talking about Zones of Control. If you learn how to influence and control the battle by tinkering with Zones of Control, you will be able to fluster, frustrate, and frankly amaze your opponents.

This is quite possibly the best way to unbalance a battle in your favor, and once you understand the concepts and what they can do for you, you'll wonder how the Hell you ever got along without it.

Basic ZOC theory

Each unit "exerts" a field of influence over the battlefield, amounting to one hex, all around the unit in question. Enemy units can enter into or leave your ZOC, but they cannot move through it. Consider that for a moment: Enemy units can enter into or leave your ZOC, but they cannot move through it.

The basic principles associated with using ZOC as a weapon against your opponent involves finding ways to cut off enemy troops, and make it impossible for them to get to safety. Once

isolated, the troops can be killed or subverted with ease. That's really all there is to it, but it's a lot harder to implement than it is to talk about. Try it, and you'll see what I mean. Note too, that there is one unit in the game that can freely ignore the ZOC restrictions. The Probe Team. This means, whether you are planning to use ZOC as a weapon, or trying your best to defend against it, the Probe Team will figure prominently into your thinking.

Intermediate ZOC Theory:

By itself, a single unit exerting it's ZOC is rather interesting, but it can't really do a lot for you. Things get complicated rather quickly though, when you start adding other units to the mix, and you can suddenly find yourself exerting influence over a significant portion of the map.

Intermediate ZOC theory focuses on a concept I call "Blocking" for lack of a better term, and Blocking comes in two flavors: Offensive Blocking, and Defensive Blocking. We'll go over an example of each.

In the case of Offensive Blocking, you want to structure your attack thusly: Let's say that you have your eye on a certain base in hostile territory. Your opponent has a worthy infrastructure, and can easily bring reinforcements to the base in question once he realizes what you're up to. You, of course, want to prevent this from happening, as it will be significantly harder to take the base if your enemy gets the chance to reinforce his position. To counter this threat, you structure your attack as you normally would for a base siege, but you include three extra units to serve as blockers. In this case, you include a trio of choppers to get in the way.

The plan here is not to use the choppers to attack, but to overfly the base in a loose-wedge formation (that is to say, a wedge formation with the units spaced one square apart as opposed to being right next to each other—which would be a "Tight Wedge"), planting themselves squarely in path that the reinforcements will have to take if they want to relieve the base. You want choppers for this because they can stay out for a few turns (unlike interceptors) and keep the block in place, and presumably, that will buy you enough time to take the base, giving your choppers a place to land before things get terminal, and look at what you have accomplished

with these three units: You have isolated a portion of your enemy's empire, and made it nearly impossible for him to hold the territory. With three units, you have cut a swath seven squares wide across his territory that he cannot get through....he'll have to go around, and of course, by that time, it will be too late. That is the essence of the offensive block. Of course, it would take twice as many interceptors, but you could do the same thing, and keep the block up indefinitely, rotating three in and three out every turn to maintain the block as long as you needed to.

The Defensive Block is executed much the same way, but it's main purpose is to stall an enemy advance. Essentially, you don't want to attack any units unless you are certain of victory, but you **do** want to throw units in the way to slow your opponent down. By blocking defensively, you give your opponent two very unattractive choices: He can either lose a turn's worth of momentum in his attack by staying put, or he can attempt to move around your block, and potentially into less favorable terrain, or toward some trap you have laid for him.

Attackers are generally on a time-table, and time favors the defender (given the close proximity of reinforcements), and a well-placed Defensive Block can really cause your enemy trouble. Not to mention, defensive blocks can quite often completely unravel a momentum player, especially those who are so unimaginative as to use an all rover force. It's unlikely that the rovers will have SAM capabilities, so rotating three interceptors in and out can create a completely immovable wall that the force is utterly helpless against, which buys the defender time.

Blocking with odd-ball units

Chances are good though, that you won't just have half a dozen interceptors lying around with nothing to do when your local bad guy comes calling, so you'll have to do some improvising. Now obviously, there is no way I can sit here and rattle off every possible scenario you might find yourself in, so you will have to experiment with the concept on your own and find a few things that you can get comfortable with, but if you're a builder or hybrid player, you've got tons of units lying about to practice with that can really surprise you with their sheer versatility. Namely, formers

and crawlers (and momentum players can use obsolete garrison units).

There is **nothing** more humiliating to an attacker than to be hemmed in and have to waste time killing a slew of well-armored formers and crawlers, especially when those formers and crawlers actually start to take a few of the bad guys with them! And if you are attacked, don't be the least bit shy about driving your formers and crawlers right up in his face. Of course, you want to be somewhat careful if he's got probe teams with him, because you don't want him to subvert your units, so you'll want to double stack them whenever possible, but the point is, Builder-Players have lots of formers, and it is not at all inconceivable that you could very nearly surround an entire attacking army, or move in behind them to cut off any chance of retreat or reinforcements.

Blocking is a versatile tool in anybody's little black book of strategies, and you would do well to keep practicing with it until you can do it in your sleep, because you can rely on the fact that sooner or later, you're gonna have to face it, and if you're not used to seeing it, you'll die at the hands of a half-dozen crazed former teams....how embarrassing.....

Advanced ZOC trickery

Where Intermediate ZOC theory focused on creating temporary blocks to allow you a specific strategic gain, Advanced ZOC theory falls into two distinct categories, and both are important. First, is the creation of permanent blocks, and second, is maneuvering around blocks that have been set up in your way. This is where the Probe Team comes into play.

Permanent Blocks

The most obvious to the eye here is a "choke point." A narrow strip of land that your opponent must use if he intends to come at you over land. If you have any terrain like this, you would be well advised to slap an armored crawler down that way to start harvesting some resource or another and get in the way. And, when you can get time to, drive an armored former down there to pay him a visit, and while he's there, he can build a sensor array, and maybe even a bunker.....Now you've got a wicked (and relatively cheap) stacked

defense group that will be pretty tough to root out.....a permanent block.

And, as the game progresses and your formers begin to finish up the continental terraform, don't be content to just haul them back to base and put them on garrison support duty! There are several better alternatives than that! (like creating more permanent blocks!) Take a look around your empire. Are there any really tasty terrain squares that you'd hate to lose productivity from? If so, just park your armored former right on top of it, and....presto! Instant protection!

Or, take 4-6 formers as you finish with them, give them the latest and greatest armor upgrade, and create a "necklace" which runs through your empire. A ready-made block which will serve to slow an enemy advance down, should anybody ever decide to (or be able to) land on your fair shores. The more defensive stuff you can take care of up front, the less attractive a target you become to a would-be invader, because you'd better believe the attacker will be doing some research, and if he finds two possible opponents, one with all his defenses bristling and laid out, and one who looks soft.....well, it doesn't take a rocket scientist to see which one he'll likely choose to hit.

That is the real power behind permanent blocks. You want to advertise them loudly and proudly. It is a statement to your enemies, and it says very clearly: Yes, you might invade, but I am ready for you, and you will play hell advancing through my empire to hurt me, so be warned. More often than not, an attacker will heed that warning and leave you be.

The second concept to consider is maneuvering through or around a block. They're stubborn things, but they're not unbeatable, and what can be done, can be undone one way or another.

If you have the raw firepower at your disposal, simply blow the offending units out of your way and move on. Note that this still benefits your opponent slightly, as it took you at least some time (and probably damaged a few units) to do that. Better still though, would be to use probe teams to turn the block against the person who constructed it. Again, probe teams are unaffected by Zones of Control, which means they can freely move between enemy units. That's a tremendous ability, and you should learn to make the most

of it.

(How-To Note: Getting around a Zoc-Block—If you want to render a block useless, you're going to have to exert your own ZOC in the area, and this can be done as follows:

Your army encounters a line of enemy troops intent on blocking. You duly stop for a moment, a few squares away and assess the situation (all the while, bringing up your cadre of Probe teams). The enemy's units are double stacked, so you can't use subversion to simply do away with the block, and you are reluctant to risk battle in the open because you want to preserve your firepower to take out the base you're after, so.....

You move your leading elements up next to the blockers and wait. Then you bring a probe team up and move him one square further (moving through the enemy's ZOC), then pause and bring up another military unit to stand with the Probe team. Stop him there and move the probe team forward again. Now you are one square behind the enemy unit and out the outer edge of his ZOC. Move another of your units up, again to stack with the probe team. Stop him there. You have now created a "bridge" across the enemy's ZOC, and the rest of your army can move along this bridge unhindered. You have completely negated his attempt to slow you down, and you never fired a shot.)

To the trained eye, this opens up all sorts of possibilities, both strategic and tactical. I leave it to each individual reader to study this section and draw your own conclusions as to the best uses of this information, but even with the simple examples given (and I'd need an active map to adequately explain more advanced concepts than these) you can see the power of using Zones of Control to influence the shape and direction of battle.

Chapter Eight

Meta-What?

Studying the Meta-Game

SMAC is a complex and multi-faceted game. You don't have to play it that way, of course. You can simply treat it as a conquest game, get your bases stable, crank out a gazillion units and march all over the globe. If that's your style, and that's what you enjoy, by all means, have at it! But there can be a lot more to the game....it can become an almost philosophic exercise, actually, and that is where the study of the Meta-game comes into play.

The Meta-Game, and the study of it, is all about taking a subtle control of the gaming environment, and going back to the earlier discussion on becoming a great player, learning to use your opponent's own strengths against him, the Meta-Game is the foundation for how you do that.

The crux of the matter is this—There is no single, absolutely unbeatable strategy you can pursue in the game. No one can say to you: If you do this, you will always win. It simply isn't so. Every strategy has weak spots which can be exploited. Every strategy is beatable by some other strategy. Certain broad-based ideas come into fashion for a while, and seem all but unbeatable, and then some wily warrior figures out a way to beat that style consistently and it falls out

of favor in preference for something else, and the cycle repeats.

The heart and soul of mastering the Meta-Game lies in your ability to read the ebb and flow of the game you are in. Determine who's winning and why they are. Then go to work finding a way to beat not them per se, but the reason they're winning. Beat the reason they're winning, and you beat them by default.

Here's a fairly simplistic example: Let us say that you are playing a game in which Lal has become the T-Rex of the SMAC universe. It's mid-game, and already he's got a veritable horde of soldiers marching all over the globe. If something is not done to stop him soon, you will be hard pressed to stand against him.

Fortunately, you had the good sense to infiltrate him early in the game (before he got the Hunter Seeker), so you can spy on him to your heart's content. Also fortunate, you've just launched your first satellite, enabling you to see all of his bases.

You're at peace with him now (a truce), but periodically, he comes calling demanding money and the occasional tech. His mood is seething, and you know it is just a matter of time until relations break down and he comes hunting for you. Probably, he's just waiting until he finishes stomping on the other factions.

After browsing through his empire, you stumble on the strength of his current position. He's playing Hybrid style (all of his bases having fairly good infrastructure), with a Mineral Focus. He does not yet have Clean Reactors, but will have them soon, and his coffers are full enough to upgrade a good chunk of his army to clean, which will free up a huge chunk of his Empire's productive capacity. If you're going to stop him, you must do so before this occurs.

The key to his strength, you discover, is the sheer number of crawlers he's got out harvesting minerals for him, and the large number of boreholes his formers have been able to construct. In fact, if he lost the crawlers, and his bases suddenly had to support his entire army, his production would shrivel up to almost nothing (unless he wanted to disband a good portion of his standing force). This makes you smile, because it just so happens that you have a couple of sea bases near Lal's coast, and a quick count reveals that from those bases, a needlejet could reach the majority of his crawlers......

You've just won your first "Meta-Victory." Discovering the

opponent's strength (heightened mineral production), and using it against him (when he suddenly finds himself without that which he has planned his entire game around, his Empire essentially grinds to a halt).

That, my friends, is the power of studying the Meta-Game. If you were to take a linear approach to beating Lal in the scenario outlined above, you would simply meet his army in the field, and it would be a long, arduous fight which you may or may not win, but by studying the depths of the game and unlocking exactly how Lal was able to rise to such a position of power, you figured out a much easier way to best him than beating his formidable army.

And that kind of analysis works in any situation you can imagine. Study the board, study your opponents, and unlock the secrets to why they are doing certain things well, then devise a plan to beat that element of their game. Beat that which they have all their hopes pinned on, and you force them to restructure their game. This will cost them both time and money, giving you leverage to proceed with your own plans.

Learn to do this well, and you will rarely lose a game.

A second example of playing the Meta-game

One recent, very exciting discussion thread on the Apolyton Alpha Centauri forum (http://www.apolyton.com) has been all about eco-damage, and ways you can manipulate the game to increase your "resistance" to it. This notion plays into Meta-game concepts because by immunizing yourself to eco-damage in the early game, it puts you in the position to do a number of interesting things in the mid or late game. But, before getting into all that, let me explain how the immunization process works:

First, consider that the base number of "clean" minerals—those that do not create eco-damage—is sixteen. Early in the game, you want to spike your mineral counts higher than this number in order to generate eco-damage and get at least one "fungal bloom" (fungus growth that destroys one or more of your terraformed improvements). This is important because for each "pop" you get, the number of "clean" minerals all your bases can produce increases by one (1). On top of that, after you've had at least one "pop," building Treefarms, Hybrid Forests, Temples of Planet, and Centauri

Preserves will also increase the number of "clean" minerals your bases produce by a factor of one (1) each. Thus, in very short order, by running an early period of rampant eco-damage, you can dramatically increase your "clean mineral suite," and increase your faction's resistance to eco-damage in general.

