

HARD TIMES™

A MEGATRAVELLER SOURCEBOOK

Charles
E.
Gannon



Science-
Fiction
Adventure
in the
Shattered
Imperium



MEGATRAVELLER
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Charles E. Gannon



GDW

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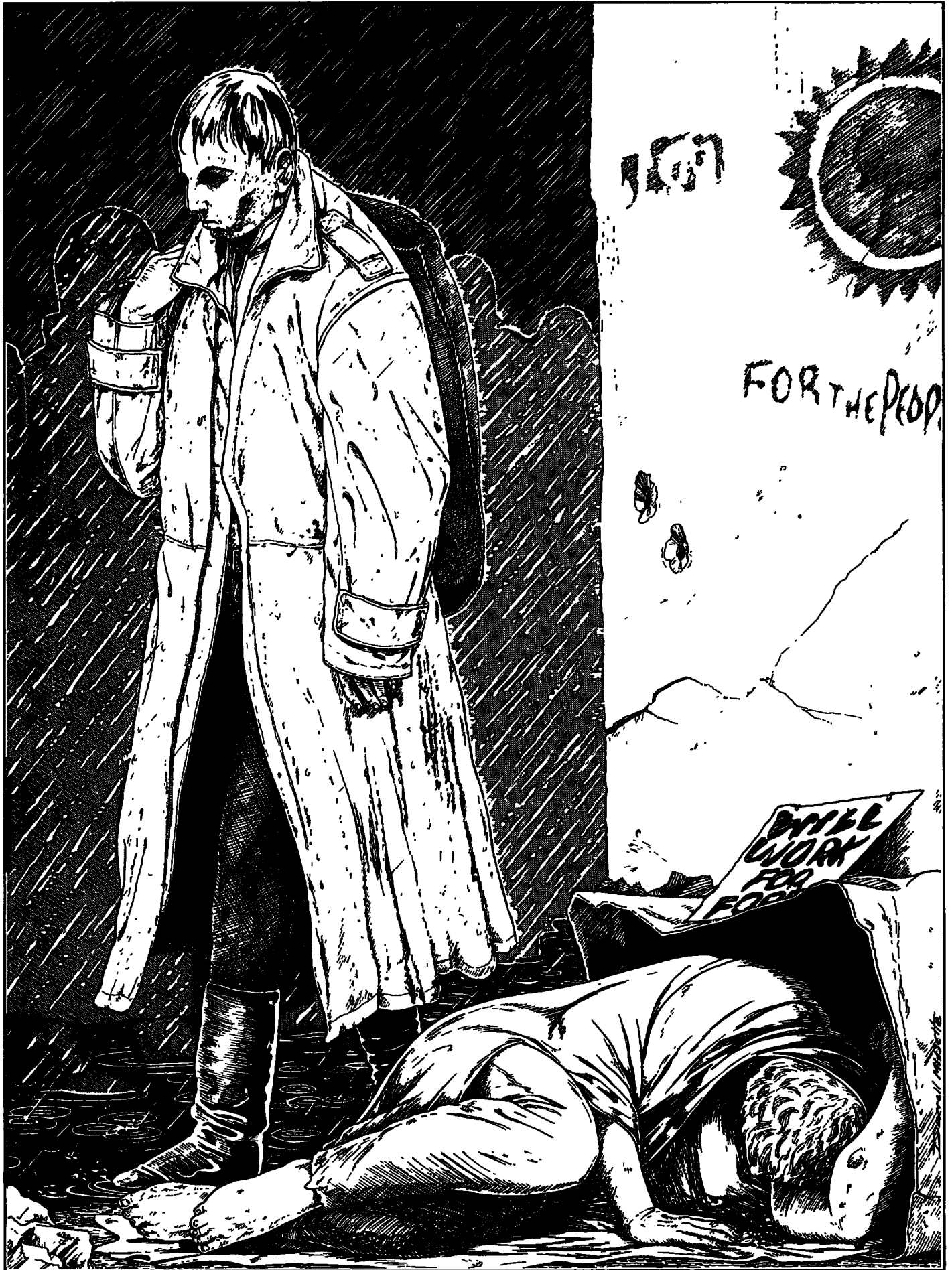
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Hard Times

I don't remember when it all started to change, when each starport looked a little more rundown than the last, when starships became fewer and farther between. It was sometime after 1120. What I do remember is we finally turned our backs on the Core and charted a course for the Frontier by late 1124.

But there was no Frontier remote enough to remain unaffected by the tides of war or its destructive eddies.

Instead of the increasing paranoia, insularity and authoritarian mindset of the Core, we found the Outlands full of dying backwater planets.

From *The Memoirs of Trevor Scotius* (a pseudonym), starmerc/merchant captain.

BACKGROUND

The Rebellion has wrecked the Imperium as a unified political entity. However, as is often the case with wreckage, some of the remaining pieces are larger than others. *Hard Times* portrays this "new" incarnation of the Imperium—a collection of separate interstellar states surrounded by blasted, abandoned battlefields.

The interstellar states are centered on the areas still controlled by each of the respective factions of the Rebellion. For the most part, these power centers were untouched by the depredations of war. With their industrial and population centers intact, these safe areas carry on in an essentially pre-Rebellion fashion.

The regions beyond these cores of safety have a different story to tell. The Frontier around the Safes were aided and supplied by their allied factions. Thus they managed to retain much of their technology and industry despite being repeatedly visited by combat.

Beyond the Frontiers are the starkest tragedies of the Rebellion. These no man's lands, trapped between gigantic warring factions, bore the brunt of the savage war that raged across the former heart of Imperial civilization and culture. The ruin visited on them was not relieved by outside aid. Industries, technologies and societies staggered, stumbled and fell.

Tragically, these regions can be further divided into areas of real suffering, the Outlands, and areas of abject misery, the Wilds. While the Outlands were simply abandoned by retreating factions, the Wilds were additionally brutalized by repeated, agonizing combat.

These four environments—Safe, Frontier, Outland and Wild—now constitute the terrain of the new Imperium. The first type does not differ radically from pre-Rebellion Imperial society and is not dealt with here. However, the last three are new environments within the *MegaTraveller* universe. They offer fresh possibilities for adventure and for a flavor unique to the period presented in *Hard Times*.

STRUCTURE OF THIS SUPPLEMENT

Hard Times is divided into three parts.

Part I is a background section, intended to bring the reader up to date with the changes that have taken place from 1122 to 1125. The end of large-scale fleet actions in 1122 did not signal the end of changes in the post-Rebellion environment. The extensive damage done during the fighting had not yet fully taken effect.

Over the following three years, this damage began to spread like ripples across the once smooth and unified surface of the Imperium. The damage to factories on one world meant fewer goods could be shipped to others; the destruction of a starport on another world meant no new ships could be built to carry these goods. As the flow of trade dried up, people began to change their lifestyles, emigrate to less ravaged areas or starve.

The long-term effects of the damage already done are explained in detailed terms that can be added to any campaign. This section of *Hard Times*, therefore, presents a new Universal World Profile (UWP) modification system that allows referees to bring pre-Rebellion UWP stats into line with postwar realities.

Part II deals with the *Hard Times* era proper, 1125-1128. This section is set up as a tutorial/adventure source for that era. Starting in late 1124, each of the chapters sequentially examines a six-month segment of the history of that era, explains how successive changes took place, and presents new rules and equipment to detail that stage. *Hard Times* is the era of viking and pirate attacks, and the era of courageous starmerc bands which fight a rearguard action against these raiders. Rules are provided for creating all these groups, as well as for the changes that fighting has brought about in interstellar trade. Each chapter closes with an adventure that allows players to experience the downslide into *Hard Times*.

Part III is a data annex. Frequently used rules and tables for this new era are conveniently collected here. Among these are a new character generation system for the gallant starmercs, plus details of the new styles of blade fighting favored by the sociopathic ripper bands. This section also includes rules for spaceship operations at the previously unexamined and unimagined tech levels 4 through 8. As the shadows of *Hard Times* continue to lengthen, struggling societies will find it ever more important to make regressing technology stretch to previously impossible tasks.

Players who are used to feeling dwarfed by the massive historical movements of Imperial history will find that "the times they are a-changin'." In the battered regions of the Outlands and Wilds, players will find a power vacuum the likes of which they could previously not imagine: Little power and few heroes are to be found there.

Even seemingly small acts assume mammoth proportions in this environment, and players will find that opportunities for dramatic action come fast and furious. For there is no small need for heroes in *Hard Times*.

Referee's Overview

I guess it was around 1125 when it really started sinking in that the Imperium was gone. You notice things like that because people start using new labels for things, like "Third Imperium." Yeah, I know it was supposedly already called the Third Imperium, but not by regular people. While we were living in it, it was always the Imperium, you know? Who cared about any others.

So when people started talking about the Third Imperium, you knew all of a sudden it was over. It had been consigned to history, along with all of those other things and people with numbers stuck to them. And then you think, well what do we call ourselves now? Everybody'd been talking about how hard times were, how it takes hard times to find out what you're made of, and how you should be thankful for what you've got in such hard times. Eventually someone just started using a capital "H" and a capital "T." Who knows what they'll call it 100 years from now, but right now, "Hard Times" seems pretty accurate.

From the unfinished manuscript *Oral History of the Interregnum*, edited by Dr. Terkel Hadushiggar, ca. 1129.
Discovered among the files of the former Institute of Literature and Society, Delphi University of Arts, Anaxias/Delphi.