By the mid-game, this will allow you to do any number of things to influence the flow of the overall game, and here are a pair of them to get your mind turning on the subject:

First and most obvious to the eye, you can simply run with your heightened mineral production! You've long since repaired all the damage the fungal blooms caused to your terraforming enhancements, and if you've pursued this strategy with a vengeance, then you'll have vast amounts of "clean" production capacity at your disposal. If your opponent has not paid attention to this aspect of the game, then the only way he can keep pace with you is to run with significant amounts of eco-damage, meaning that he has to compete with you while repairing terraforming damage due to fungal blooms **and** fending off rogue worm stacks. That's an uphill battle indeed.

Second, a significantly higher eco-damage threshold means that you can commit atrocities and suffer few, if any ill effects from it. Here, you'll note in the datalinks that attrocity damage can be countered by "GOODFACS" (the aforementioned Tree Farms, Hybrid Forests, and so forth). Get your eco-damage immunity built up sufficiently and you can even drop a Planet Buster—figure 5 GOODFACS per—without causing Chiron to go haywire!

In all, paying close attention to your clean mineral suite position relative to the other factions in the game—and taking steps to ensure that yours is higher—will have an enormous impact on the bottom line, enabling you to do more things more quickly and/or immunize yourself against the damage normally caused when you commit atrocities.

More Notes on the Meta Game

Another aspect of the Meta-game is finding ways to take wisdom drawn from other areas and apply it to the game situation at hand, and with that in mind, here are some things designed to get your brain churning in that direction:

The Stage Magician's Secret—Big Moves can cover Small Moves:

Keep your objectives incrementally small, and, when you set about achieving them, do so in a very quiet way. To enhance your chances of success in your endeavors, rely on diversion (Big Move). Send a large force out openly to threaten an area far-removed from your true objective. Force your opponent to spend time and resources to meet that perceived threat (and, if it is not responded to, it's easy enough to make the perceived threat a very real one). In the meantime, send a much smaller, tailor-made force out in secret toward that which is your true objective. In MP, this is one of the very best ways to take opponents by storm, and by complete surprise. Do it well and consistently, and they'll swear you are a but a ghost on the battlefield, there and gone before they knew what happened.

Use Odd Bits of Philosophy or Misc. Phrases you've heardThis is a great way to help shape strategy, for example: "....and lo, the birds of the sky and beasts of the sky shall be as my army...." is the perfect summation for a classic Gaian or Cult strategy to catch worms and release them in some Marketeer's territory to cause trouble without "actually" attacking. And to that end, read everything! Everything you can get your hands on! Soak the whole Universe up like a big sponge and channel what you have learned down different avenues (a thing which works as well in SMAC/X as it does in life!).

Borrow from other games you playWhen I was in college, I used to play Axis & Allies (a game with quite a few similarities to SMAC/X, by the way) with an almost religious fervor. In fact, over the course of a summer, we held a tournament on campus. One hundred game spread. My record was 98-0-2. Both of the "draw" games were fought against the same person, and after three days of not getting anywhere against each other, we finally just threw in the towel. After that summer, I couldn't get anybody to play with me, even by offering them double their starting money....

As each game progressed, those watching would be in shock, and constantly I would hear phrases like *"But....how are you winning?!*

You've got a couple guys here....a couple more over there, but you're not doing *anything!"* Which I took as the highest compliment I could be given, because the truth of the matter was, I was doing quite a lot, but that told me in no uncertain terms that my game was utterly without form, and that speaks directly back to Master Sun Tzu's words: "....if it is formless, then even the deepest spy cannot discern it, nor the wise make plans against it."

It was true two-thousand-odd years ago, and it remains true today. Wise words.

I also used to play Magic: The Gathering all the time. Still have my cards, but haven't touched them much lately....too much other stuff to do I guess. But I **did** play in one tournament, and had the good fortune of running through it undefeated. It was a sealed-deck thing, with a thirty minute trading period.

I wandered around the room for about fifteen of my thirty minutes, just watching. Seeing what kinds of cards people were trading for, and then went the opposite direction from the herd. Everybody was ditching their reds and greens, so I picked up tons of them on the cheap, and put together a mean little red/green creature heavy (with direct damage in support), deck that sported a trio of Stormbinds as a final kicker.

After the tourney, everybody was curious to see the deck, and they couldn't believe that the guy who went undefeated used a handful of common cards (the Stormbinds were the only rares in the deck) that nobody thought were very "good." That was a fine moment indeed, and it speaks to an important point in SMAC. If everybody else is moving off in more-or-less the same direction, find a new direction and see where it takes you. Don't be content to stick with tried and true strategies just because "everybody is doing it." Maybe everybody is wrong. Maybe you can prove it to them.

Perhaps though, the game that taught me the most about doing freaky, unexpected things was Starfleet Battles. God how I love that game, and as my former opponents can tell you, if nothing else, it can be fairly said that our games were always colorful. I was the guy who would do oddball stuff like, begin an assault against a starbase with all my ships entering the map in reverse (with a plan to execute a snap-turn the moment we reached overload-range and blow the base off the map....which worked, by the way!), or, set up

an entire PF flotilla as death-riders, remote control them for several turns, driving them all over the map and eventually luring several ships away from the primary objective (a civilian base station, in that case), and then flying in fast and hard to crash them into the base....BOOM! Crazy stuff like that. Things to catch the opponent off guard, or distract, or just plain make him scratch his head and wonder what the heck I'm up to. Best of all, it's not always necessary to have a "master plan" in mind when you do weird stuff like that. Just do it and see what happens. If your opponent ignores your bizarre move, so be it, but there may yet be a way to make it pay, and if it draws his attention, then figure out a way (on the fly) to use it against him.

I could ramble on for about ten more pages about the Metagame, and ways of bringing ideas from outside sources into your overall "bag of tricks" (and in fact, I did, and then, to save some space, edited much of it back out!), but I think that's enough examples from different viewpoints to get you thinking about things in your own life that might prove useful in game terms. Odd bits of wisdom you've picked up from here and there. It's useful stuff, I promise.

Chapter Nine

All Good Things....

More Single and Multiplayer Notes

If you have absorbed every word of this guide, then the AI should present no real challenge to you anymore, even on the hardest levels. You have achieve the pinnacle of your playing strength then, unless you move onto something else. Namely, mixing it up with wily human opponents. Not to say that SP games will no longer be enjoyable....I still find myself playing SP regularly, if only to test out some new idea or another, but the real enjoyment from here on, will come from testing your mettle against those crazy, illogical, hard-to-predict humans, and don't be afraid of that! It is my sincere hope that, armed with your own thinking about the game, and supplemented by what you have read here, you are more than ready to take to the field against even the very best human opponents out there.

    If and when you do find yourself in a game with a human opponent who has the reputation for being heads-and-shoulders-above-the-rest good, watch him. Pay attention to everything. Study and learn. See not only **how** he does certain things, but **why**. Once you make contact, ask questions. If you're not involved in a war, odds are good, you'll get answers. Real, practical, game-mechanics-

driven answers that will improve your own game. And if you are at war with that player, do your best, and if you lose, study the save files later to figure out why. How did he beat you? Learn the answers to those questions, and apply them to your next game. If you do, you'll find yourself with a reputation of your own quite soon, and you'll notice that others are beginning to ask **you** questions! That's when you know you're getting somewhere....

The Late-Game

Long before you get here (and generally, the Late Game is defined by the arrival of Habitation Domes), you have either won or lost the game, so there is little you can do at this point to save yourself if you're losing ground. You get some attractive "Future Society" choices on the SE table, but these additional advantages will likely not be enough to turn the tide for you if you find yourself slipping. Chances are very good though, if you have followed the suggestions laid out in this guide, that it will be all over but the cleanup.

If you are losing though, don't despair. Take a look at your game and try to identify where you went wrong. A loss is but an opportunity for improvement. Simply locate the specific things you did to allow yourself to get beaten and change those behaviors in your next game.

Locking Things Down

Assuming you have not encountered any bizarre or unexpected problems though, chances are quite good that all that remains in the late game is the mop-up. Even if there are some big Empires out there saber-rattling, the game is over and they don't yet realize it.

If you're playing Momentum-Style, now is when you want to end whatever war you're involved in currently as fast as you can, and go pick a fight with the biggest Empire still in the game. Hammer him relentlessly until he's dead or submits, and then take out the next biggest. Your army is likely composed of nothing but Elite troopers at this point, and you can simply overwhelm your opponents with wave after wave of troops.

Hybrid or Builder Players: If you can keep the peace, you will likely be well set up to run for a Transcendence victory, but if

someone wants to pick a fight, now is the time to carry it to them. Do not be intimidated! The late game belongs to Builders (and Hybrids, to a lesser degree), so you will likely have all the important advantages on your side if you choose to fight, and these advantages, combined with the vast efficiency of your Empire, will be more than enough to end the fight very quickly indeed, and at this point too, your infrastructure will be sufficiently developed that you can literally fight the war with "one hand tied behind your back." That is to say, at this stage in the game, you need not scrap your plans to go for a Transcendent victory if someone wants a fight. You will, more often than not, be able to use less than half your bases for cranking out war materials, leaving the other half to focus on continuing the buildup and preparation for Transcendence. This is the true strength of Builder style. It is the moment you have been playing toward for the whole game. Make the most of it.

Final Notes/Odd Musings

One final thought as I sit here late at night and ponder. Scout-bombs. Most often, this is a desperation tactic, but it is a useful tool nonetheless. It's somewhat limited in its scope, but consider this: If your opponent approaches you stacked en masse to avoid subversion, try sending out a 1-1-1, cheapo scout patrol and "detonate" him next to the stack. A very cheap way to cause collateral damage to all the units in the stack, and if the units in that stack are already damaged, you might get lucky and score one or more kills with your sacrificial unit. In any case, it's a good reminder to your opponent that mass-stacking can be just as dangerous as leaving his units separate and subvertable.....

Trickery and Guile

Here, at last, is the crux of the matter. The mechanics of battle are not a matter of debate. We **know**, for example, that the base power of an Impact Weapon is 4. We **know** that Synthsteel has a defense of 2. We can therefore conclude that if a 4-1-2 Rover meets a 1-2-1 Infantry out and about someplace, odds are very good that the rover will return home and the infantry unit will not. Most of the time, it happens that way, but sometimes not.....sometimes not...and that is where greatness lies.

This section of the article will attempt to teach you everything I know about winning supposedly un-winnable battles. This is horribly unconventional stuff, and I'm sure a lot of people will howl and refute it. A lot of people will read this and say or think to themselves: "Well, that's cool, but **I'd** certainly never fall for it," or something like that. I'm expecting that kind of reaction. I love that kind of reaction. And who knows, maybe they're right. Maybe they really **wouldn't** fall for any of the stuff you're about to read, but again, I can only say that I win more often than I lose, and I can tell you that when you're neck deep in a tense game, and if you are presented with an opportunity, and all your intelligence efforts tell you it's okay to pursue it, even if every nerve ending in your body is screaming at you that it's a trap, nine times in ten you'll do it anyway. I've seen it happen too many times. People allow themselves to be lulled and deluded. People get complacent. They get comfortable. And they get beatable.

Here is a shopping list of specific things you will find me doing in my games to bewilder, confuse, confound, and generally irritate my opponents. I call it my "thing list" for lack of a better term. Enjoy, and may you constantly give your enemies the willies....

The "Thing" List
The First thing
Attitude is everything. Be confident, but don't get cocky. Be sure of yourself and what you are doing. Be efficient. If you're read every word in this guide up to this point, you should be getting pretty good at those things, and you have an excellent foundation to build upon.

The Second thing
Use "Messenger Units" frequently. Think about how this looks from a multiplayer standpoint: Suddenly, from out of the blue, here's a Morganite impact rover on my turf. How'd he get there without me noticing? Is he alone? And, even more unsettling than that, **why** is he there? Is he just passing through? Or does he represent the leading element of a massive invasion force? But wait! The Morganites are my allies! and, last time I checked, he was running Market, so what the Hell...... You see how it goes. The unexpected arrival of forces (even a single unit) in a rival's territory can make him start to second guess himself, and that's all you need. Maybe that single unit trolling around and doing nothing in particular on the fringes of his territory will cause him to change the production in three or four of his bases. If so, what did that net you? Turn advantage! Also, you can force your opponent's hand in this way. Maybe he was planning to attack you anyway. You'll find out soon enough, because if so, he will not tolerate your units in his territory, and will move to do something about it. So be it.

The Third Thing
Allow your opponent to do a lot of the grunt work for you. Want a secret project, but you're too busy building infrastructure and prototypes? Great! Keep an eye on exactly WHERE secret projects are being constructed. By mid-game, players will usually just start projects "wherever," as bases finish up the latest facility they were working on. And frequently, that means that a border base will assigned to do secret project work. Wait till it's finished, save your money, and subvert it!

The Fourth Thing

If your opponent can do something better than you, let him, and then make him regret it later! Specifically (from Tokek's game, not long ago): Yang captured one of Lady Dierdre's bases and started making use of his nice industry bonus to crank out a lot of garrison units. My recommendation was to let him build up a bit, and then subvert the base back, on the thinking that Yang could build the units a lot faster than Deirdre could, and subverting the base after it was well-garrisoned would be worth several turns of turn advantage.