If you thought the Rebellion was going to wreak havoc on your campaign, hang onto your hat. The carnage wrought by several years of warfare has only set in motion forces that will continue to tear down worlds that never heard a shot fired in anger.

The unified Imperial economy has been dealt a mortal wound. And while it is true that a rising tide raises all boats, it is time to learn the reverse is also true: An ebbing tide lowers all boats and leaves a great many of them stranded on the rocks.

Worlds are dying, but different worlds die at different rates. Some die quickly and painfully, while others die slowly in absolute agony. Either way, the human cost is staggering. But extraordinary people—otherwise referred to as player characters—can sometimes mitigate these effects. Sometimes they can slow them down enough to allow some of the innocents to escape. And sometimes by weighing in with their talents and determination, they can tip the scales from death to life, if that is their intent.

Make no mistake, in the post-Rebellion environment there are forces of darkness and of light, and the PCs can be agents of either. Which they will be, and how much impact their acts will have, are the questions treated in **Hard Times**.

IMPLEMENTING HARD TIMES IN YOUR EXISTING CAMPAIGN

Hard Times provides information for referees who wish to establish new campaigns, as well as for those who wish to keep their campaigns current with the era covered by this supplement.

The **Hard Times** campaign assumes that the player characters have access to a starship. If they do not, the adventure patrons will have starships, and part of the PCs' job will be to assume the role of its crew. The PCs should be able to acquire a starship of their own at the end of the fifth adventure of the **Hard Times** campaign.

New and Transplanted Campaigns

The easiest way to use this sourcebook is to establish a new campaign in the subsectors covered in the book. Included in this manuscript are statistics for the Khavle/Diaspora and

Pasdaruu/Diaspora subsectors, showing their post-Hard Times values, as well as 10 adventures set at specific times and places within these two subsectors. As the Khavle and Pasdaruu information has already been "predigested," referees choosing this option will not need to use the UWP modification tables to alter any UWP values, but they will want to be familiar with the procedures of these tables so they can institute the game effects of these changes at the proper stages in the adventures.

Characters for a new campaign should not be from the Khavle-Pasdaruu area; the scenarios work better if the PCs are just learning their way around the area for the first time. Simply have your players generate characters who muster out somewhere near the Khavle or Pasdaruu subsectors at the beginning of 1125.

To transplant an existing campaign from another area into this region requires a little sleight of hand on the referee's part. However, several suggestions are presented in Chapter 4, "Campaign Background."

Existing Campaigns

Bringing an established campaign up to date with **Hard Times** developments will require some work, but good campaigns always do and are always the better for it. The UWP modification tables in Chapter 3, "Effects of **Hard Times**," allow referees to appropriately modify the worlds of their campaign settings to reflect the changes since the breakdown of Imperial society.

However, these changes take place in discrete stages which demonstrate the worlds' gradual decay. Referees must take care to apply these changes as indicated in Chapter 3, "Effects of **Hard Times**," and—in more detail—in the adventures themselves. Referees will want to pay particular attention to Chapter 2, "Eve of **Hard Times**," to ascertain the conditions in their own portion of the former Imperium.

Similarly, referees who wish to run the **Hard Times** campaign presented in Part II in their own campaign areas must make appropriate modifications to the locale and characters in order to maintain their own storylines. Alternatively, referees may prefer to read Part II to gain a "feel" for the story, then run in their own campaign a similar series of adventures that tell the same overall story.

STRUCTURE OF THE HARD TIMES CAMPAIGN

The adventure campaign that comprises Part II of *Hard Times* is laid out in Chapters 4 through 14. Chapter 4 lays the background for the following 10 chapters, detailing major NPCs the PCs will meet, and establishing the political and astrographic framework within which the PCs will operate.

Chapters 5 to 14 comprise both the historical analysis of the *Hard Times* of 1125-1128 and the scenarios of the *Hard Times* campaign. Each of these chapters sequentially covers roughly a six month period, a stage in the continuing decay of the Imperium. By breaking the period down into stages this way, *Hard Times* aims to make players feel immersed in tangible social change; they will sense the onset of *Hard Times* in the very structure of the play environment. This also allows the referee to assimilate these changes more easily. By breaking down the historical narrative into segments, referees can successfully carry their own campaigns through this period without having to impose too many abrupt changes that have no real foreshadowing.

Each chapter opens with a short piece of "mood" prose that sets the tone of the stage it covers. Each mood section is followed by a collection of essays describing what is going on during this stage and why.

Next is a resource section which offers practical hints to help referees and players integrate a particular stage of *Hard Times* into their games. These research segments include reminders that it is time to institute changes in a planet's UWP, new equipment lists, NPC and encounter generation lists, a new design sequence, lists of new opportunities and adventure ideas, and other things that will help bring the *Hard Times* era to life.

Each section ends with an adventure set in the stage covered. This adventure integrates elements covered within the section, thereby giving referees an example of how to turn the presented concepts into a playable reality.

Adventure Outline

The PCs are hired by a front group for the megacorporation Hortalez et Cie. The organization wishes to see if the PCs have the talent to handle a bigger job, so their success in each adventure qualifies them to be hired on for the next.

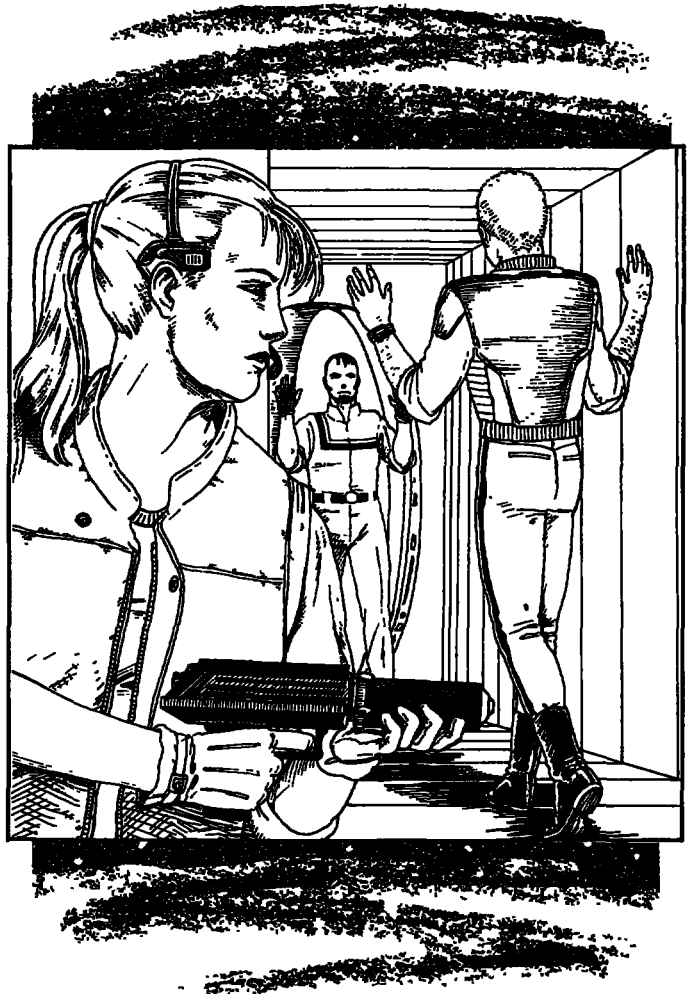
The first job involves the retrieval of some expensive equipment from a ruined facility and a shoot-out with a lurking presence in the dark. In the second adventure, while transporting this equipment, the PCs are apprehended by starport security officers who intend to repossess their ship due to an extensive—and untrue—history of past-due payments. After discovering that this is actually a scam run by a viking band, the PCs' next job runs them afoul of raiders holding a colony of miners hostage on an airless world. By the successful completion of this mission, Hortalez has enough confidence in the PCs to hire them for a full-fledged job—running security for a newly acquired installation that has been sabotaged by disgruntled locals.

Hortalez next hires the PCs to infiltrate a pirate band, setting the stage for future antipiracy jobs with the company. To convince the pirates of their intentions, the PCs must take part in a raid in which they face the concentrated fire of their real allies, while at the same time seeking to foil the raid. On the way to their next job, the PCs have the opportunity to assist a doctor

seeking a solution to a plague striking his declining world. Here the PCs learn that the growing xenophobia of *Hard Times* is even directed at those attempting to do good. Their next job takes the PCs back into contact with the pirates, this time to "assist" the pirates in capturing a booby-trapped ship which will ultimately be used in a Trojan horse plan against them.

The PCs then become involved in assisting an increasing number of doomed and collapsing worlds, where thousands of lives hang on the technical assistance that one starship crew can provide. These poignant situations should drive home to the PCs the real issues facing humanity in *Hard Times*. During the last of these projects, the PCs are required to drive off a raid by a pirate group which could blow their cover with the band. If this is allowed to happen, their efforts in the previous adventures to lay an elaborate trap for the pirate band will be wasted. Assuming the characters are up to this challenge, they will arrive at the ultimate goal of Hortalez's long-term planning, the ambush of a major pirate assault. After all the skulking around, the PCs should be gratified that this is a stand-up fight which allows the them to show their true colors. They will be fighting alongside a powerful starmerc unit as part of a combined force facing down over a dozen pirate vessels. While this is the end of the adventure published here, it can be only the beginning of a career for the PCs as troubleshooters in the embattled Diaspora Sector.

The 10 adventures are intended as sequential parts of a unified campaign, but referees may opt to use one or more as stand-alone adventures. The minor changes required to do so are listed with the adventures.



Road to Hard Times

The Third Imperium is predominantly noted for being the first empire in which two branches of humanity held the reigns of power conjointly. It is also noteworthy for the unique blend of conservatism and vitality which this sharing of power produced.