This also works well with any faction that gets "free" base facilities. Why bother building colony pods when you can subvert Zak's newly founded bases AND get a Network Node too! Not to mention, doing this will utterly terrify your opponents, as they wonder if this was just a "Nettle," or if you're up to something more ominous. This goes back to using your opponent's strengths against him, and here's a faction by faction outline of a few things you can do:

Against The Hive: Let the good chairman build sea bases for you. He generally loves to surround factions with sea bases, and they're almost laughingly easy to subvert. So, let him use his industry and growth bonuses to your advantage!

Against The Morganites: Bully them! They make a lot of money, but under computer guidance, they're wimps! Bully and badger them till you break the bank! If he get's rowdy with probe teams, send him a little present in the form of about three dozen mediocre troops with polymorphic encryption and let him subvert them. He'll blow all his money grabbing your average troops, and then you can send in the real invasion force. Even the Morganites have their limits, and without any money, he's a pushover. Alternately, keep taking the same base with your units and let him steal it back. Repeat till he's broke, and unable to cause you further grief. Morgan without money is like a tiger without teeth. Big cat, but not particularly threatening.

Against the Gaians: Their main strength is Psi combat, and their ability to cozy up to planet. Most obviously, build lots of trance and empath guys to even yourself out with them, but also, send armored formers into their territory and strip out their worm-farms. Likely, they'll be relying heavily on those in the early game to augment their otherwise average troops, and that heavy reliance can

easily be their undoing. Besides, in a lot of cases, a former in enemy territory is more threatening than a shard invader!

Against the Believers: She wants to attack first....ok. Let the wench. Bulk up your garrisons in embattled bases, use lots of ECM troops mixed with AAA guys, keep tons of probe teams handy to counter her attempts at getting decent tech, rush perim defenses and tachyon fields wherever she attacks and then see how her vaunted 25% attack bonus fares. But, more often than not, she'll attack anyway, and quickly be out of your hair.

Against the University: Technology. The pride and joy of the good Professor. But they don't do him any good unless he can turn them into things, so don't let him. Feint him to death, and bleed his energy reserves per Morgan to keep him broke and unable to rush build. Keep him so busy wondering what you're up to that, techs or no, he won't be able to react. It's very easy to paralyze this faction with an aggressive stance, and lots of nettles and feints. Even human players who favor the University tend to fall for this more often than you'd expect. It's strange, and rather amusing at times.

Against the Spartans: Subversion. Their units are awesome! And wasn't it nice of Santiago to deliver a whole bunch of them right to your door!

Against the Peacekeepers: Ahhhh, but here's the crux of it. Nothing in the game mechanics to exploit, so you'll have to study whoever is playing the Peacekeeping forces and use the player's strengths against him. Is he aggressive? Is he the consummate peace-keeper? You'll have to get a bit creative here, but you'll find the strengths and weaknesses of his style, and you'll be able to use both of them against him.

Against the Cult: The same things that work against the Gaians work here as well. Do it with a vengeance. Declare war on Chiron itself, ripping out fungus everywhere you find it, and make their heavy reliance on psi-attackers work against them with your own empath and trance troopers. Then see how strong the worms are.

Against the Cyborgs: Aki will be pre-disposed to first strike armies, on account of the techsteal ability. Be faster. Beat her to the punch, and teach her a sharp lesson about sending out troops with little or no armor. With luck, it'll be a lesson she'll learn too late.

Against the Pirates: Let them build sea bases and naval units

for you! Theirs are awesome, and if you subvert, you get the free marine detachment too!

Against the Drones: With a few probe teams handy, you don't need to build an army at all. Let the Drones do it for you!

Against the Data Angels: Like the Peacekeepers, there's little here to exploit, so watch the player and wait for him to make a mistake!

Against the Aliens: Same as above: Subversion works to a degree on Marr, thanks to his Morale, but a subverted Caretaker loses it's 25% defensive bonus, leaving you in the position of having to watch for something you can use.

The Fifth Thing

A small, but important thing. Don't sit in a comfortable chair! Don't allow yourself the luxury of comfort. It will relax your mind and take away from your focus. I play all my games in a straight-backed, wooden chair. Yes, I get stiff and sore, but it is an important reminder.

The Sixth Thing

Every ten turns or so, pretend that you are seeing the map for the very first time. Scroll all around the globe and look at things from that perspective. You'll be amazed at how revealing that can be.

The Seventh Thing

Anything you can do, your opponent can do to, so don't read too much into what you see. Look at it, acknowledge it, and don't let it distract you in the least.

The Eight Thing

Huge, important thing. **DO NOT THINK TOO MUCH ABOUT WHAT YOU ARE DOING!!!** If you start thinking too much, you start second guessing yourself and then you get all confused. *Feel* the game, don't think it. Every game has it's own unique pulse and rhythm, and that is why I love it so much. It's a completely different experience every time. Pour over the map and study everything. Feel the ebbs and flows in the undercurrents of

the game. Very often, human players advertise their intentions long before they carry them out, and you can make people believe you are psychic when you are ready for their attack before they even put their army together! Paint the tapestry of your grand plan with a broad stroked brush, and let the details fill themselves in.

The Ninth Thing

Be impassive. Be patient. Never allow yourself to be goaded into action. Likely, somebody who's read this or who has come to these conclusions independently is lurking out there, just beyond your field of vision waiting to pounce on your for being foolish. Disappoint him.

The Tenth Thing

Never accept a setback as a setback. **Find** a way to turn it into an opportunity! Did the worms come and rape your newly formed base? Okay, take the opportunity to see if maybe you could have located it in a slightly more advantageous position. Take the time to build the sensor where you want the base to go, so when you put it back, it's harder than ever to remove. Work with the flow of the game, not against it.

The Eleventh Thing

Devise your battle plans under the thinking that your opponent will fight the perfect battle. Of course he'll make some mistakes, and when he does, it will make your conquest easier than you expected it would be.

The Twelfth Thing

If you are at peace, plan for the day you must fight. If you are at war, plan for the day you will finally be able to put your sword over the mantle and get back to building.

The Thirteenth and final Thing, that which brings us full circle, and brings this newest addition to the strategy guide to a close:

Trust yourself, and at the same time, have nothing but the deepest respect for your opponents. A certain, healthy level of nervousness heightens the senses and makes you come alive. It is

the thing which forces you to stretch yourself beyond what you might normally think you are capable of, but too much nervousness leads to fear, and fear/uncertainty leads to paralysis, which can only have one possible outcome: Defeat. Respect your opponent because only when you have a deep and abiding sense of respect for him and his abilities can you fully appreciate his position. And once you can fully understand and appreciate his position, you can walk in his shoes. See the world from his perspective. Do that, and you will very, very seldom lose.

So what's next?

I could keep writing and adding to this guide book forever, but that wouldn't do anybody much good, and eventually you'd get bored with it, so I'll stop here and wish you the best of luck. I intend to get a lot of feedback on this little guide from a number of friends I've made on the forums, and may, after talking to them, add one or more sections to this thing.

Again, much luck to you, and I hope maybe I'll run into you in a live game at some point! :-)

We have an informal war gaming group here in Columbia that we call the War College. We meet semi-regularly, and I'm the defacto president (I buy the chips & drinks) :-) Seriously, I've been playing War Games longer than the other members, so I generally wind up teaching them. Here are some of the lessons drawn from the War College. Not all of these are lessons drawn from SMAC, but all of them are applicable. Anyway, for my own amusement more than anything, I've put a list of strategies (both general and specific), and general principles that I enjoy making use of. Maybe you'll find this a completely useless section, but maybe it will help. :-)

Velociryx's Goodie Bag & Guiding Principles

* Ruthlessly violate any strategy you have ever read. Never accept anything as inviolable law. Challenge it. Stress and stretch it.

* Be noble, even in the face of terrible adversity. Purity of spirit and clarity of purpose are enormous advantages.

* Be very, very good. Be quick and fast and smart. Practice and hone your skills constantly. Never accept that you are the best. Deny it. Convince yourself you are struggling to keep pace even if you consistently set the standard. The first time you rest on your

laurels will be the time someone sneaks up to pull them out from under you.

* Thin Expansion Rocks!!! (Thin Expansion = Makin' TONS of colony pods as quick as you can to get bases started, and worrying about building them up later)....helps create that badly needed Turn Advantage)

* Think Probe Teams, damnit!

* Every turn, you need to be able to answer the following question: "How will I defend myself if I'm attacked right now?" If you can't, then you are asking for trouble.

* Every turn, you need to be able to answer the following question: "What can I do this turn to help get me more technologies?" If you don't have a ready answer, you probably won't be in the lead, technologically.

* Never, ever, EVER give up. If your opponent is beating you, he'll likely get careless, thinking he has nothing to worry about. Exploit that and steal the game from him.

* Take your opponents by surprise. Try something weird and unexpected. Even if it's not the best idea in the world, the sheer strangeness of it might be the thing that catches your opponent off guard and disrupts his plan. Make a list of weird things that work and use them (sparingly) again. :-)

* If you are weaker than your opponent, use Mind Worms. If you are stronger, use Technology.

*Put 3-4 missiles "on alert" in your border bases. GREAT point defense!

*The best way not to be defeated in the field is not to have a cohesive army. Your opponent should NEVER be able to look at the map and determine when and where you plan to strike. It should come as a complete surprise or you're not doing it right.

Finis

The topic has come up more than once in the boards I frequent: Why do we love this game so much? It can be tedious, trying, nerve wracking, and it certainly is not without its flaws! But here we are just the same, the faithful, the diehards, staying up way too late at night, coming into work the next day with eyes red and puffy, itching to hurry up and get through the day just so we can sit back at our computers and repeat the whole process. Why? What is it

about this game anyway? And when that topic comes up, you hear a lot of the same kind of answers. Cool story line. Good look and feel. Great movies and blurbs. Eerie graphics. Good all around game. And I would completely agree with all of those things, but that still doesn't quite answer the question to my satisfaction, so I did a lot of thinking about that.

Partly, I play this game to death because it draws on two things that I hold very dear in my daily life. Fiction (and especially Science-Fiction), and Economics. Both are woven into the very fabric of the game, to the point that it becomes nearly impossible to tell where one stops and the other begins. As an author, as an economist, I really, really like that.

In fact, I like it so much that I've actually used the scenario editor to create training modules for work at my previous job. Lessons on team-building and cooperative effort. Lessons about matching skill sets with appropriate tasks, and the like. I've also used the (admittedly clunky) scenario editor to create economic modeling simulations to test various ideas out. Believe me, it's a lot more entertaining than your "typical" economic modeling routines.

But that still doesn't quite answer the question.

No, the truth of the matter is that I cut my teeth on Sci-fi. Weeknights at 5pm, channel 13 in a sleepy little town called Emporia in the eastern portion of Kansas. Star Trek. And those childhood memories still bring back a smile.

How many summer afternoons did I spend lying on my back in a wheat field, looking up at the sky and wondering what the heck was really up there? Wondering what it might be like to really GO there. To be a part of colonizing a whole new world?

Too many to count.

And later, as I grew older, those fantasies expanded to include wondering what it would be like if I were in charge of such a massive undertaking. What would I do? Would my ideas work at all, or (and I cringed at the subsequent thought), would they fail miserably, prompting everyone with me to think I was a moron?

For me then, Alpha Centauri is more than "just a game." It is that, of course, and quite a good one. But it's also a way of rekindling those childhood fantasies of mine. A way of living the dream in some small way, and for that chance, I offer my humble thanks to

Sid and everybody else who had a hand in the game's creation. Guys, you did well indeed.

Oh, I have no illusions. Even if a ship like The Unity were to be built in my lifetime, what skills I have at this game would certainly help me none at all in landing a seat on such a grand adventure, much less put me in a position of authority, but it's a good dream. ::grin::

I certainly hope you found the guide of value. And more than that, I sincerely hope you enjoyed reading it, and this last little ramble inside my head, and on that note, I just looked at the time. 4:44am. Too late to go to bed, so I think I'll sign off now, save this, and post it to the forums to give everybody a look at what I've been doing with my time.

And then, I think I'm gonna start a new game.....

Index of How-To's:

Unit Rush Build Hurry Reference Chart
M = Minerals Remaining
CH = Cost to Hurry

M	CH
1	2
2	4
3	6
4	8
5	11
6	13
7	16
8	19
9	22
10	25
11	28
12	31
13	34
14	37
15	41
16	44
17	48
18	52
19	56
20	60
21	64
22	68
23	72
24	76
25	81
26	85
27	90
28	95
29	100
30	105

If you have less than 10 minerals accumulated, the cost for Hurrying gets doubled, regardless of what you're building!