The Solomani tendency toward innovation and conquest was tempered by the traditional Vilani values of restraint and caution. As a result, the Third Imperium achieved an impressive balance between expansion and consolidation, international vigor and domestic security. However, despite the longevity of the Third Imperium and its many noteworthy achievements, it is perhaps best remembered for its fragile governmental structure and its final, tragic disintegration.

From Imperial Stars: A History of Three Imperiums by hu-Tugul Ackerson, published in 1218 by Sodokond Educational Press, Arkirkil/Solomani Rim.

PASSING OF AN AGE

Aftermaths are inevitably longer than the wars that cause them. And the aftermath of the War of the Rebellion is no exception.

Hard Times begins in 1125. The fighting is effectively over: The combatants are too drained to mount the massive campaigns that characterized the first five years of the Rebellion. The factions are now facing the reality of long-term independence and a new political order—but the actual condition of most of the former Imperium continues to worsen.

Even after the last great fleet actions of 1121, the factions continued to hammer away at each other with what force they had left. However, limited resources dictated warfare to devolve into banditry, surgical strikes and terrorism. Resources, which could not be secured for future use were destroyed in order to deny them to the enemy. The space lanes became too dangerous to travel. Trade continued to shrivel up. Contact and communication died away to an intermittent trickle. Most planetary economies retracted; others imploded. Populations decreased, governments grew oppressive; and pirates thrived.

This outcome was not what most military or economic experts forecast. Each faction's chief analysts had predicted that the Rebellion would be resolved in five years, six at the most. They predicted minimal civilian casualties, with acceptable levels of damage to industry and commerce. Encouraged by the comparatively positive tone of these predictions, many faction leaders imagined that a sharp military victory would crush the will and organization of the adversary, and the Rebellion would be over.

But as 001-1125 dawned on Capitol—eight and a half years after the hostilities began—it was quite clear the experts were wrong. Only a very few intelligence agencies and megacorporations had accurately foreseen the outcome of the conflict, an outcome they referred to hopefully as the Short Dusk. But to the sophont in the street, it was simply the beginning of Hard Times.

ANALYTICAL ERRORS OF 1116

By the end of 1116, the majority of experts had already made the crucial mistake that ruined their projections regarding the outcome of the Rebellion. This tragic flaw was inherent in their very first theoretical assumption—that the Civil War of 604-622 was an appropriate historical model for the upcoming events of the Rebellion. Although such a mistake is understandable—the Civil War of 604-622 being the Third Imperium's only prior experience with internal strife—the experts couldn't have been

more in error when they selected it as an example. The Civil War of 604-622 was not a civil war at all. It was a series of military coups, with minimal civilian involvement. During that conflict, the political infrastructure of the Imperium attempted to detach itself from the fierce struggles between the military kingpins who collected around Core in pursuit of the Iridium Throne. The admirals held no public loyalty, held no right to specific territories and held no claim to the Iridium Throne other than their willingness to kill to obtain it. In contrast, the legitimate organs of state continued to operate without interruption: The Imperial bureaucracy continued with business as usual, administering the affairs of the Third Imperium while the admirals fought over who would ultimately rule.

Since no admiral had a clear political or ancestral claim to any given region, all were outsiders to every planet and system they visited. Those few admirals who attempted to impose themselves as local rulers quickly became quagmired in the difficulties posed by regional resistance. They found that battlewagons were easier to smash than labor strikes and planetary assaults were simpler to defeat than protest marches. Inevitably, the admirals always gave up empire-building in favor of empire-stealing. After all, if they won, they wouldn't need to build an empire—they could simply claim the extant one as the spoils of war.

The worlds of the Imperium encouraged the admirals to keep their war between themselves. When visited by the fleets of the Imperial contenders, the planets paid tithes, provided the logistical support required of them and did not complain too much. They knew that eventually the admirals would leave, and life would return to normal. Unfortunately, the tendency in this "civil war" to restrict violence to certain select political strata was not a hallmark of the Rebellion.

The Rebellion was—and is—a true civil war. From the very outset, political rivals with competing claims rallied civilian populations to their cause. Fleets went forth not as the embodiment of one admiral's desire to rule, but as an extension of publicly supported policy. This was not just a conflict between soldiers—this was a war between common people, between competing regions, cultures and political ideas.

Consequently, just as the enabling foundation of the war was civil, so were its casualties. Industry, commerce, transportation, even agriculture and population centers became targets. Damage suffered by a faction's populace vindicated counterstrikes. The upward spiral of violence took an increasingly heavy toll on the structure of the Imperium itself.

A NEW KIND OF WAR

It took the experts several years to accept that the Rebellion was different from any previous type of conflict within the Imperium. The military was not used to managing a conflict whose battleground was also its logistical base. Wars with the Zhodani and Solomani, plus various pacification campaigns, gave the Imperial military establishment an institutional predisposition toward conquest at any cost: Damage done today could be rebuilt tomorrow or left for the enemy to handle.

But the Rebellion was a more complex conflict. Every faction's logistical base overlapped onto its area of military operations. Therefore, it was crucial for objectives to be taken and defended intact—there was no time for rebuilding if war production was to retain the momentum required for victory. Strategic success required a deft military hand and an understanding of the subtle interactions of warfare, commerce and politics. An inappropriately timed tactical victory could in fact be a strategic defeat.

Few leaders of the Imperium appreciated this. Those few who did had little opportunity to benefit from it: Lucan's headlong offensives demanded stiff, absolute responses. His irresponsibility as a ruler and unsuitability as a military planner not only squandered his own sizeable resources, but ultimately invalidated any measured responses undertaken by his rivals. Consequently, no single individual contributed more to the downfall of the Imperium than the man who—rightly or wrongly—sat upon its throne.

HIGH-POPULATION WORLDS ARE BROUGHT LOW: 1118-1120

The Rebellion's most combat-intensive period extended from late 1118 to mid-1120. It was then that the factions strove to attain the key objective in the conflict—control of the high-population worlds. Predictably, but tragically, the battle to control these worlds led unerringly to their ultimate ruination. The intense conflict that surrounded them shattered markets and port facilities, and drove off all commercial shipping. Thus, the huge, import-driven economies of these multibillion-person leviathans retracted—or collapsed.

Few of these worlds were ever self-sufficient. As foodstuff imports dwindled, rationing was introduced, followed immediately by panic. The law levels of these worlds—typically high to begin with—grew more oppressive as governments were forced to adopt draconian measures to maintain control. All too often, the result was revolt, anarchy and ruin.

This result was inevitable, though no less tragic, on high-population worlds with inhospitable environments. With their needs for food, water and air always close to the edge, their slide into chaos was swifter and more absolute—and involved millions of civilian casualties.

Consequently, most high-population worlds quickly lost their value as strategic objectives. Instead, they devolved into chaotic cesspools of misery and desperation. Although few were targets of major attacks, these prizes of the Rebellion became the war's most tragic casualties.

WINDING DOWN: 1120-1121

The Imperium started the war with 320 numbered fleets and an equal number of reserve fleets. By 1121, fewer than 95 numbered and 130 reserve fleets remained. Most had been reduced to 60% strength or less, with the heaviest losses in the

BatRons and CruRons. Losses were also severe in the ground forces. As the front moved back and forth, countless divisions were stranded due to insufficient resources for evacuation. Without orbital support, few units survived more than 48 hours past the arrival of an enemy fleet.

Lucan, having held a disproportionately large share of the military resources to begin with, was the only faction leader who could still mount one last major offensive in 1121. So he did. Lucan's final offensive against Gushemege Sector was a pyrrhic victory: His forces were too weakened to hold the territory they had purchased at so high a price in trained personnel and high-tech equipment.

The other faction leaders had already realized what Lucan refused to accept: The war might not be over, but it was collapsing under its own weight. Neither the personnel nor the equipment was left for further offensives. What front-line quality units remained were now barely able to defend each faction's core. And control over peripheral areas continued to recede.

But even more telling than the lack of personnel and equipment was the lack of logistical support. Commerce and industry were devastated. Manufacturing centers watched their shipments of raw materials being reduced to a trickle. The remaining bulk carriers were needed to ensure the immediate defensive and minimal industrial needs of the faction core areas. Even had the combat forces existed, there was no way to reprise the massive offensives of 1118-1120. The supply resources to empower them were gone. Like exhausted prizefighters, the contenders for the Iridium Throne staggered away from each other and collapsed in their respective corners.



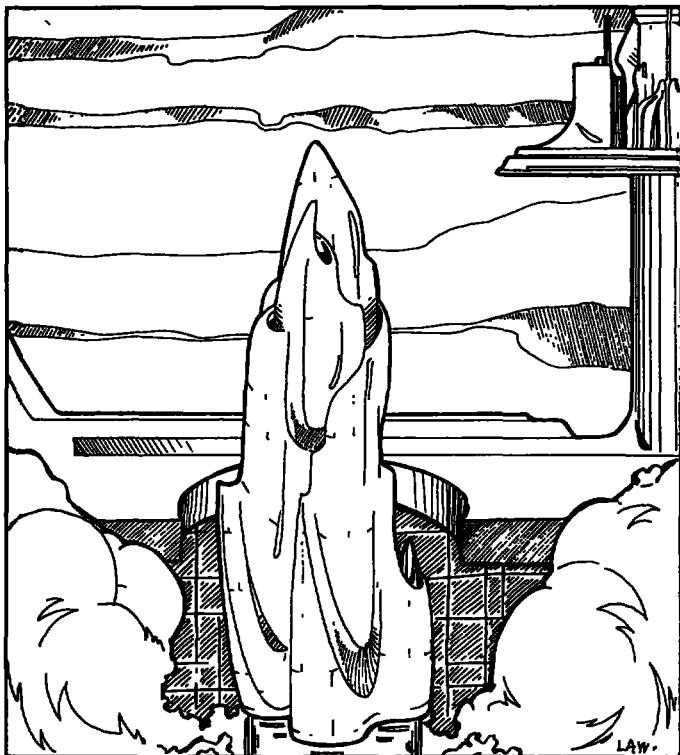
SHADOWS LENGTHEN: 1122-1124

As the faction leaders learned, the costs of war continued to accrue long after the bullets and BatRons stopped flying. Economies did not spring back in response to the deescalation. War-related industries dominated the commercial sectors of the factions. As contracts for new war materiel began to shrink, ripples of unemployment coursed through the economy. Commerce retracted even further: The last viable market—war—had evaporated. Now there was nothing left to sell—which was appropriate since no one had any money to spend anyway.

Each faction began attempting to rebuild its economy and commercial sectors. Among the more successful were the Ziru Sirkaa, Margaret's Domain (whose strong suits were in trade, not war) and—oddly enough—Lucan. The reason for Lucan's success was indeed ironic: The would-be emperor was simply not interested in economics. Consequently, his experts had a relatively free hand. Only his military leaders had to endure his "expert guidance." That guidance mandated a relentless campaign of lightning strikes into the core areas of the rival factions. Convinced that the other factions were on the verge of uniting against him, Lucan decided it was necessary to disrupt their largely illusory offensive capabilities.

As a result, the battles of the Rebellion ceased to resemble arena contests fought with battle-axes and began to be reminiscent of knife fights in darkened alleys. Commerce raiding took the place of squadron actions. Deep-penetration raids by destroyers and escorts replaced fleet-sized thrusts. Hit-and-run strikes by companies or battalions were used instead of full-scale planetary assaults. As the forces shrank in size, so did the objectives: Instead of whole planets, single cities or starports were targeted.

However, despite its seemingly "limited" nature, this new phase heralded a terrible change in military objectives: The desire to conquer had been replaced by the decision to destroy. The targets were not attacked in order to be added to the assets of the attacker; they were being eliminated so the



defender no longer gained any benefit from them. The purposeful destruction of resources had begun years earlier, when retreating naval commanders were forced to destroy key starship construction and repair facilities to hinder pursuit by the enemy. But now this tactic was no longer the exception to the rule—it became Lucan's standard operating procedure.

The other factions had no choice but to respond in kind. This at least forced Lucan to devote more of his assets to defense, which limited the number of offensive strikes he could make. But Lucan still maintained a high level of activity against Dulnor, Vland and the Solomani Confederation.

Just as this period of conflict (referred to by many as the Black War years) evolved new kinds of tactics and objectives, it also produced a new breed of soldier. It placed emphasis on the trained, resourceful professional who could conduct and complete complex missions with minimal support and guidance.

On the other hand, it encouraged the emergence of raiders and "black" units—so named because of suspicions that they were moonlighting as pirates when not on a mission.

By now, the factions were passing out letters of marque as freely as party favors. And the lines separating war, terrorism and piracy—always thin to begin with—began to vanish amid the new brutality of "legitimate" warfare.

As a result of these years of Black War, the factions' efforts to jumpstart their respective economies died. Civilian losses in the peripheral areas caused many heretofore loyal outlying worlds to rethink their allegiances and move toward neutrality. Thus, in a remarkably evolutionary fashion, the areas controlled by each faction continued to shrink to a size which could be defended by what few military assets remained, a task simplified by the deeper no man's land—a byproduct of the receding Frontiers.

By the end of 1124, some measure of stability had finally arrived for the central regions of each faction. However, each of these regions—known as Safe areas—were not much bigger than one or two subsectors. Beyond each of them was a Frontier area, a region where the faction still held a fair amount of sway, but which was more unpredictable and risky for travellers. Beyond the Frontiers were the Outlands, areas that had originally been under marginal control by the faction. After suffering the depredations of full-sized fleets and armies, the Outlands were too battered to endure the insult added to their injury by the Black War. Most of the Outland worlds fell by the wayside, seldom visited.

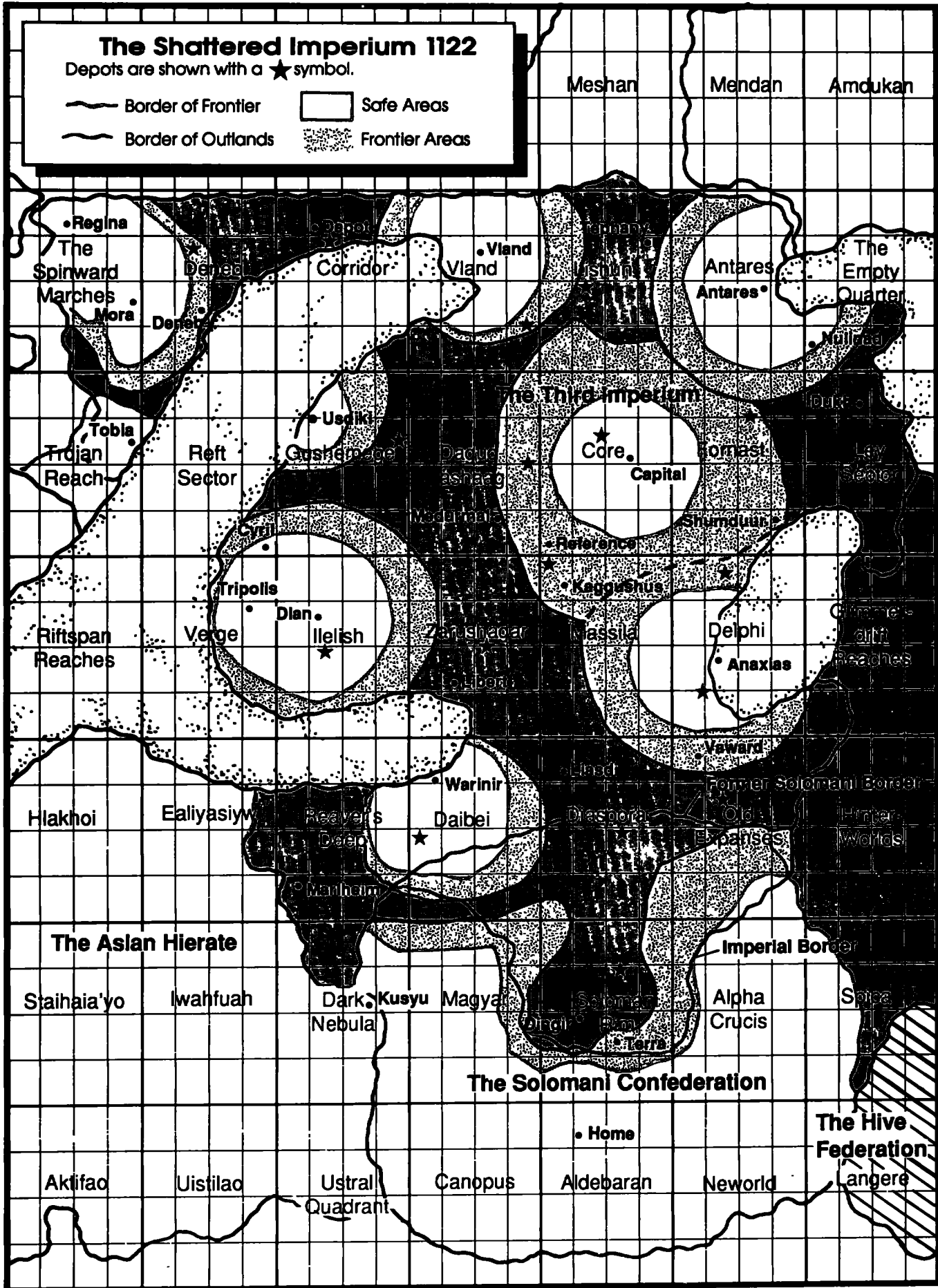
And further outward still were the Wilds—the areas forsaken by the factions since the war began. Innumerable fleets had raged back and forth across these systems, and then the Black War had ravaged them. Maintaining contact with these worlds was not only pointless—it was folly.

Only the adventurous and foolhardy, or those with intense personal ties, would attempt to cross the gulf to visit those abandoned worlds. And no others were interested in helping them try. For as 1124 drew to an end, it was obvious that the attempts at economic reinvigoration were failing. Merchants were getting nervous about being able to make payments on their increasingly rare jump-capable ships. Every day, another broker closed up shop for good—or opened a window 30 stories up and took a short walk into forever. People stopped spending; stores began closing. You could feel it everywhere: Hard Times were a'coming.

The Shattered Imperium 1122

Depots are shown with a ★ symbol.

- Border of Frontier
- Border of Outlands
- Safe Areas
- ▨ Frontier Areas



The Hard Times period (also known for a short time to hopeful social scientists as the Short Dusk) effectively begins in 1125 as a result of the havoc wrought by the War of the Rebellion from 1117-1124. For referees and players who are understandably curious about the look of the Imperium since the last maps were published in the *Rebellion Sourcebook*, new maps on pages 11, 13, 15 and 17 provide subsequent references up to 1125.