A different look at the same data on rush building:

M = Minerals Remaining
CpM = Cost per Mineral

M	CpM
1	2.00
2	2.00
3	2.00
4	2.00
5	2.20
6	2.17
7	2.29
8	2.38
9	2.44
10	2.50
11	2.55
12	2.58
13	2.62
14	2.64
15	2.73
16	2.75
17	2.82
18	2.89
19	2.95
20	3.00
21	3.05
22	3.09
23	3.13
24	3.17
25	3.24
26	3.27
27	3.33
28	3.39
29	3.45
30	3.50
31	3.55
32	3.59

33	3.64
34	3.68
35	3.74
36	3.78
37	3.84
38	3.89
39	3.95
40	4.00

SP Challenge Games

So....you think you've mastered the game? Well, the folk over at the Apolyton forum have devised a number of cunning challenges for you to test your mettle against! Try some or all of these on for size, and don't forget, if you get a great result, send your saved game to the Masters of Apolyton, and they'll post your game in the Hall of Fame!

(http://www.apolyton.com)

The Zero Facilities Challenge (Multi-city)

1) Only the Standard Map of Planet is allowed.

2) The following game settings must be adhered to
  a) Transcend/Ironman
  b) Rare Lifeforms.
  c) Blind Research
  d) Tech Stag
  e) Aggressive AI
  f) No spoils of war
  g) Do or Die

3) You are not allowed to build any base facilities. These base facilities are not inclusive of those that come along with faction inheritance, or those provided by Secret Projects.

4) You are allowed to keep those base facilities left over from enemy's cities conquered (there is no need to recycle them).

The Believers' Challenge:

Abide by the following setup rules
  a) Transcend/Ironman
  b) One city only
  c) You must win by transcendence
  d) Do Or Die on

e) Cooperative Victory disabled
f) You may not kill another faction
g) No Atrocities
h) Tiny Map
i) 30-50 water
j) Rampant lifeforms
k) Sparse cloud cover
l) Must have at least 30 Secret Projects
m) At least 50 transcendent though techs
n) Your only city must be at least 50+ pop
o) At least 100,000 energy credits
p) Intense Rivalry on
q) Tech Stagnation
r) Spoils of War off
s) No Unity Survey on
t) Look first off
u) No Unity scattering on
v) Fog of War on
w) Blind Research on
x) Randomize Faction Leader Personalities on
y) Bell Curve off

UoP Fast-Transcend & most energy in a 30-year spread
Abide by the following setup rules:
a) Must play at Transcend level
b) Can play any faction, any map, unlimited cities
c) All victory conditions enabled for AI, but you must Transcend
d) Blind research
e) Do or Die off
f) Spoils of War on
Ironman off (see below)

To avoid the one turn rush, have the challenge be the best consecutive 30 turns (as evidenced by Autosave1 and Autosave30) in any time period.

The Make-Wild Challenge—Dominance through Native Life
Abide by the following setup rules:
a) Huge map of planet or custom map with the following

parameters:
    Huge map
    30-50% ocean coverage
    Strong erosive forces
    Abundant native life
    Dense cloud cover
b) You may only build one city.
c) Forbidden to build units with armor or weapons
d) Forbidden to communicate with another faction
e) Pillage is forbidden, as are all atrocities
f) Conquest victory only
g) Librarian or higher
h) Iron man on
i) Blind tech off
j) Aggressive AI on
k) Probe Teams are not allowed
You are free to select any faction to play.

Share-tech Evil Challenge (Requires changes to alpha.txt file)
Setup:
a) Every computer faction gets SHARETECH, 1
b) The Tech-Challenge Creed
    1. I will never use probe teams to steal tech
    2. I will never let a computer player surrender to me
    3. I will never buy tech from the computer
    4. I will never trade tech with the computer player
c) Blind research on
d) Tech stagnation on
e) No unity pod scattering on
f) Spoils of war off
g) Aggressive AI on
h) Huge planet
i) Transcend/Iron man
j) (Share-Tech Variant Challenge) You must play with only one city

One City Challenge
Basic:
1. You can't build any colony pods. (You can use your colony

pod to found a new base at the beginning of the game.)

2. You must abandon conquered bases either by starving, turning over to friends or obliterating.

3. You must win by Ascent to Transcendence.

4. You must build at least 16 secret projects.

5. You may only build native military units and units without weapon(armor allowed).

6. You must choose the difficulty level higher than Librarian.

7. You can keep whatever you find in the unity pods.

Advanced Challenge(changes to basic challenge):

1. You must disband your initial colony pod immediately.

5. You can only build units with armor and no weapon.

7. You must disband any units you found in the unity pods.

Ultimate Challenge:

1. You can only build one base, disband any colony pod at start.

2. Abandon any conquered base by starving, obliterating, or giving away.

3. You must win by Ascent to Transcendence.

4. Blind Research.

5. You may not build any units with weapon, armor, and psi-ability. You can only bribe enemy units.

6. You must disband any units found in unity pods(including transport foils)

7. You must build at least 16 secret projects.

8. You must play at transcend level.

9. You will play on the "Planet" map.

ZFOCC, i.e. Zero Facility One City Challenge:

Version 1

1. You must play on map of planet (standard or huge, your choice)

2. All victory types are allowed

3. Blind research on/off your choice

4. Aggressive AI

5. "Look first" option can be on to choose base location

6. You can only build one city (base), the other colony pod must be disbanded (timing is up to you). Gifted or conquered bases have to be destroyed, given to other factions or disbanded through colony pods within 2 x population turns. No base swapping allowed—have

to stick with your originally founded single base.

7. You are NOT allowed to build any base facilities—but you can keep whatever comes with your faction or Secret Projects.

8. There is no limit on the number of units or types of them—you can use whatever army you can build and support by that single bare city.

Version 2

1. You must play on map of planet (standard or huge, your choice)

2. All victory types must be enabled, but you MUST WIN BY TRANSCENDENCE !

3. Aggressive AI

4. "Look first" option can be on to choose base location

5. You can only build one city (base), the other colony pod must be disbanded (timing is up to you). Gifted or conquered bases have to be destroyed, given to other factions or disbanded within 3 turns (regardless of population size).

6. You are NOT allowed to build any base facilities—but you can keep whatever comes with your faction.

7. You are not allowed to build any military units (not even defenders!) and you are not allowed to upgrade the units you get for free (scout patrol and rovers/copters from pods) but you can keep them and use them. You are NOT allowed to add armor to non-military units (probes, formers, supply units) either. Any units gained from other factions (subverted by probes or gifted) must be disbanded immediately.

8. You must play on "Transcend" difficulty level.

9. You can build only 1 secret project apart from the Voice & Ascent, and that can NOT be one which would confer a base facility (e.g. Command Nexus, Citizens Defense Force, etc.)

10. You are NOT allowed to sign PACT with any other faction. Neither friendly nor submissive pacts !

11. You must play on Iron Man setting.

The Nomad Challenge

1. Must play on at least a standard size map.

2. All victory types allowed.

3. Research setting (blind or not) will be irrelevant.

4. Aggressive AI

5. You can not build ANY bases. If you capture bases, they must either be destroyed, given away, or disbanded through colony pods within 2 x population turns.

6. Any units you can manage to acquire are fair game.

The Lumberjack Challenge:

1) You may not have mineral production in your "target" base (see below)

2) You can't convoy minerals, but can you convoy nutrients and energy via crawlers

3) Nessus mining is banned, but hydro and power sats are OK.

4) Build all of the 500 and 600 mineral Secret Projects in one city. This city's mineral production must be zero! The Projects must be built with the 5 minerals that you get from destroying a forest in the radius (and you can't use the forest to produce minerals while it is there). Projects must cost < or = 2000 energy credits to be bought, otherwise continue destroying forests.

5) Ultimate challenge: Build the Assent in the same city. You still can't have positive mineral production. You also can't rush any project or facilities you want in the "target" base.

Secret Projects to be completed in the Target Base are:

The Cloning VatsThe Self-Aware ColonyClinical ImmortalityThe Space ElevatorThe Singularity InductorThe Bulk Matter TransmitterThe Telepathic MatrixThe Voice of PlanetThe Ascent to Transcendence

Setup:

1) Transcend/Ironman

2) All others to taste

Arrarat Challenge (Another Believer-Based Challenge)1. Customize random mapA) Large planetB) 50-70% oceanC) Strong erosionD) Abundant lifeformsE) Sparse cloud cover.

2. Transcend/Ironman

3. Custom game rules. a) Spoils of war offb) Bell curve offc) Time warp off

d) Tech Stag on

e) Aggressive AI on

4. Must win by Ascent

5. Play the Believers

6. No habitation improvements (max 7 size base). If you capture

an 8+ base, you have to bring it down to the 7 limit by starving or pods. Hab facilities must be scrapped.

7. No upgrading of "independent units".

8. (optional) Lose your first scout, game over.

9. No base trading.

10. No atrocities

11. Scenario settings: no tech from pods, no artifacts, no tech swap

12. Limit of 5 Secret Projects may be built by you (can conquer any #) Two of your Secret Projects MUST BE Voice and Ascent.

Vel's Challenge:Ground Rules:

1) You must win the game by Transcendence, while leaving all other paths to victory open to all other factions.

2) You must play on a huge map (to make all the games comparable to each other)

3) Spoils of War—Off

4) No unity pod scattering

5) Blind Research

6) Tech Stag.

7) Aggressive Opponents

8) Rampant Alien Life Forms

9) Sparse cloud cover

10) No unity survey or advanced start

All other options may be adjusted to taste

You must meet the challenge on Transcend/Ironman level, with the goal being to achieve the best speed Transcend under these horrible conditions....

Ultimate Builder Challenge

Download this scenario file:

Play it and try to win by transcendence! All victory conditions are enabled, so the AI has the chance to beat you in any way, but if you win by any other way than transcendence, that means you have not fulfilled the challenge.

The game is almost a standard SMACX game with a very specific set of setup option and faction choice which makes it hard to transcend.

The factions

1. Planet Cult—the human player, i.e. You

2. Hive

3. Believers

4. Spartans

5. Pirates

6. Caretakers

7. Usurpers

Rule options:

* All victory conditions ON—for the AI, but you must win by transcendence!

* Do or Die ON

* Look First ON

* Tech Stagnation ON

* Spoils of War OFF—can't steal it

* Blind Research ON

* Intense rivalry (aggressive AI) ON

* Bell Curve ON—better comparison chances for the challenge

* Iron Man ON

Difficulty: Transcend (of course!)

The game is played on the Huge Map of Planet—so that everybody has the same chance to know it including me, because I want to participate too without unfair advantage.

For the same reason, I give you the starting locations (pods/ scouts, look first is on, so you can walk about before putting down your city).

Of course, you can also load the scenario into the editor to look around before you play.

Just don't use the editor during the challenge game…

1. Cult (You) start at (69,17)—Isle of Deianira

2. Hive at (91,71)—near Monsoon Jungle

3. Believers at (110,32)—near Upland Wastes

4. Spartans at (32,102)—near Freshwater Sea

5. Pirates at (74,78)—between Sea of Unity and Geothermal Shallows

6. Caretakers (15,55)—near The Ruins

7. Usurpers (46,54)—near Garland Crater

Now, the only remaining thing to explain is the almost above, i.e. what makes this scenario very different from a game started up with

the same setup parameters and factions. It is the diplomacy setup!

Each AI faction has the following special diplomacy setting:

* Vendetta with Planet Cult

* Atrocity victim of Planet Cult

* Want revenge against Planet Cult

* Fight to Death with Planet Cult

* Pact with all other AI factions

* Surrendered to all other AI factions (yes the Scenario editor allowsboth ways surrendered state—go figure)

* The current diplomacy status is fixed—cannot change during game!

BTW, do not hope to get some freebie tech or Alien Artifacts from the Unity pods. These 2 goodies are disabled.

So, imagine those 6 warmonger AI factions in unbreakable submissive pacts with each other (meaning they will share every tech discovered and help each other) all against you in a fight-to-death vendetta, pissed off because of your alleged atrocities against them. And now, you have to transcend under blind research tech stagnation with a very weak builder faction (-1 economy, -1 industry).

*The game file can be reached on Googlie's website: http://googlie2.tripod.com/spartanchronicles/

Other Works & an Invitation

If you enjoyed your romp through the SMAX universe, and are curious to see what other sorts of ideas race through my head now and then, I invite you to check out my first novel, Guardians.

Also, if you would like to participate in the on-going discussion of the strategy guide or Guardians, you are cordially invited to join me at http://clik.to/renaissance.

Bonus Material

Essays on Creating Synergy and Doctrine: Defense

The purpose of the essays that follow is to illustrate what kind of game you can create for yourself by applying the concepts you've just read. This should not be seen as the "final word" or "ultimate" playing style....rather, it is simply one of a nearly infinite number of combinations that the concepts contained in this guide can be combined together to create.

My hope is that when you have digested the material on the pages that follow, you will be able to sit down with the game and re-create this style of play, modifying it to suit your individual gaming style and the needs of the moment. As to the style itself, as you will see, it is essentially a "Builder" game, but can be quite easily be adapted to Hybrid style. Sorry guys, if you're into the Momentum scene, you probably won't get much out of this....except that maybe the next time you attempt a Rover Rush on somebody using this style, they'll probably mop the floor with you! ::evil grin:: And what a nice change of pace that would make, eh? Give the Rushers something to fret about for a change!

And here goes:

Synergy is the mathematical proof that the whole is indeed greater than the sum of its parts. It is the act of creating an empire

where all parts work cooperatively to create an interlocking system of defense such that the would-be attacker has no other option but to look elsewhere for a fight. This is vital, because once you have secured the defenses of your own empire, then is the time to begin developing assets to launch an attack against a rival's. Most of all, it is about controlling the flavor of the game (metagame) in such a way that even if the attacker believes he is playing "his game," you're actually forcing him to play yours.