ROAD TO HARD TIMES MAPS

Three maps trace the evolution of the Imperium from 1122-1124. These maps indicate two boundaries about each faction. The inner boundary indicates secured areas that are essentially 100% committed to and integrated with the faction. The outer boundary indicates areas that are less secure and fully integrated, but are nonetheless effectively controlled by the faction. Referees who intend to play their campaigns forward into the 1125 era will find these maps especially valuable.

The map for 1121 is not presented in *Hard Times* since it is essentially identical to the map for 1120. In effect, the events of 1120 had only one major effect—they proved that the factions were no longer able to exert dramatic influence upon each other due to their collective state of military exhaustion.

Shattered Imperium 1122: This map (on page 11) shows the beginning of a slight recession for all areas of influence, although the losses for Strephon and Daibei are particularly dramatic (and are the results of the last great campaigns of the Rebellion). At this point, the economic effects following the cessation of high intensity conflict have not yet been felt.

Shattered Imperium 1123: This map (on page 13) shows the profound effects caused by the public and commercial adaptation to the end of the war economy fostered by the Rebellion. It also shows the erosive influence of the Black War. The shrinkage of the secure areas held by each faction is particularly noteworthy.

Shattered Imperium 1124: This map (on page 15) indicates the continuing shrinkage of each faction's secure areas. The two factions farthest from Lucan's scorched earth maraudings—the Domain of Deneb and the Solomani Confederation—are also the two factions whose borders are showing signs of stabilization.

HARD TIMES MAP

Shattered Imperium 1125: By the beginning of 1125, the factional core areas have achieved basic stability. Military forces have withdrawn to lines that can be reliably defended, allowing the worlds within these boundaries to retain pre-Rebellion economic levels. However, their outlying regions—and the interstellar reaches beyond—are still adjusting to the tremendous changes caused by the Rebellion. The 1125 map indicates these regions and several other features which are not present on the 1122-1124 maps but which are relevant to *Hard Times* play.

Area Distinctions

As explained on page 5, there are four categories of areas in *Hard Times*: Safe, Frontier, Outlands and Wilds. The differences between these areas are crucial in campaign terms, as a world's location in one of these areas will largely determine how badly its UWP will deteriorate under the rules

presented in Chapter 3, "Effects of Hard Times."

Safe Areas: Safe areas are the most secure areas in the Rebellion Imperium. They represent the cores of the respective factions and are carefully guarded by the remaining military forces. These function as isolated pockets of pre-Rebellion times, where commerce, industry and civil government continue as before. The only thing that breaks the illusion of travelling back in time to 1115 is the attitude of the inhabitants. They are wary and vigilant, for only vigilance can keep these areas secure. In addition, they know what is going on outside the Safes, and this has made them cautious spenders. They have something of a lifeboat mentality, hardening their hearts to the tragedy outside the Safes, knowing there are only enough resources to retain selected parts of their civilization. Safe worlds are not subject to UWP modifications.

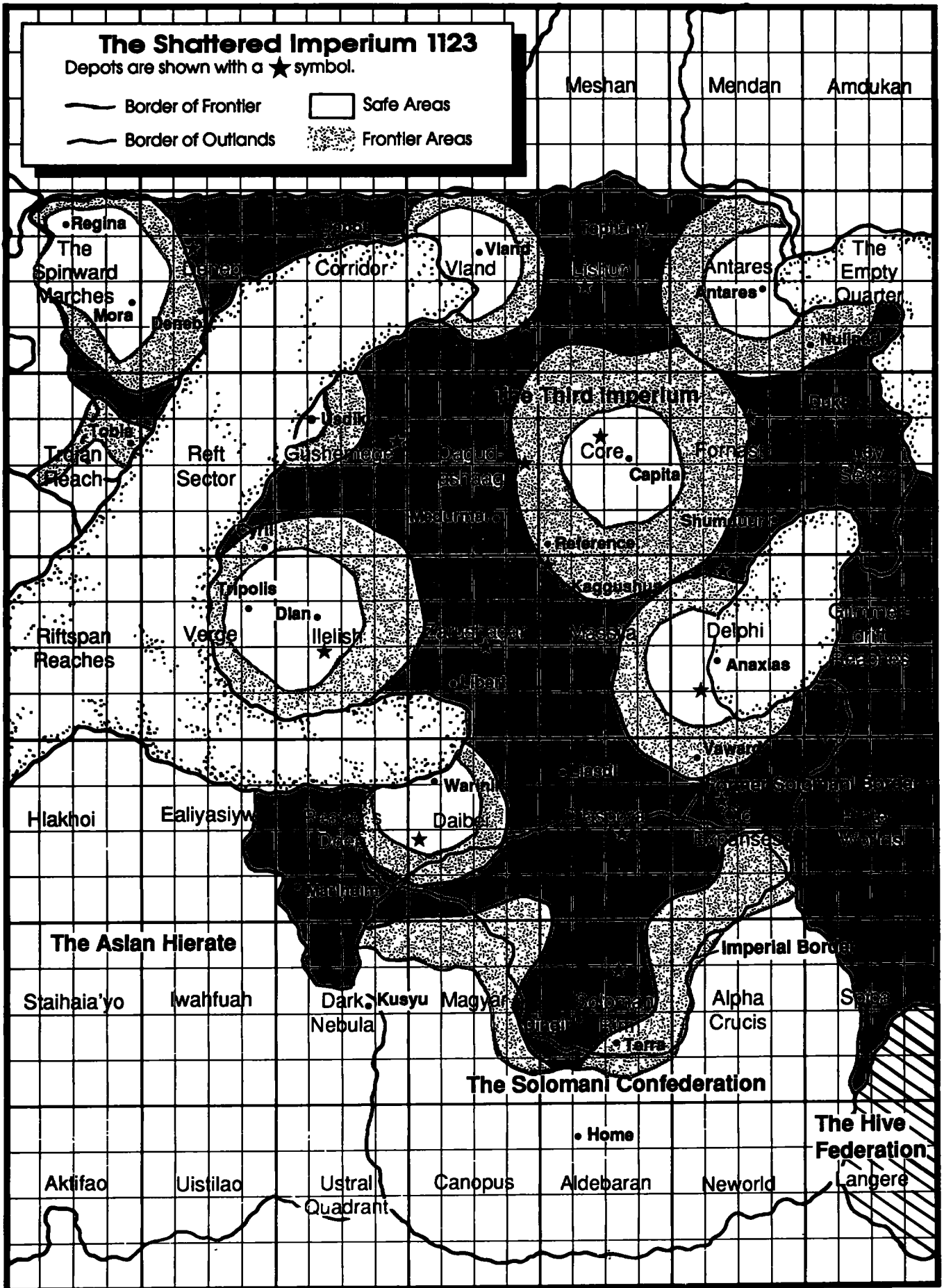
Frontier Areas: These lie just outside the boundaries of the Safes. They encompass areas whose security cannot be guaranteed by the reduced militaries of 1125. Consequently, their factional loyalty is lower. The level of factional control and defense runs about 50%, although most of the Frontier worlds must trade with the Safes, the only real economy around. Although lower than in the Safes, the level of naval patrolling is sufficient to encourage moderate interstellar trade and transport. But the danger to shipping is sufficient to reduce its volume to well below pre-Rebellion levels. The increased risk shows in the attitudes of the people. They have become careful and shrewd, sometimes gruff. However, unlike the more desperate people farther from the Safes, Frontier-folk are still usually generous to travellers in need of help. After all, a favor done is a favor owed, and everyone needs favors and friends when there is no shortage of enemies. These enemies—pirates and raiders—are drawn to the Frontier because shipping is still sufficiently plentiful, and defenses sufficiently light, to make such raids a reasonable proposition. Also, technology needed to keep ships and weapons functional is becoming increasingly rare farther out, where the bones of civilization are rapidly picked clean. Frontier worlds are subject to UWP modification.

Outland Areas: These are the areas that have been forsaken by all the factions, so there is no law or protection beyond what each world can muster for itself. Therefore, space travel is very hazardous. Pirates operate virtually at will, and rescue is unlikely. The Outlands are difficult to characterize—as worlds become isolated, they can evolve drastically different responses to the same circumstances. Some still hunger for their lost trade and the benefits of Imperial society. Others shun trade because it attracts piracy: If you have nothing, no one can take anything from you. Outlanders live by their wits—there are only the quick and the dead. Outland worlds are subject to UWP modification and will suffer more than the Frontier worlds above.

The Shattered Imperium 1123

Depots are shown with a ★ symbol.

- Border of Frontier
- Border of Outlands
- Safe Areas
- ▨ Frontier Areas



Wild Areas: Anything awful that can be said about the Outlands is even worse in the Wilds. The Wilds were not just abandoned because they were strategically untenable—they were blasted to smithereens first. Many of these worlds have not had outside contact since 1121—and for good reason. While pirates may run rampant in the Outlands, it is the Wilds they call “home, sweet home.” This is not to say that some Wild worlds haven’t retained some tatters of civilization. But those which have are typically xenophobic—again, with good reason. Many feel that the Imperium has forsaken them, and they are not friendly to any visitors, even if the strangers aren’t pirates. While some Wild worlds may desire access to rare and desperately needed technology, their people will be very slow to give their trust. Wild worlds will suffer the most grievous effects of the UWP modifications.

War Zone Subsectors

Subsectors are also labelled according to the degree of conflict they saw over the first five years of the Rebellion.

War Zones: These subsectors endured at least one major campaign. They contain a high percentage of worlds that have had their starports destroyed, populations attacked and industry wrecked. War Zones are susceptible to the UWP changes brought about by Hard Times.

Intense War Zones: These subsectors endured two or more years of high-intensity combat. They are even more vulnerable to the forces of decline than are War Zones.

Black War Zones: These are Intense War Zones where Lucan was a combatant and pursued his objectives at all costs, resorting to his Black War tactics when necessary. Such regions likely hold several annihilated worlds. Almost all these zones are also Wild regions since traders have little reason to expect any benefits from visiting them. They are thus doubly benighted and tend to hold a large number of doomed or failing worlds.

FACTIONS AND THE ONSET OF HARD TIMES

The factions and their respective Safes are an important part of the Imperium during Hard Times. However, since the Safes are effectively unchanged by the events of Hard Times, referees and players can use the values and norms of the pre-Rebellion Imperium without modification when dealing with these regions. The political goals and current conditions of factions have changed, however. Accordingly, this information—current as of 001-1125—appears below.

Lucan’s Imperium: Despite heavy losses while fighting every other faction in the struggle for the Iridium Throne, Lucan’s position as *de facto* emperor of the Third Imperium remains functionally unchanged. After the Black War years (1122-1124), however, Lucan’s behavior has grown increasingly erratic, alternating between periods of extreme reclusivity and almost hyperactive dedication to his Imperial responsibilities. Twenty-eight years old when the Rebellion began, Lucan is now 37—but no wiser for these turbulent past nine years as emperor. Instead, most of Lucan’s growth has been in his impatience and ruthlessness.

The Imperial Moot is now a hollow mockery of its former self. With over three quarters of the original members boycotting its proceedings or simply absent, Lucan has played havoc with age-old patents of nobility, stripping titles and reassigning them with utter disdain for tradition and heritage. Conse-

quently, Lucan can count few of the true (original) nobility among his supporters. With their fiefs seized and their patents revoked, they are nobility only to those who regard Lucan as a usurper, without Imperial right.

Lucan’s dedication to a scorched earth strategy accomplished little save widespread destruction. Although his final assault into Gushemege Sector all but wiped out Strephon’s stronghold, Lucan was not able to fully eliminate any of his rivals as he had hoped, and the policy of scorched earth did not finish the job as he had anticipated. As a result, Lucan’s dissatisfaction with his general staff has grown to legendary proportions. Grand Admiral Irinea Shashurra opposed Lucan’s 1121 plan to smash into the heart of Gushemege Sector, insisting that the time had come to postpone attempts to eliminate Lucan’s rivals and it was time to rebuild. Shashurra’s “cowardice and impudence” (literally translated from the High Sylean: “really, really bad attitude”) cost her both her rank and her life. She was the first general staff member Lucan executed for treason. But she was not the last. Lucan prefers admirals with a ruthless and bloodthirsty streak, and this trait has filtered down to the very lowest levels of his armed forces. His troops are acquiring a merciless and bloody reputation.

As he has never renounced his commitment to a military victory, the Safe area of Lucan’s Imperium retains a booming war industry. Although the people are war-weary and increasingly terrified of their ruler, they dare not protest, lest they find themselves accused of treason and sedition (or a really, really bad attitude).

Although still focused on eliminating Dulinor, Lucan has lately increased his activities against the Ziru Sirkaa. This was precipitated when the four Vilani bureaux refused to pay the first-quarter 1123 dividends which were theoretically due to Lucan by virtue of the Imperial family’s shareholding position.

Dulinor and the Federation of Illeish: Under Dulinor’s generally adept leadership, the Federation of Illeish has repulsed Lucan’s repeated attacks. However, secessionists in the Verge Sector made a successful bid for autonomy in 1122, forcing Dulinor to retract his Safe and costing him what had been a secure rear area. While simultaneously trying to rebuild and ward off Lucan’s persistent Black War efforts, Dulinor also managed to conclude a nonaggression treaty with Daibel in early 1123. But he was then forced to close his borders to the refugees who began flooding in from the Great Wilds, the blighted area spanning the wrecked Dagudashaag and Zarushagar sectors.

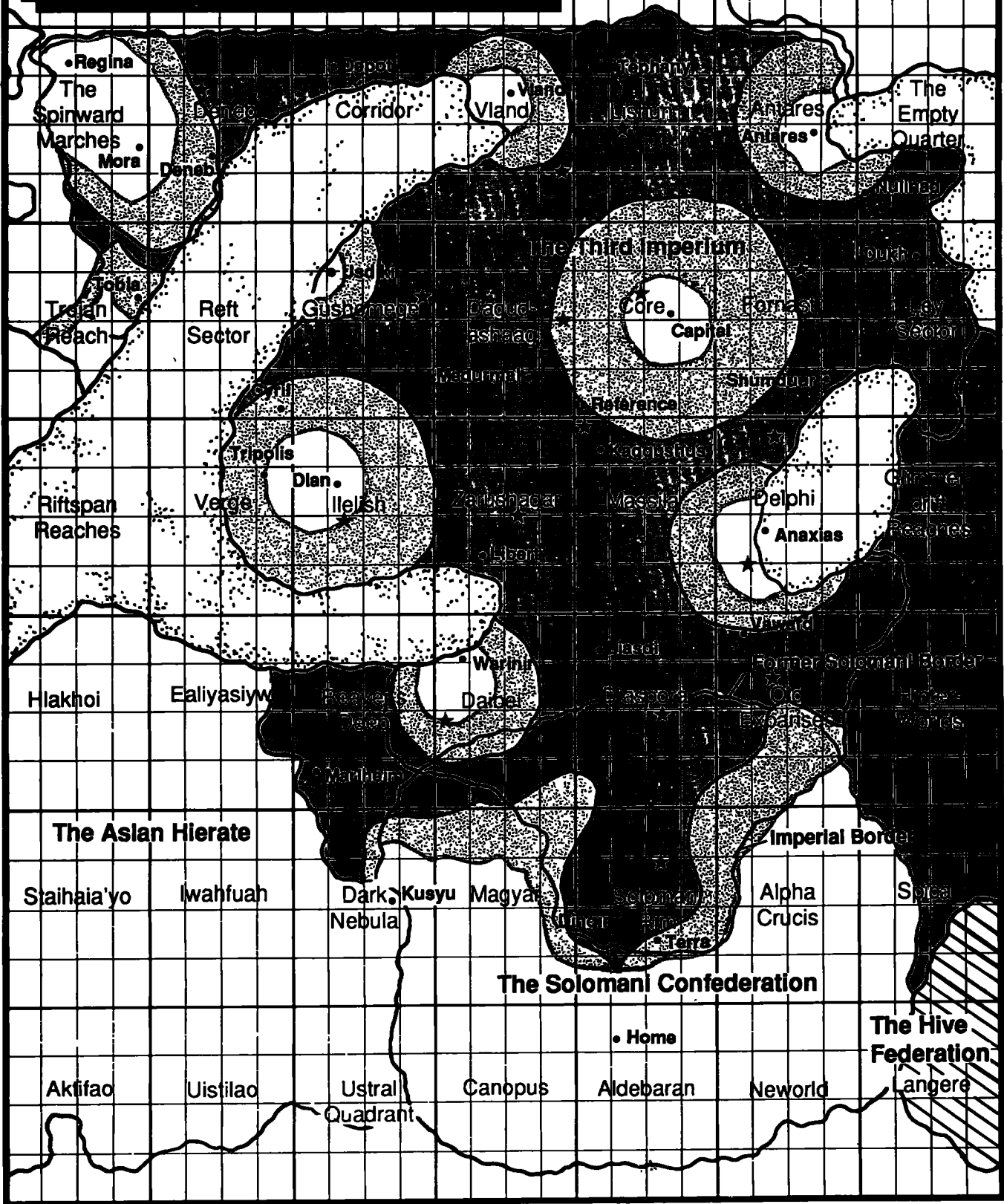
Many observers have noted Dulinor’s new involvement with Virasin religious leaders since 1121. At his invitation, many elders of past Synods have been appointed to influential government posts. During this same period, the Virasin faith has been wracked by theological disputes between the so-called Orthodox and Enlightened sects. Members of the Enlightened sect are younger and are supporters of Dulinor. They have proposed that death in combat, which was previously believed to prevent a Virasin’s fulfillment in the afterlife, might actually promote this fulfillment if it occurs in action against Virasi enemies.

Although many adherents see this as a mature and realistic response to a universe where events often overmatch pureness of intentions, Orthodox leaders call it a travesty of true Virasi notions of personal accountability. Some non-Virasi observers have noted that while this debate rages, Dulinor’s government has grown more insular and authoritarian.

The Shattered Imperium 1124

Depots are shown with a ★ symbol.

-  Border of Frontier
-  Border of Outlands
-  Safe Areas
-  Frontier Areas



Margaret's Domain: As the Rebellion's emphasis shifted from making war to managing economies, Margaret's fortunes improved. With the aid of planners from megacorporations Hortalez et Cie and Tukera, she used her own considerable talent for domestic policy to stabilize her position in Delphi Sector and carefully manage a voluntary retraction from many of her holdings in Massilia. This moved her out of frequent contact with Lucan, a primary objective of her defensive (some would say weak) policy.

Early in this period, Margaret's fortunes were boosted when the Imperial Regency of Intelligence and Security (IRIS) declared her the highest ranking legitimate noble in the Imperium, shortly after disallowing Lucan's claim to the Iridium Throne. As the regency lacks any ability to enforce this decree, the announcement has primarily served to lend the cachet of legal respectability to any of a number of anti-Lucan initiatives, as if the rule of law can be said to hold any sway in the former Imperium.

For example, this was the legal fig leaf used by the four Vilani bureaux to finally cease paying dividends to the titular shareholder who was waging war on their sector.