The aggressor may argue that because it is he who chooses the base to attack, he is, in fact, choosing the location of the battle, but I would contend that the attacker is taking a short sighted view. By choosing NOT to attack, the defensive player has forced the aggressor to come to him, potentially walking into any number of traps and/or nasty surprises. And, if the defender's empire is operating as a synergistic whole, then an attack to any part of it can be dealt with easily, and with immediate, overwhelming force.

Map Settings

Keep in mind that almost all of my games are played out on huge maps, 50-70% water, arid conditions with high erosion. Not to say that these ideas will not be applicable to games played on other maps...the core principles remain the same, subject to modification by map size. Also, bear in mind that I never use pod scattering, which, when coupled with the conditions mentioned above makes the early mobility techs (flex and mobility) relatively less important to me than they might otherwise be.

Base Spacing

I invariably space my bases three apart. Have for a long time. When coupled with the fact that my formers spend a good deal of time building roads in the early game, it gives me rapid expansion and creates turn advantage by giving me the ability to get pods in place and new bases established 1-2 turns after the pod is built. Contrast that with the image of a colony pod moving 4-5 spaces along territory in which few roads have been built, and the advantages become clear. When comparing the two approaches, I can move my pod, build the base, rush the former, and sometimes have that former finish building a road AND tree planting on the tile in question

before the other method even gets its base built! Do that every time you build a base, and you rack up quite a large resource advantage. Also, this tight base spacing sets the stage for very early game defense. With bases spaced in this fashion, it enables my infantry garrisons to travel from base to base, never ending their turn outside. Further, it enables my rovers (see below) to move between two bases, also ending their movement inside the relative safety of a base.

Sensors

Whenever possible, sensors are built on base sites in advance of a colony pod's arrival, but don't get crazy about it. If there's insufficient time to do that, then just build the sensor elsewhere. As you will see, if you follow this strategy to the letter, it will be a rare event indeed that enemy troops are anywhere inside the core of your empire, and if they are, odds are good that they're there because you want them there for your own mysterious reasons. This then, renders sensors relatively less important than they might otherwise be. I'd still recommend them, mostly for the extra 25% combat advantage....you never know when that'll come in handy, and it's better to have it than not!

Prototyping

All prototyping is done as soon as I get the tech for the latest weapon or armor, even at the expense of slowing down the development of infrastructure. This is a concession to the military....if I'm using garrisons at all, they're undoubtedly of the Trance-Scout variety, but I DO insist on maintaining a smallish core of good, rover-based troops to deal with early game threats to hearth and home. Having said that, of course all of my prototyping is done on a rover chassis-except, obviously, for prototyping new chassis types, and everything is prototyped separately, to give me the largest possible force pool. Prototyping everything separately may seem counter-intuitive, in the sense that it ties up an increasingly large portion of a given base's mineral suite, but here again, a nod to the military MUST be given, and the fact is that this small body of troops (and even with prototyping everything separately, the total number will still be pretty small), will serve as the backbone

of my army until the advent of air power. As such, having more high morale troops is better than completing prototyping faster, regardless of the slightly higher support costs-undone with the arrival of clean reactors, and countered even before that by adding a crawler or two when mineral counts drop below the desired threshold.

Garrisons

All garrisons are simple Scout Patrols in the early game, Trance Scouts as soon as I get the requisite tech for it. (Exception - Because one of the center-pieces of this strategy involves running an extended period of Market Economics, Interior bases will use Infantry-based, trance-capable, armored probes as their only defense. Coastal bases will have 1 Trance Scout and two infantry based probes-no armor, no special abilities-garrison defense jumps to one Trance Scout and one Trained-Clean Scout as soon as I get the tech for clean reactors) Scouts displaced by configuring this defense are either re-homed to bases in need defenders, or simply scrapped to help with rush-building.

Upgrades

All prototyped rovers are upgraded to best/best configurations, beginning with Impact/Plasma and then upgraded any time a new weapon or armor type becomes available. At least two are given Empath ability when it becomes available. The Empath rovers are posted at opposite "ends" of the empire to watch for rogue worms, and the rest are dispersed as I get them to spots I regard as potential avenues of attack.

Morale

A military unit that spends long periods of time at peace need not fear having low morale. For one thing, once you get clean reactors, there's NO REASON you cannot have troops with decent morale in all your bases. This can be accomplished simply enough by training new clean troops at a Military-oriented base, and shipping them out to your other bases. The old troops can then be relegated to patrol duties, or sent on worm hunts to boost their morale. If they survive the hunt, you're a few credits richer and have a morale

boost too! Eventually, if the unit in question survives enough hunts, he can be added back into your "regular" force pool.

To that end, such units should be upgraded to Empath at the very least, and probably given resonance armor for the duration of their hunting career. True, this means that you'll likely not even break even, comparing upgrade cost to worms killed, but you will end up with an ever-increasing number of good morale troops and that is always a good thing.

Alternate plan: Leave the troops as greenies, and use them as your first Field Operations Group. Assign them to a transport (or several, depending on how many green troops you've got), assign each transport an escort, and give the whole outfit 3-4 probe foils, and you're in business! If you have superior tech, it will offset the low morale and turn them into a viable fighting force.

Expansion

The first goal is to fill up the continent (if alone), or to block expansion of a rival faction (if not alone), so as to limit the amount of space they have available to work with on the continent, and to maximize my own territory. If needs be, in order to head off a rival faction's expansion, I will break with my usual paradigm of expanding my bases 3-apart in order to place a base to choke expansion, back-filling as I am able.

As soon as I get six bases, three of them are selected for project work, and they begin immediately. Two of the six bases begin churning out crawlers to bulk up their mineral counts, and one base (referred to as the "Mother Base") continues to build colony pods to further the expansion.

Project Work

This, and the above note depend on whether the game is SP or MP. In SP, I generally try to get LOTS of projects, but in MP, I only shoot for the ones I feel are most vital to my plans. In MP then, I'd ignore everything but the VW, WP, and PTS for denial (if possible). Much as I like the Empath Guild, my beeline is such that I can seldom beat a determined player to it, so I live with the infiltration, figuring it'd have happened sooner or later.

Ignore projects that are not pivotal to your game!!! It doesn't matter who gets them if you don't need them or can work around them! Early game, the ones I value most are: Weather Paradigm (creates turn advantage by shaving terraforming time), HGP (fast completion allows for an early switch to Market, even if Rec. Commons are not in place, and besides, with so many bases, so close together, the extra talent in each really helps with control!)-exception: if I'm playing Lal, I skip this one--VW (especially if playing Zak), and PTS (again, with so many bases and terraforming work done in advance, the boost in pop is quite nice). A bit later comes the Empath Guild, and then I'm all done for a while. Note too, that we begin to see the first signs of synergy here....with the acquisition of the Empath Guild, I get everyone's comm. Frequencies. This enables me to trade for the mobility techs I intentionally skipped over in the early part of the game.

Once my "crawler bases" get their mineral counts up where I want them-16 for most, 24 for my designated polluter base-they begin sending their crawlers to the project bases to help wrap up the first three projects I'm working on. Once those bases finish their projects, they begin building crawlers, and the bases with crawlers begin building projects. Needless to say, they finish rather quickly.

The moment the projects I want are in hand, full attention turns once again to expansion, and all bases crank out pods until the continent has been filled to capacity. Note that this is done entirely without regard to b-drones, or anything else for that matter! If I get to the point where the base I'm founding begins with a drone in it, then that base gets a rush-built Rec. Commons as it's initial build. Many of these problems will vanish when the expansion is done and I add Dem. To my SE mix, so I ignore them in the meantime. (more signs of synergy here: Not adding Democracy to the SE mix until after the expansion has been completed....this allows each base to capture it's initial ten "bonus" minerals, which helps speed its development! Also, snagging the PTS plays into this type of expansion as the smaller bases get additional drone control!)

How about the base spacing scheme? Yep....yet more synergy. Here's how: First, in the very early game, before the continent you're on is even fully mapped, there exists the possibility that you're not alone on your starting landmass. By having your bases spaced

three apart, you set yourself up to be able to defend against attacks made by rival nations on your starting continent, with your infantry-based garrisons able to shift around from base to base without ever having to end their turn's movement outside the relative safety of your bases. This also helps with worm defense when running Market. The ability to get an infantry-based garrison from one base to another in a single turn is of incalculable value. Later, the "three-apart" strategy moves from allowing for rapid garrison shifting to protecting your entire continent from drop-cable troops (and more on this in the pages that follow).

As soon as the continent has been filled, all coastal bases immediately set to work building the sea pods necessary to ring the continent with coastal bases. While they're doing that, the bases in the interior are building infrastructure like mad rabbits, after spending some more time on developing their mineral suites.

Notes about crawler placement

Now that you've finished the "manifest destiny" portion of your interlocking defense, and set up the eventual "locking out" of drop troops from your continent, it's time to deal with troops who will be arriving the old fashioned way. Let's face it, a transport filled to the gills with bad guys can really mess up your day. To that end, don't just place your crawler's "wherever it's convenient." Get in the habit of working with them and trying to figure out where they'll do you the most good. Look at the map. Where are you on the globe? Have you seen anybody else yet? If so, what direction did they come from? Even if they're friendly right now, it might be a good idea to begin by placing your crawlers along the coast, ESPECIALLY in the direction where you know or expect trouble in the future.

This too, seems counter-intuitive. Why would you intentionally want to put your crawlers in harm's way?

To that I would answer: "Better your crawler than your base!"

So, don't be shy about it, relentlessly blockade your coastline. Seal yourself in. With all of your bases spending time building crawlers, it won't take long at all to do! And remember, building

crawlers is itself on an acceleration curve, meaning that if the first crawler takes you six turns to build, it pops out and starts harvesting minerals for you, then maybe the second will only take five turns. And the third will be even faster, until you have all you need.

Congratulations, you've just finished another segment of your interlocking defense. Now, you have eliminated "non-marine" units from landing anywhere on your coast. They can't even attack your units! Sure sure, you've got the problem that Marines can still cause trouble, but not for long! (and besides, at this point, even if they DO land, they'll be stuck in that tile for at least another whole turn, ZOC'd in by units on both sides. But read on, you're about to eliminate that as a threat to your mainland too!)

If possible, before you build the first of your sea-outposts, and running through to the founding of the last one you need, consider dropping Democracy from your SE configuration to boost your support rating in order to again capture those ten "bonus" minerals when founding a new base....one more way to provide synergy to your empire as a whole.

When the sea colonies are established, I'm invariably running Market, and have been for some time. Thus, a token garrison is not needed, so the first build is a clean sea former, rush-built and overpaid in order to generate ten minerals in carryover. Your next build then, will be an infantry-based probe team (also rushed), which will be upgraded to best armor + trance as soon as it's built. Thus, over the course of two turns, you provide the newly founded sea base with a versatile defensive unit and a means of increasing its (probably anemic) mineral suite. From there, the base begins working on a foil or cruiser based attack ship (also clean), but now, there's no real reason to hurry production, as your coastal bases can build ships of the line much more quickly and efficiently....thus, the ships under construction at your sea bases should be considered more as a long term investment than anything. They'll finish eventually, without any further action from you, which enables you to focus the vast majority of your attention on your much more valuable core bases. Get used to looking at your sea-outposts as nothing more than early warning posts....eventually, they'll serve as staging areas for your fleets and chopper squadrons, but for now....outposts. Early warning stations. Nothing more.

And excellent early warning stations they are! At this point, with sea bases up and running, you'll find yourself with a large swath of ocean all around your continent that's closed in by your borders. From a Marketeer's standpoint, that means you now have a theater of operations for your navy! You can move around in it anywhere you like, and not cause the first ripple of drone discontent! Plus, the ring of sea bases means that there's almost no way an enemy cruiser can slip up to your coast undetected-assuming you don't get lazy about eliminating patches of fungus!

Sweet.

Vertical Investment

All core bases set about maximizing the economy and building research centers as their first priority, interrupting this only when a new weapon or armor type becomes available, and then only long enough to complete the prototype (often accomplished in one turn, thanks to crawler production, which is on-going at any time I get a few spare turns where all current infrastructure builds have been completed). At this point too, any bases on the coast will also get a perimeter defense built. No maintenance cost, and I generally don't get the Citizen's defense force.

The Perimeter Defenses are probably not necessary, but it's better to build them while you're building than to wait and see. Consider it cheap insurance for your bases on the coast. Be glad if you never need it, but grin like the Cheshire Cat when you do, cos its already in place. In any case, that's another piece of the interlocking defensive network, and it sends out a strong visual signal as well. It says, "Don't waste your time attacking here, cos we're ready for that kinda noise."

Clean Reactors

The moment you get them, select two of your newer bases, preferably on different parts of the continent (or if you find yourself on a smallish continent, then just set one base up as your Command Post, and make sure it's centrally located). Build Command Centers here, and use these bases as the training grounds for your empire. Add more if you need them, but start as outlined above and see what

that gets you. Set those bases to the creation of an infinite supply of shell units. Infantry, Rovers, eventually Tanks, and spend some time in the Workshop dreaming up all manner of nasty configurations. To see what they look like and get a feel for upgrade costs, upgrade a few of your shells into these various configurations, and post them around your empire. Better still, transport them to a fringe base for added security.