Hortalez et Cie began consolidating a number of its assets in Delphi and along the Trailing edge of Massilia, primarily through convoluted trades with the Vilani bureaux. A long-time ally of IRIS, Hortalez had been uncommonly active in corporate trading from 1121 onward. At first it seemed as though the megacorporation was virtually crippling itself in a number of losing trades, but now the outcome of this activity seems to hold promise for considerable profit and an increase in power.

Tukera has also benefited in recent years, with the opening of a new trade route to Hiver space via the Hinterworlds.

Aided by several renegade fleets under IRIS-sympathetic officers, Margaret repulsed the last Solomani thrust toward Vaward (Old Expanses) in 1121. Since then, she has left strategic planning to staff experts. Remarkably, and to the consternation of many, her initial policy of refusing to bait Lucan into vengeful attacks on her areas has proved astoundingly successful. While Lucan has become embroiled in vendettas against first Dulinor, then Strephon, and now the Ziru Sirkaa, Margaret has been left with a remarkably intact and high-technology fleet.

Freed to pursue other matters of state, Margaret has subsequently pulled off a number of diplomatic coups. These include the formalization of an alliance with the Hinterworlds client state of Ral Ranta (1123), and a trade and cooperation treaty with Daibei (1123). One unfinished initiative is an attempt to negotiate a formal cease-fire with the Solomani, which is now bogged down in intra-Solomani politics.

Margaret is endeavoring to salvage key assets from the Diaspora and Massilia sectors, and weather the onset of Hard Times.

Duke Craig and the Federation of Daibei: Having concluded a nonaggression pact with Dulinor and a more extensive treaty with Margaret, Daibei still finds itself fending off Solomani attacks. In addition, 1124 saw the beginning of incursions by organized raiding groups from Reaver's Deep.

Daibei is the primary supporter of the ongoing Vegan insurgency against the Solomani forces in the Vegan Autonomous District. Unfortunately, this has been a losing battle, and Daibei has accepted hundreds of thousands of Vegan refugees. In return, gratitude to Duke Craig has prompted thousands of

Vegans to volunteer for military service against the Solomani. Their valor and sacrifice have become legendary throughout the Rim.

In 1124, Daibei began pursuing an independent treaty with the Aslan Hierate. Although no agreement has yet been reached, it is common knowledge that the Aslan representative Tlankhuta, who is the *aohkho* (spiritual leader) of the Yerlyaruwo clan, has struck up a friendship with Duke Craig. Remember that the Aslan ambassador killed by Dulinor when he gunned down Strephon was of the Yerlyaruwo clan—a nephew of Tlankhuta, in fact.

Ziru Sirkaa (Vilani Empire): Since 1120, the Ziru Sirkaa has experienced numerous Vargr incursions emanating from both Spinward and Coreward. Also, a trade war with the Julian Protectorate and its allies in Mendan and Meshan sectors has been a steady drain on Vilani resources. These both pale against the damage done by Lucan's vicious Black War attacks, which became particularly determined after 1123, when his dividend payments from the four Vilani bureaux (megacorporations) were suspended.

After years of schizophrenic relations with Lucan, who was an enemy of the Ziru Sirkaa and yet a major stockholder in all four bureaux, Vland decided to cease paying dividends to Lucan in late 1122 when IRIS declared him a usurper without right to the Iridium Throne, nor, conveniently, to its shareholding position. Reports that Naasirka has made inquiries about paying a retainer fee to High Regent Garran Trainor-Hughes appear thus far to be unfounded.

Early in 1121, the four Vilani bureaux finalized a number of major shareholding exchanges with Hortalez et Cie. This allowed the bureaux to consolidate and centralize their position in their own sphere of influence.

As a result of Lucan's virulent Black War campaign, there has been a sharp upswing in cultural purity issues throughout the Vilani sphere in 1123. Although Syleans bore the initial brunt of the prejudice, ethnic Solomani are now the primary victims.

Brzk and the League of Antares: With his dalliance with the Julian Protectorate, Brzk scuttled what little chance he had to be perceived as a coequal contender for the Iridium Throne. As a result, he declared formal secession from the Imperium and renunciation of all rights and responsibilities thereto in late 1123.

Since then, he has been trying to pacify his own interior. Many of his subjects wanted to retain their ties with the Imperium. Losing this identity, the humans of the league now fear they may wind up in a Vargr-dominated state which will force them into war via alliance with their own kind.

Strephon's Stronghold: Crippled by Lucan's 1121 Gushe-mege offensive, Strephon's stronghold has effectively dwindled to barely a dozen Safe worlds behind a 10-parsec Frontier.

Unable to do more than survive, Strephon's cause was dealt its final blow in late 1121 when regents from IRIS eliminated Strephon as a contender for the Iridium Throne, as he declined to submit to a number of tests intended to establish whether he was an artificial being.

Since then, Strephon's shrinking domain is an increasingly popular target for human raiders, far-flung Vargr corsairs, privateers and old naval units.

Strephon's cause is not expected to survive the end of the decade.

* = War Zone subsector

X = Intensive WZ subsector

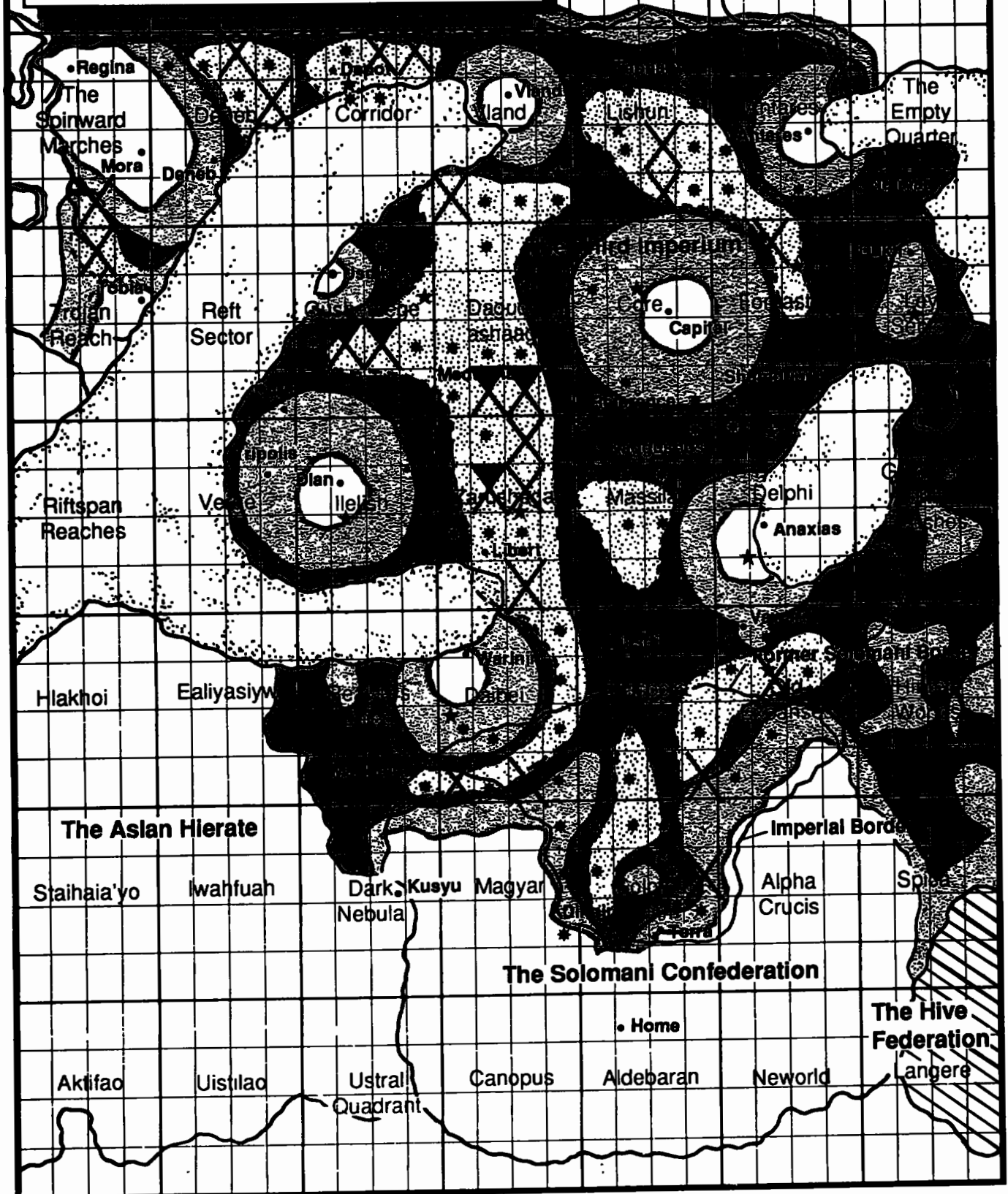
X = Black WZ, Lucan

Political Map as of 365-1124

The Shattered Imperium 1125

Depots are shown with a ★ symbol.

- Border of Frontier
- Border of Wilds
- Border of Outlands
- Safe Areas
- Frontier Areas
- Outlands
- Wilds



Norris and the Domain of Deneb: Handling interstellar affairs with his customary aplomb, Norris succeeded in stabilizing his domain rapidly and effectively.

A series of small wars with different Aslan *ihatei* groups has brought their advance to a standstill and has created a no man's land between his territories and theirs.