And while you're about it, set up two more bases for the exclusive production of probe teams. Make these bases coastal, so you can make foil and cruiser probes too. Just keep most of them home for the time being, but DO send a few out scouting. When you need them, they'll be ready. As far as configurations go, I'd simply alternate thusly....one rover-based probe, two foil-based, then two cruiser-based, repeating infinitely.

Two more bases get tapped for use as Naval Yards, and these crank out an endless supply of ships. Mostly foils, some cruisers, mostly warships, some transports (when I'm doing it, I'll make two foils, a cruiser-based transport, and a cruiser, then repeat). Create squadrons and get used to operating them as a cohesive unit. Send the squadrons to various fringe bases as they are created, and you'll find yourself with an ever-increasing naval presence all around your continent.

When you get air power, don't do anything at all. Wait two techs for MMI, and then build choppers (more on this topic later). Set one base aside for the production of nothing but choppers. You won't need many in terms of raw numbers, so one base should be plenty. Make air superiority units only if you're running Market and have not yet set up a punished base, or an all specialist base. When you DO get one of the two set up, start making Assault Craft as well, homing them all to the base in question so there's no discontent. Create "flights" of these (I make very basic defensive flights which consist of one of each, an Air Superiority Chopper and a Heavy Assault Chopper), and again, get used to operating the flight as a group. Send them out to your fringe bases as well and put the assault craft on regular patrols. This extends your "sight" further away from your continent still.

Cost
Sounds expensive, doesn't it? Sounds like it'll take a LONG time to set up, yes?

Not really.

Remember, you're not actually building all these expensive units, you're building shells. Build Impact Choppers and upgrade them to what you need. So each one costs you 170 credits? Big deal. Each unit only takes one turn to build, too, and that's a good thing!

Set yourself up like that, and then just let your opponent TRY to figure a cost-effective way to attack you. Just let him try.

My money says he never even touches your coast.

Other Stuff
When you fill up the continent, relocate your HQ to a centralized location.

When your sea formers have cleared out all the fungus patches you don't want, set up a few that you do want. And when you make a fungal patch, STAFF IT!

Specialist Bases
Personally, I find the PIA factor to be too much to contend with in making all of my bases "Pure Specialist" bases, so that generally only happens about one base in three or four, with the rest making use of the forests I've got planted all over the place (note too, that with bases three apart, I've got more specialists than average in any case, thanks to the relatively limited number of workable tiles per base), giving me a nice mix of specialists and workers). Not to mention, filling up the whole continent with crawlers isn't that attractive to look at, and....what can I say, I'm an artist at heart! I make cool looking empires, if I do say so myself!

Doctrine: Defense
This essay builds on the concepts covered in the article on

synergy and "rounds out" the strategy as a whole.

Genesis of Doctrine: Defense

We must begin with the assumption that your bases are of relatively high importance to your game. Without a base of operation, you have no game, and there is no window of safety here. If you lose your last base, you don't have X-number of turns to go and take over someone else's base to keep you in the game....lose your last base, and that's it for you. Therefore, seeing to the safety and defense of the heartland is of paramount importance.

Hand in hand with this, is the notion of vertical investment (mentioned above). Even the most diehard of Momentum players have a keen interest in building Network Nodes to help their own research efforts, and those who play the Builder's game obviously spend a good deal more minerals on improving their bases. It is therefore relatively safe to say that over the course of your game, you will pour literally hundreds of minerals into base improvements at each of your core bases. A fairly typical example: If you build a Network Node, Research Hospital, Recreation Commons, Recycling Tank, Tree Farm, and Energy Bank in your core bases, how many minerals have you invested in them, individually? I don't have the cost chart in front of me, but I'd ballpark it at something close to 450? That's a lot of minerals. Now, multiply that out over the number of well-developed bases you have and ponder that number a moment.

Would it hurt to lose one or more segments of that massive investment? Would it impact your game in a negative way? Of course it would! Therefore, spending extravagantly on defensive measures for your core bases is a completely justified expense. Take a look at the raw mineral cost of what you are protecting! Not to mention the "per turn" benefits that those investments in your future are bringing in!

Thus, the need for a comprehensive, overwhelming defense.

Key things to remember if you want to plan such a defense

Defense is not about stacking tons of units in each and every one of your bases. That is a generic way to defend yourself, and in the end, not terribly effective. The fact is, by the middle game, you can have an outstanding, completely overwhelming defense with relatively few units on the board. Having said that, the more units

you have, the stronger your position, if they're the "right" units (covered below).

If defense is not "unit based" then it becomes a fair question to ask what it is based on, and the answer is, "Attack Type." This was touched upon in the first essay on synergy, and will be greatly expanded on here. Your mission, your job as the protector of your homeland is to neutralize the various types of threats to your empire, and those threat-types are as follows:

Resource Siphoning
Non-Marine unit landings
Marine assaults
Naval Assaults (including attacks to sea bases and bombards that precede attempted (generally foil-based) probe actions against sea or coastal bases,
Air Strikes, either against a base proper, a field position, or your terraforming/crawlers.
Drop-actions

Six basic types of attacks that need to be dealt with in one way or another.

So, the first goal is to eliminate as many avenues of attack against your heartland as possible. Neutralize the avenue of attack and you don't have a problem at all.

A specific example of this

Let us say it's the middle of the early game. You've got Industrial Automation, and have been churning out crawlers at a prodigious rate. You have read the synergistic defense article, and wish to try your hand at it, and to that end, your crawlers have been ringing 'round your continent (which has been filled to capacity by your fleet of colony pods).

Yang pops up on the radar screen with not one, but four transports. A quick check of infiltration data tells you that he has Impact weapons to your Synthmetal armor, and a quick look at the contents of the boats indicates that you're about to be on the receiving end of a Builder's worst nightmare....yep, they're all 4x attack rovers, but guess what? The poor boy doesn't have marine ability yet, and your continent is ringed in, so just how much of

a threat is the mighty attack force? Even if all your garrisons are trance scouts at this point, what's he gonna do?! He can look, but he can't touch.

Neutralizing the major types of attack was covered in the essay on creating synergy, but I'll add those notes here as well, because it's an important (vital, in truth) segment to the overall defense doctrine.

Step 1: Manifest Destiny

You want to expand out in all directions from your starting bases until you have filled up the continent, and you want to do so with your bases spaced three tiles apart. Exactly three tiles apart.

There are two reasons for this, and both were covered in the first essay, but I'll reiterate here because it's a crucial element in this playing style. First and foremost, it creates an interlocking infantry-based defense whereby garrisons from neighboring bases can be shifted to threatened bases in a single turn without leaving the garrisons outside the bases at any time. Rover based defenders and counter-punchers can travel the span of two bases, also ending their movement indoors.

Second, and nearly important is the fact that air defenses extend outward by two tiles, and air defenses are what prevents air drops. With bases three apart, the air defenses at each base overlap, creating an umbrella of protection that covers every single tile on your continent. Simply put, there is no way on Chiron that your opponent can use drop troops against you when that shield is in place.

Notes about fulfilling your manifest destiny

Time is your enemy and speed is of the essence. In order to speed your colony pods to their destinations, you need to build roads, but you don't want to spend too much time on that. Therefore, whenever possible, build roads on flat terrain tiles! It only takes a single turn, giving your former more time for other stuff.

Don't fret about not being able to build your base on a sensor array! You're looking for speed here....fill the continent up as your first priority and worry about adding in sensor arrays later, when the initial expansion drive has ended.

Have an expansion plan! Don't just blindly build colony pods

till you run out of room, and then have to add a few pods back in various bases as population! Look at your empire. Take note of the shape and structure of your continent. If, for example, you have a peninsula to your south, and a wide expanse to your west, don't spend a lot of road-building effort on the peninsula to fill it up quickly. You can send "incidental" pods there as you go, and they don't even have to be traveling on roads if your formers are behind on things. A much better plan would be to send one former down the peninsula building what roads he can, and divide your other formers up into groups with an eye toward claiming the territory westward. Sending some to road build and pre-terraform to the north-west (to push back the shroud and find out just how big a landmass you're on), and the others can follow the coast, also pressing westward.

Have a "Rolling Line" of expansion-oriented bases

This is applicable only on a large continent, but if you find yourself on a big landmass, obviously you'll reach a point where you've got bases that are kinda "boxed in" by other bases, and pretty far away from future base sites. So, as you push your borders further and further out, have the bases far from the expansion begin to work on projects, crawlers, and infrastructure, while bases nearer to your frontier continue to carry out the expansion for you. Thus, as you expand further, the line of bases you have building pods also advances, meaning that the pods have a fairly static distance to travel in order to set up new bases.

Deal with specials immediately! This is just good gaming. If you have a special resource inside a base radius, then do something with it, especially if it's a mineral or nutrient special (early game)! If it's covered up with fungus, then take the time to uncover it! If you don't, you're letting a valuable early game (pre restriction lifting) resource just go to waste! A resource that can, in fact, help you achieve your goals that much faster! When your formers are out road building, you normally want to choose flat tiles, but if you're going to pass right by a rolling tile with a nutrient resource in it (for example), then don't just go around it....that's a case where you want to take the extra turn to build the road on that tile, and then forest it before moving on!

Step 2: Circling the wagons

Very important to neutralizing the early game rover rush, and you need one thing to do it - Supply Crawlers. You can do it with probes, but this is a weaker choice (see below), but if it's all you've got, then it's all you've got.

The essence of the plan is as it was in the first essay....to render your core bases immune to attacks from non-marine based units. To do that, you'll need to create a blockade running around the entire perimeter of your coast, and the Supply crawler is ideally suited to this job. It's cheap to build, it's "clean," and it can harvest resources for you, essentially pulling "double duty" (protecting you from attack while harvesting valuable resources at the same time). Even though infantry based probes are cheaper from a raw mineral standpoint, since they can't harvest resources for you, they are the weaker choice as the crawlers will pay for themselves in 15 turns or so, and then start paying you a handsome dividend! Still, depending on your game or your particular beeline, you may be in a position where you have to build something, and probes are the only clean unit you have for a few turns. If that's the case, rather than stockpile energy, build a few "extra" probes, and start sealing yourself in with that, switching to crawlers as soon as you get the tech.

Notes about sealing yourself in

Depending on how quickly you get to Industrial Automation, you may or may not have gotten a lot of terraforming work done yet. Considering what your goal is, the work you do have done is best done on your coastline, since that's where your crawlers will be going-with at least a couple of tiles per base non-coastal, to give your workers something productive to do. Anyway, two basic approaches here. First, is to relentlessly build crawlers, regardless of terraforming done. Every tile produces something (exceptions: flat arid tiles produce nothing at all, and depending on your planet rating, the fungus might not be productive), so every crawler built will give you at least one more resource, and you'll have your coast blocked in that much faster. On the other hand, you could opt for a more balance approach where you build crawlers until you occupy all the terraforming work accomplished so far, then switch to building another former to speed further work, then back to crawlers again. This has the advantage of giving you more terraformers in the

field, paying support for them as your mineral suite grows, but the downside is that it "blunts" the total effect until clean reactors. Still, it's the approach I use, and I highly recommend it.

Even interior bases should send their crawlers to the coast! Interior bases will wind up being your real gems....probably the most productive bases you have, especially if you don't crawl many (or any, at least in the early game) resources from tiles in their radius. Again, this speaks directly to your goal. Crawling resources from inland tiles is only half as productive as your crawler could be if he was on the coast, where he's serving a double purpose! Get as much mileage as you can out of every unit you build!

To road, or not to road? And that's an interesting question. Either way, you should be fine because even if a crawler has used up all it's movement points, you can still click on it and have it harvest resources, but this adds a PIA factor that I don't really care for. Much easier to build the road in advance....that way, the crawler moves freely, and 2 out of 3 times, he won't use all his moves getting to the coast, so you'll have him sitting where you want him, blinking and ready for you to give the command. Much more convenient, especially later on when we "hollow out" (covered later). I like having a "coastal highway" that runs all around the continent, with branches leading from bases to the coast. That's handy, and makes dealing with all those units much less of a PIA, but that's just me. Roads then, are optional. If you don't want them, don't build them. Getting your units in position is the important thing.

When you get to this stage in the game, knowing when to stop is pretty important too. When your target base has 14-20 minerals, it's time to do something else besides build more crawlers, and there are two really good, important things you can do before you start building infrastructure. First, you can build crawlers not to harvest with, but to send to a project base. Very good use. Almost as good, would be to send your crawler to another, less developed base, re-home it there, and have it start harvesting for that base. In this way, your bases all reach their early game mineral potential quickly.

The point above brings up another interesting idea: Let's say we've got two bases. One is working on the WP, and the other has been building crawlers, and now has a mineral count of 20 per turn.

He could build more crawlers and help crash build the WP, and if there's another faction already working on it, that's probably the way to go. But if no one else is working on it yet, then a better plan would be to have the crawler base build more, send them to the base working on the WP, and re-home them in order to increase that base's "per turn" mineral output. Plus, if it looks like someone else might beat you to it, you can always cash the crawlers in then.

Okay, so in short order you should be able to accomplish steps one and two. Manifest Destiny, and circling the wagons. Along the way, you've undoubtedly captured two or more projects (which will vary depending on your personal preferences and the game at hand), and you're ready to move on to bigger and better things.

The first thing is to take stock of your tech position. Do you have flex? If not, you'll need to get it soon, either by trading (you DID build the Empath Guild, yes?), or researching it yourself (if everybody's having a bad day and no one wants to trade with you). Point is, before you can truly protect your growing investment from the dreaded Marine strike which will be rearing its ugly head soon, you NEED flex. Get it.

Step 3: Everybody, into the water!
This time, you're not expanding to build sterling showcases of research and industry, you're building outposts. Forts. Frontier towns on the high seas, and it would be wise to get used to looking at them like that. These are not bases you want to put a lot of money into, these are patrol points for the navy and air force you don't have yet. Mid-game, you can start to build them up, but right now, build them and forget about them (from an infrastructural POV anyway).
Notes about Fringe Base Expansion
Fringe bases serve two (and sometimes three) purposes. First and most importantly, they are your eyes in the water, and let's talk about that for a moment. Consider the attacker. He's coming from....well, you don't know for sure, but from somewhere, and he's coming by ship. Foils have four moves. Cruisers have six. A base on the coast can "see" two tiles into the ocean, which means that if an enemy foil is three tiles off the coast, you won't see him. You've got a blind spot that extends from 3-6 tiles out. That's a lot of space, and

a big window of vulnerability.

The fringe base solves that problem by pushing your blind spot back further. If you build a sea base four tiles from your coast, your coastal base can "see" two tiles out, and your sea base can "see" two tiles in both directions (toward your coast, and away from it), meaning that you now have a visual lock on every tile of ocean extending seven tiles from your coast. A foil based attack cannot succeed against your core bases at this point (nor can a cruiser based attack, unless it's an elite cruiser or your attacking opponent has the MTC...but even then, read on to see how to counter those rare occurrences without having to add another "layer" of sea bases, because you'll see it coming before it reaches your coast. True, it can still take your fringe base by surprise, but that's why you built it....to let it take the fall (potentially) so your core bases remain safe. That's also why you don't want to invest in infrastructure here. If the base is captured, he victor will, in most cases, sell off the most expensive facility and burn the base down.

The second purpose of the sea base is to serve as a staging area for your navy and air force. By operating from the sea bases, rather than from the coast, your own patrol units have extended their own "reach," and because of the presence of your fringe bases, they've got plenty of places they can go to rest and repair. This then, gives you a flexible platform from which to execute your defense or launch a strike of your own.

Also, if you're a fan of Market then you already know that having ships out sailing beyond your borders causes drones. Fringe bases are handy for that too, cos they provide you with a wide patch of ocean to go sailing in, meaning that you can set up active patrols along the outer periphery of your ring of sea bases, always end your movement back inside your borders, and never have drone problems.

And finally, the construction of Fringe Bases prevents the "resource siphoning" form of attack, whereby a competing faction will send a sea pod just off your coast and plop a base down in your way. By beating him to the punch, you eliminate that form of "attack" as a concern.

So....all that to say, build sea bases, and ring yourself in with them!

Notes on setting up Fringe Bases

Optimal spacing for sea bases is four tiles from shore, and four spaces apart. This gives you the biggest sea zones possible and the widest interlocked line of sight.

Once your sea bases are established, and once you've got patrolling naval squadrons, you need not fear for your sea based formers, normally juicy targets....now protected by your fringe bases and their patrols.

To extend your "sight" further, and make it all the more difficult for an enemy to approach, consider building foil-based crawlers with deep radar. One placed in the outermost corner of each sea base's border will increase your sight range to 9 hexes out, all around your empire, rendering you virtually impossible to sneak up on.

Okay, so I've got these bases....Now what do I do with them?

First off, as mentioned above, you don't want to build infrastructure, or at least, no more than you have to (you may want to consider a Rec. Commons if the base is growing like a weed, but remember that this increases your investment in the base and will mean a longer payback period). Your first two builds should be as outlined in the first essay, a (clean) sea former, followed by an infantry based probe, with an eye toward upgrading him to trance/plasma. If I'm remembering the numbers correctly, this upgrade will cost you all of 70 credits, making the unit a bargain indeed.

 After that, start work on a clean attack ship, but remember, your new base is going to have a very small mineral suite, so don't be surprised if it takes 20 turns (or more!) to build even a shell unit! Don't be disheartened by this though! So what if it takes a long time to build....this base's job is that of a sentinel....if it augments your armed forces eventually that's a bonus, but it's certainly not the base's primary duty, so don't worry about how long it takes.

Oh, and one more thing....unless you're really in a crunch and need the unit that a sea base is working on desperately, don't rush anything from sea bases ever! (exception, the first two builds). Your money is better spent on the infrastructure at your core bases!

Creating and using Naval Squadrons

When you're fighting a naval battle, you generally either win big or lose big, and because of that, morale is relatively less important at sea than with other unit types. Thus, the best way to get a decent

navy up and running quickly is, as soon as you finish building your ring of sea bases, have every coastal base start to work on a sea former, and then a foil based attack ship! One from each base should see you with a decently sized navy, and if you're worried about mineral counts, make them clean and recapture the minerals!

Make these initial ships purely along destroyer design lines....all guns and no shields. Break them into groups of three (3) and send them out to various sea bases. The idea is that every turn, one ship can patrol, and if it finds anything, the other two can respond (assuming here that the patrol ship uses all its moves and is unable to respond on its own).

Three ships operating in tandem gives you the firepower to stop almost any early game attack (considering that most attack forces in the early game consist of 1 attack ship for escort, 1 probe foil, and 1-2 transports)...or, in the case of a probe attempt, 1 escort ship and 2-3 probe foils. For added support, eventually you'll want to give each of these groups a probe foil and a transport (which enables them to begin conducting offensive missions as well), but for the moment you've got a number of functional task forces scattered around your fringe, moving from base to base-important, in case someone has infiltrated you--and constantly patrolling and probing the outermost reaches of the empire. This makes it vastly more difficult to land against you, or make any sort of effective attack on your core bases, especially if your task forces are arranged in such a way that they can support each other in very short order.

Adding to the navy

Once you get your initial fleet established, you want to take care to constantly improve it. Of course, your fringe bases will give you new ships, but those are long-term investments, so if you've got enough core bases to do it, I'd strongly recommend setting one (or more, depending on how many "core" bases you have to work with) of those bases aside and earmarking it specifically as a naval base. Not to say that it won't ever build infrastructure again, but I'd definitely put it on a slower developmental track. Say....build a Research Hospital, and then another complete task force (3 destroyers, a probe foil, and a transport), then build something else infrastructure wise....alternating between bulking up the navy and

adding to that base's infrastructure. In this way, you get a steadily growing fleet, and even if your initial navy has trouble covering all the space opened up by your ring of fringe bases, constant attention to expanding the navy will see those gaps filled in shortly, and enable you to simply overwhelm an opponent using cooperative task force strikes, wolf-pack style, long before they ever get close to your shores where all the important stuff is!

Adding some Omph!

Of course, things get a lot more interesting when air power comes into the game. My advice would be: Forget the needle jet. Wait two more techs, and build nothing but choppers, and build only two kinds. The Heavy Assault Chopper and the Anti-Air Chopper.

The HAC has best weapon and no armor (note: normally I recommend putting light armor on choppers, but these will be stationed at sea bases which will very likely have ships docked as well, which serves as artillery protection for the choppers), and the AAC has the same, but with the "Air Superiority" special. That's the only difference between them.

Send them out in pairs, and put them in alternating sea bases (every other). They've got good movement, and defending two fringe bases with a single chopper flight is not a problem. And when they're in place, put the HAC on patrol. The AAC's only job is to sit in the base until and unless you see an enemy squadron of planes or choppers....then, you go make mincemeat out of them. This combined, overlapping fleet and air presence means that your opponent would need a truly massive force to even attempt an attack aimed at keeping one of your fringe bases, and a force several times larger than that to attempt a drive toward your core bases (if he did that, then the chopper squadrons from the far side of the continent would likely find themselves with targets in range as the attack force moved closer to the coast). This is not what a Momentum player wants to content with. A Momentum player is looking for a soft Builder who hasn't thought about getting his defenses in place, or one who plays like he's got all the time in the world to set them up.

Don't be that player. Don't allow yourself to get overrun because you get so focused on infrastructure that you forget about

the people out there who'd love the chance to take it away from you. Remember them....plan for them, cos make no mistake about it....they're planning for you!

Hollowing out

So....once you've got this great, huge defensive network set up....what's next?

Well, the first step is to dismantle it....not completely of course, but the fact is....all those coastal crawlers you've got are now....kinda redundant. You've got a strong, active naval presence, as well as a blanket of overlapping chopper defense, and your choppers can deal with both incoming planes and ships....so the fact is, unless the attack is just completely overwhelming (exceedingly rare!) No one will ever even get to your coast, meaning that you no longer need them.

Your bases are prolly huge at this point, and being that they're stacked three apart, even if you use a "forest and forget" strategy for the most part, you've still got lots of specialists per base, and that's a good thing.

So here's the next step

1) Take a look at your bases, and pick 2-3 of them that are coastal. Plan on turning these bases into "all specialist" bases. Immediately set any crawlers from those bases to food harvesting, rather than mineral harvesting, and mark their locations. You'll want to send your former crews back to those spots eventually. Right now, let them crawl food from the forest....you've probably got at least tree farms and maybe hybrids, so you're getting 2-3 food per tile, and the crawler paid for itself a long time ago anyway. That's good for the moment. Your main goal is to get those specialists set up!

2) Once you've got your all-specialist bases set up, send the navy and air force to them to re-home. This allows you to get back to market if and when you want, without worrying about drones. It also allows you to start doing some offensive missions while running Market....vitally important to keeping your research rates and cash position strong.

3) Send formers around to any tile you're crawling food from

and optimize for food production. Working in gangs, that shouldn't take long. Also, while you're about it, make sure each core base has a borehole, and if not, give it one now.

4) Stop using most of the crawlers in bases not set up to be all specialists! Of course, if you've got special resource tiles or mines inside a base's production radius, keep crawling resources from there, but now's when you want to look at retiring a good chunk of your supply crawlers. They've done their job and held the line until your "proper" defenses could get dropped into place, and if you're worried about degrading your empire because you're decreasing the number of specialists you've got, don't be. Remember, with your bases so close together, you're bound to have a good many specialists anyway, even if there's not a crawler in sight!

5) Take all the spare crawlers you pulled off of your coast, and stack them in designated project bases. That way, when the next juicy project becomes available, you can almost instantly build it. (Alt: keep the crawlers harvesting until you actually start a project, but reposition them so you can get a huge number of them to the project base in 1-2 turns...more efficient, but a larger PIA factor).

6) Send the formers around to delete any roads that you no longer need.

What this leaves you with is a beautifully terraformed continent, with not terribly many crawlers mucking up its appearance. Very nice indeed. (Alt: depending on the number of bases you have, you may find that Market is no longer as valuable to you as Green, and in this case, forget the all specialist base and cash in all your crawlers except those on mineral and nutrient specials....gives you less specialists, to be sure, but the visual effect is stunning, and hey....sometimes it's all about the art!)

I find it fairly easy to forget where I put stuff, so at this point, I'll generally break my formers into teams along regional lines, and if the formers in one particular region have nothing else I want or need to do at the moment, I'll park them in a line along a road (looks kinna like traffic) until I need them for something. Also, to keep

better track of my prototypes and such, I'll station them at highly visible points around the now mostly empty landscape.

That's the beauty of Doctrine: Defense, and its companion article on synergy. Every unit, every action has a purpose that is interlocked with some other action or unit. You build crawlers and place them along the coast to both provide early protection and increase your industrial might. As the game wears on, naval and air units replace the crawler as a much more active defense, and population increases to the point where those tiles they once worked might be best utilized by workers in any case (unless you just really love micro managing!). Thus, the crawlers are retired, but they are retired in such a way as to provide one final service to the empire they once protected, in the form of several speed-built projects.

Everything linked together.

Symmetry.

Synergy.

That's good stuff.
Odds and Ends
HSA: When you get it, that'd be a good time to cash in all those probe teams you had set up in your core bases. Forget about upgrading them to fusion, just ditch them and make new ones (with elite morale at this point!) - This furthers the "hollowing out" mentioned above.

Check base-by-base and see if you're losing any minerals anywhere. Then check to see how much it'd cost to upgrade that unit to clean. Depending on the answer, you might want to consider an upgrade, or, cash it in someplace and build a new "clean" version.
Projecting your power
Okay, so you've done the defense thing. You've got navy squadrons out the wazoo, your sea bases are bristling with choppers, you've got money and industrial output coming out of your ears, even to the point where you're starting to invest in infrastructure at your fringe bases just to give you something else to do!

Sounds like it might be time to flex those muscles a bit.

At this point of the game, you've won, even if your opponents don't know it yet.

Oh, you can still lose....but if you do, it won't be anything that your opponents do that makes you lose. No....if you lose now, it's because you made a mistake.....got involved in too many things at once....bit off more than you could chew....something.

The point is....be careful. Despite having incredible economic strength at this point, you can still be brought down, so watch yourself.

Getting started

First, for God's sake, have a plan! Don't just decide you want to get out and start trouble and make the rest up on the fly.

That's a good way to squander your position.

No...if you want to do it, do it right. Set an objective, and see how it goes.

Example: Lets say that you're in a four way hot seat game, and all this time, you've been quietly building up.

Some distance away, two of the other players are involved in a tooth and nail war, with one of them clearly gaining the upper hand.

Concerned that this may upset the balance of things (and in your position, you're pretty darned happy with the balance just the way it is!), you make a pact with the weaker guy who's getting trashed, who agrees to cede you a small base on his continent in exchange for your assistance).

See the difference there? You've got a detailed plan, and in fact,

you're playing the metagame now....getting yourself in the thick of the diplomatic underpinnings of the game.

In that particular example (based on an actual game, btw), I was actually treatied with both parties at the start, and wound up sending two task forces to assist. In that case, each task force was set up along the lines of (and it's been a while, so this might not be exact, but it's close):

2 Destroyers
1 Cruiser
1 Cruiser Transport with
2 Rover Shells
4 Infantry Shells
2 Probe Foils (the base I was given was coastal).

It was easy to speed build a couple of choppers at the new base, and I was pretty well entrenched.

My aggressive ally was unwilling to start a fight with me AND his weak opponent, so the war was stalled simply by pacting with the weaker player and stationing my units in bases near the front. Also, I got a new base out of the deal, giving me a permanent presence on another continent....always nice, and in fact, in that game, I traded tech to the aggressor for the two bases taken (which got him back off the continent and restored the game's balance), and sold them back to the weak player later, so it was quite the profitable venture!

Could I have done that without having all my defenses secured at home? Of course, but there would have been risks involved.

As it was, I was able to do that without weakening my border defense at all....those were just "spare" units I had been building when time permitted! Most of the units had, in fact, been cranked out of my fringe bases, which means I orchestrated the entire thing from bases I really didn't care anything about and that had little "investment value" to them.

The advantages of building an interlocking defense system are manifold, and some of them are listed below:

1) By denying your opponent the option of making specific

types of attacks against you, you force him to play your game and not the other way around. A smart attacker will recognize this, and not even bother with you, more often than not....after all, he's looking to make someone else play his game, not get sucked into yours, and that works in your favor.

2) You rely on fast moving attackers as counter-punchers and maintain vigilant patrols. This means that more often than not, you will see your attacker coming, and can ride out to meet him. This is, in all probability NOT what your opponent had in mind when he decided to come pay you a visit, and is one more way you can switch things around on the aggressor....suddenly and unexpectedly forcing him to play your game and not his.

3) You have preserved 100% of your industrial capacity by making use of clean units when appropriate. This puts you on an even footing with those factions who can easily achieve +4 Support, giving you access to just as many troops.

4) Unless your opponent is Morgan, you can get +1 Energy per square every turn, and in most cases, your aggressive opponent cannot (again, if you're fighting Morgan, he can do it, and if it's mid to late game, it's possible your opponent has a P-Sphere or spec. base), but in most cases, Momentum Gamers are not fans of Market. That's good for you, because it means you're getting more money per turn, and more tech, too....so let him come. If he keeps it up for 20 years or so, you'll have at least two techs on him, and if he keeps it up much longer than that, you'll break his back with your tech lead.

Summary

It is undeniable that attacking carries with it a number of advantages. Those advantages are often discussed and well known to all. Doctrine: Defensive seeks to nullify those advantages wherever possible, or make sure that they are only applicable where the defender dictates. (ie - yes, the attacker can still execute a marine strike against one of your bases, but you've got things set up such that the only viable option is to do so against a fringe base, and not an important coastal one). Doing so strengthens the defensive

position at nominal cost, and dramatically weakens the offensive position.

Further refinements

1) If you find yourself on a really massive continent, your best approach might be to forget expanding into the sea, and just treat your coastal bases and any shared border bases as "fringe."

2) Select a few (well defended) sea bases for further development, and make that development purely along mineral lines (subsea trunkline, eventually genejack factory and robotic assembly plant). Even with their relatively small number of starting minerals, you'll see these bases rocketing upward quite nicely in their total mineral counts by the late game, and this will enable you to run your entire war effort from those bases, allowing your core bases to focus exclusively on enhancing infrastructure, launching ODP's and satellites, or other good stuff like that.

Coordinated Military & the concept of Dispersion

Having a gaggle of units moving off in the general direction of your opponent can be an effective way to attack. Having a coordinated team of units moving with precision toward your opponent is almost always a better and more effective way to attack.

Conversely, stacking tons of units in every base can be an effective way to plan your defense. Having relatively few units, but making sure they're the "right" ones is almost always a better and more effective way to defend.

This section is all about making the best, most effective use of your military. It doesn't matter whether we're talking about offense or defense, the fact is that coordination and dispersion are two concepts that will help your game immeasurably, so let's take a quick look at those concepts and see what develops.

What does it mean to have a coordinated military?

A fair question, and in answer, I'd ask you to consider the following two attack forces, designed to capture a coastal base. Look them over, and then judge for yourself which is the best.

Attack Force A:
1 Cruiser Transport (Plasma Armor, AAA)
4 X-Missile Rovers (No Armor)
1 Probe Foil
1 Missile Cruiser (Plasma Armor, AAA)
1 Foil Transport (Plasma Armor, AAA)
2 Speeder-Based Probe Teams
1 Missile Destroyer (No Armor)
Supported by:
1 Heavy Assault Chopper (No Armor, X, Missile)

Not bad, and a pretty typical example of what a smallish mid-game rover assault force might look like.

Attack Force B:
1 Cruiser Transport (Plasma Armor, AAA)
2 Missile Marines (Plasma Armor, Amphib) (one Marine unit is "X" Capable)
1 ECM Missile Marine (Plasma Armor)
1 Trance Missile Rover (Resonance Armor)
2 Probe Foils
1 Missile Cruiser (Plasma Armor, AAA)
1 Foil Transport (Plasma Armor, AAA)
1 Trained Scout
1 Infantry-Based Probe Team
1 Missile Destroyer (No Armor)
Supported by:
1 Heavy Assault Chopper (No Armor, X-Capable, Missile)

Notice the differences here? If the defender somehow becomes aware that the attack force is on its way, the first force is almost certainly doomed, because the defender will have time to bulk up on ECM/Resonance defenders (as well as an additional AAA garrison), but that won't do much to stop the second attack force. In fact, it would require a significantly larger garrison force to defend effectively against the second force, simply because it's so versatile. Add to that the fact that second force has obviously been put together with an eye toward keeping the conquered base-it

seems more than capable of surviving the almost certain counter attack-and the winner is clear.

But why is the second attack force better?

First, it's multi-faceted. It is capable of dealing out damage to the enemy in a variety of forms. By making use of a variety of chassis types in the attack force's composition, the force becomes much more difficult to effectively defend against.

Second, it's flexible. Capable of capturing the base without causing undue harm (note that only two of the units are X-Capable, designed to go in first, to rip out the toughest defenders), and then playing the role as staunch defenders of the newly captured territory.

Finally, it's overlapping. The ships are all AAA. When the base falls, they'll move inside, giving the base good air defenses, but Air Defense might not be all that's needed, so the strike force comes fully prepared to deal with threats from native life and a rover-based counter attack as well! And, the trained scout is along for the ride in the event that something totally unforeseen pops up!

On closer inspection then, I'd have to regard the first attack force as something of a "one trick pony." Yes, it's fully capable of dealing out death, and perhaps (if the attacker is able to maintain the element of surprise) capable of taking the base it's gunning for, but it's certainly not very interesting, and can be countered with relative ease because of it's essentially linear construction.

That is the power and value of a coordinated attack force, and the advantages are clear. I'd feel comfortable taking the second force against any light to medium defended base!

Dispersion
This is a defensive measure, though it can be used offensively, as a means of protecting attack units on their way to a battle.

Simply put, spread your guys out!

Odds are, you will eventually get infiltrated by somebody, and when you do, if you leave your forces all bunched up, then your opponents will have an easy time pinpointing your strongest and weakest areas.

Not surprisingly, they'll go around your strongest points and

attack your weakest. Don't make it easy for them!

The secret to making dispersion work for you is to make sure that, although your forces are spread out, they are still capable of supporting each other in the event of an attack. By doing this, you force your opponent to do one of two things:

1) Leave you alone, once he recognizes that you cannot be effectively attacked. (And this is what you want! Let him find someone less prepared to pick on!)

2) Attack you with a massive wave of force on a very wide front, in hopes of wiping out all of your interlocking support groups in a single shot. (This speaks of desperation on the part of the attacker, and because such attacks are so vast in their scale, they're all but impossible to pull off with the element of surprise intact, meaning that they're doomed to at least partial failure, and in a case like this, partial failure may as well be complete failure!)

Of course, he could attack along a narrow front anyway, and yes, he will succeed in knocking out one of your patrol groups, but so what?! At that point, his attack force has lost the element of surprise, and is in range of at least two, and probably more of your supporting patrol groups. In short, they're as good as dead.

If your opponent is content to attack you this way, let him.

If he believes he is somehow hurting you by doing this, let him.

Just keep a tally in your head of how many minerals your opponent loses each time he makes one of these attacks, and compare that to how many minerals it costs you to replace your patrols with upgraded shell units. Try and keep a straight face when the next attack force arrives.

As mentioned earlier, dispersion is also useful on the attack. This can be seen in its simplest form by imagining either of the two forces mentioned above on their way to the site of the upcoming battle. You could minimize your chances of being seen by stacking all the units together, that's true. But if you are discovered, your

opponent now knows the precise location of your entire attack force....that's never a good thing.

Much better, by far, would be to use the destroyer in either of the abovementioned forces as a scout or diversion, nosing around in advance of the actual attack force to make sure the way is clear. If he spots trouble, the probe foil can be brought forward to buy off the offending unit and strengthen the force without ever revealing the bulk of the attackers.

Optimally, you'd have 1-2 "decoys" out milling about....task forces similar in construction to the main assault force (but perhaps loaded out entirely with scout shell troops). These are spread out on a wide front, all making their way slowly toward the enemy, but in this case, you want to make sure you advertise the presence of the decoys a bit more than normal. Draw attention to them in some small way. Force your opponent's attention there. Doing so increases the chances that your main assault force will arrive at its destination as planned, and with surprise on your side.

Also, when you do this, make sure that your main assault fleet and your decoys are far enough apart so that detection of one doesn't give the others away as well, but close enough together that they can combine forces if needs be, in order to ensure the success of the attack.

The essence of dispersion is to keep your opponent guessing as to your true intentions, and to keep him in the dark as much as possible as to the exact locations of the bulk of your forces. The last thing you want your enemy knowing is where all your troops are and where they're going!

More on attacking and attack forces

In most games where you're worried about an early to mid game rush, they take two forms:

1) An "unscouted" rush, where the player builds an attack force and send them out without knowing exactly where his opponent is, or

2) A "scouted" rush where the attacker finds an opponent first, and then builds an attack force to go cause trouble.

If it's the first case, then the player using the methods above has

nothing at all to fear. The attack force is likely small (1-2 transports and maybe a destroyer escort), and the attack units will likely be all rovers.

This is the kind of force that simply gets sunk on the high seas by the method outlined above....when the attacker draws close to your core bases (assuming you let him get close enough to see your mainland), he won't be able to land, thanks to all the coastal crawlers you had set up long before he arrived, and he'll find himself in range of at least one, probably two defensive task forces you've got spread out in your fringe bases. Even if the attacker manages to sink one of the destroyers, the other two will ride out and kill the enemy attack ship, then sink the trannie. And the attacker can't run, either, since your destroyers will be able to outrun him.

In the second case, it's probably a mid-game attack, and so we're talking about both sides having air power.

There's probably an enemy sea base in the neighborhood used to shuttle choppers closer, allowing them to strike out, and there are two possible outcomes:

1) If your HAC patrols indicate the presence of a nearby sea base (borders on the water), then a quick rush toward the base will empty it, allowing one of your task forces to move in and capture the base before the attack can even be launched.

2) If the attacker managed to move his forces out of the base before you knew it was there, he'll get first strike, and his own choppers will sink one of your navy task forces and prolly blow away two choppers. The good news is, he's done, and on your turn, your choppers in neighboring bases can move in and return the favor, then proceed to take his sea base.

Also, there's the possibility of a suicide chopper run. Keep in mind that his choppers will be at least 30%, and probably 60% damaged when they pop up inside your LOS. Yeah, he might get lucky and gain first strike, again, taking out a task force of your boats and maybe two of your choppers, but then he's done and you'll wipe them off the map with your Air Superiority Choppers nearby.

In any case, with defenses set up along the lines of this essay,

all of the scenarios mentioned above will play themselves out in and around your fringe bases, and not at your all-important core. Since a would-be attacker is aiming to cause you grievous harm, he's obviously aiming for your core bases, and since you're defensive structure can keep him well away from them, you win the battle and the war.

All of this sets you up nicely for making offensive moves of your own. After all, you've got all the raw materials you need at your fingertips, and now you can proceed with your own plans without having to worry about an attacker finding you while you've got forces out hunting! And, now that you've come to the end of this essay, when your forces do strike out toward the enemy, they won't be clumsy, linear swipes in the general direction of the enemy, they'll be cunningly constructed, intricately overlapping war machines... .balanced, well-rounded, and capable of dealing with any number of threats while posing a genuine danger to the holdings of your enemy.

'Nuff said....go out and kick some butt!

-=Vel=-