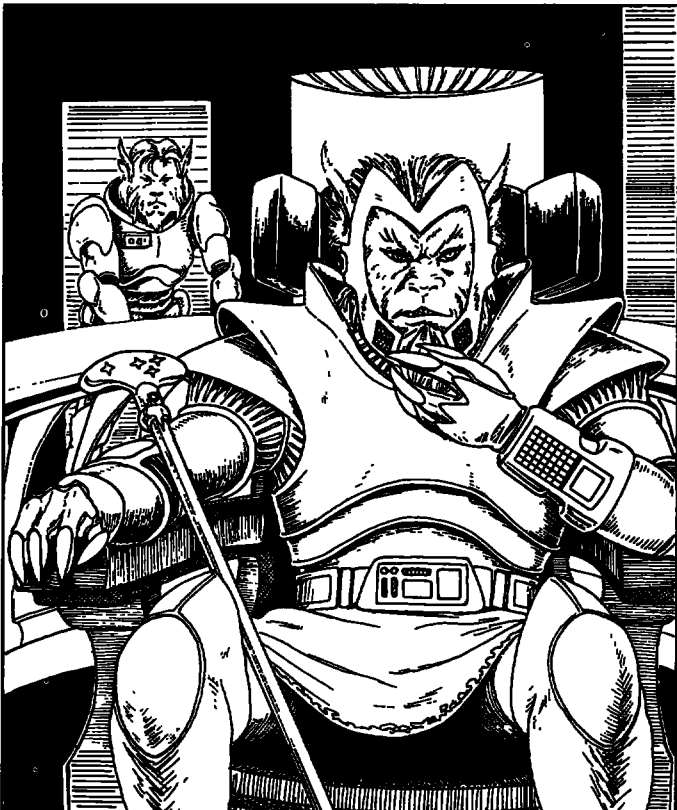
Sporadic contact with the heart of the Imperium is maintained primarily through megacorporate planners sent from the main offices located across the Great Rift. Some of the major megacorporate presences in the Domain of Deneb include Ling Standard Products, General Products, SuSAG, and Sternmetal Horizons.

Norris and his government have resigned themselves to operating as an independent political entity, and many of the duke's intimates push him to formally secede from the Imperium. But Norris is hoping for eventual reunification and perceives that some glimmers of this possibility still exist.

Solomani Confederation: From 1121 to 1124, the Solomani Confederation's operations remained essentially unchanged. The Solomani continually probe Daibei to wear down the resistance of the insurgent Vegans, and they continue their consolidation of those territories gained during the first four years of the Rebellion.

However, beginning in 1124, evidence of rifts within the confederation began to emerge. Controversy arose over a number of disagreements between centrist/radical and reformist/moderate elements of the Solomani party.

The Reformist party reception of Margaret's cease-fire delegation in 1124 turned a smoldering theoretical disagreement into a full-blown conflagration, with SolSec itching to try Joshua Dahvin "and his ilk" for treason. The Reformists expressed alarm the next month when SolSec and the confederation general staff unveiled plans for a grand offensive to reassert the Empire of Man. Moderates protested that the confederation's



1116 war mandate had only envisioned the reattainment of the old confederation boundaries. Once again, the Solomani military and civil leadership found itself at loggerheads.

Consequently, as of late 1124, there is a decrease in offensive activities as the fractious leadership gropes for a unified course of action.

Aslan *ihatei*: With their expansion drive blunted by Norris in the Domain of Deneb, a large portion of the still-unlanded *ihatei* did not bother to make the journey across the Great Rift after 1122. Consequently, they are still searching for new lands. Some are moving Rimward, but there is general turmoil within the *ihatei* as to what to do with its unlanded sons. Given the increasing xenophobia of the Centrist Solomani party, some of the younger, more volatile sons are talking about incursions to Trailing, citing the humans as unsafe neighbors who should not be given the opportunity to strike first. Older heads are vociferously vetoing such ideas.

Vargr Raiders: Sharp combats with Lucan from 1121-1124 inflicted terrible losses on the Vargr groups operating in the Tephany Subsector. They have currently abandoned their Rimward advances in order to concentrate on pillaging the Coreward half of the Tephany Subsector.

More politically inclined Vargr leaders are looking into trade or protection relationships with the League of Antares. Not surprisingly, racial tensions between Vargr and human elements of the faction have complicated their efforts to establish relations with the league.

The most far-reaching Vargr corsairs have filtered down into the Great Wilds, even preying upon targets in Gushemege. These are but small bands, numbering one or two ships at most. But as Vargr have done since the "big mistake of giving them hands" (as human citizens of the League of Antares refer to the Ancients' project), they keep wending their way into any environment that offers targets of opportunity. The shattered Wilds and unprotected Outlands offer a plentitude of such targets.

Zhodani Consulate: Currently enjoying calm relations with Norris, the Zhodani are still recovering from the Fifth Frontier War, which drained them much more severely than it did the Imperium. Rumor has it that they are also using this interregnum period to fund the launching of two new Core expeditions.

With typical shrewdness, the Zhodani realize that as long as they do not attack Norris, the Imperium will have no compelling reason to reunite in common cause. Without an external threat to tweak the Imperial xenophobia, the Zhodani anticipate that it will be decades before the consulate is forced to contemplate another war in the Spinward Marches.

Hiver Federation: Never before a common sight in Imperial space, the Hivers have mysteriously decided to increase trade with Margaret and several Reformist Solomani planets. Their presence in Spica Sector is growing, and a new presence in Delphi was established as part of a joint commercial venture with Tukera in early 1122.

Jullian Protectorate: Since 1120, the protectorate has been occupied with the backwash turbulence caused by the Vargr incursions, and the incendiary rivalries and coups that result as these raiders squabble over the diminishing spoils of the conflict.

The protectorate has a fairly low level of interest in Imperial affairs, although it already finds itself in a heated mercantile contest with the Vilani megacorporate bureaux.

Effects of Hard Times

3

APPLYING THE DOMINO THEORY TO THE IMPERIUM

To portray the changes brought about by the onset of Hard Times, it is necessary to alter world values. These changes reflect the systematic decline from the original pre-Rebellion Imperial Universal World Profile (UWP) values.

Chapters 5 to 14 comprise both the historical analysis of the *Hard Times* of 1125-1128 and the scenarios of the *Hard Times* campaign. Each of these chapters sequentially covers roughly a six-month period, a stage in the continuing decay of the Imperium. These stages are further described in this chapter. They are grouped together here for the convenience of the referee, who will probably wish to generate all the UWP changes at one time, then apply them as necessary. This is especially true of the referee who is bringing an already existing campaign up to speed.

STAGES AND DATES

Each stage of the *Hard Times* era is assigned a date that indicates when it begins. As the campaign reaches these dates, the referee should introduce the changes or special elements of each stage. This will create a constant sense of the slow decline of the areas affected by *Hard Times*. The dates assigned to the stages represent average values. For instance, most worlds are entering Stage 2 in the first half of 1125—but many worlds entered this stage by 1124, and others may not do so until 1126. Furthermore, the dates are primarily a benchmark to help referees know when to incorporate UWP changes. It is easiest to consider the stage's starting date as the day when all UWP changes for that stage should be applied to all affected worlds. But, obviously, this is not how these changes occur. The UWP alterations are usually the end result of months or even years of slow change. And the outlook and memories of NPCs from changed worlds should reflect the reality of the change—the slow transition from the way things were to the way things are now.

You can expect to hear the players utter comments such as, "We were through here last year, and the tech level was 9. Now it's 7, and the locals are just barely holding their own!" That's exactly the sort of experiences your players should be encountering—the Imperium is falling to pieces around them. Their maps and UWP values are no longer invariably accurate; they are becoming more outdated and suspect with each passing week. Will this make players feel more insecure, a little less certain about the safety of that next trading mission they were planning? It should!

DEGREES OF CHANGE

Roll	Degree of Change
1-4	No change to level/UWP value
5-6	-1 level/value
7-8	-2 level/value
9-10	-3 level/value
11-12	-4 level/value
13-14	-5 level/value
15-16	-6 level/value
17-18	-7 level/value
19-20	-8 level/value
21-22	-9 level/value
23-24	-10 level/value
25-26	-11 level/value
27-28	-12 level/value
29-30	-13 level/value

The Degrees of Change Table is, in effect, the master table for the *Hard Times* era.

All other tables will be used to generate die roll modifiers (DMs), which will then be used to adjust a 1D or 2D roll on the Degrees of Change Table (the number of dice to be rolled is specified on each subordinate table).

Example: If a planet with a class-A starport was checked for a change in its starport value, and the final, modified die roll was a 7, the new starport value would be a C (a decrease of two levels from A).

Changing UWP Values

As societies undergo the kind of massive changes brought about by long years of debilitating warfare, their UWP values will inevitably be altered. The following flowchart presents the methods used to determine these changes and the order in which they occur.

Note the worlds in areas that have not been affected by the Rebellion (Safe areas were not in a War Zone) do not experience UWP changes; for them, life continues much as it did before the Rebellion.



EFFECTS OF STAGE 1

**Stage 1:
Destruction of Interstellar Transport**

Date: 300-1124

Destruction of interstellar transport is the antecedent condition bringing about Hard Times. The destruction of starships and their facilities contributes to the downfall of the Imperium more directly than any other single factor. The decrease in interstellar transport undercuts commerce, communication, confidence in currency and support of environmentally dependent worlds. Thus, it is the mortal blow to the wounded Imperium.

Although not strictly part of this stage, any permanent damage done to a world's biosphere by weapons of mass destruction is resolved in this stage for convenience: The war's peak has passed, and these effects would already have taken place.

This stage is reflected by potential biosphere damage and reduction in starport level.

**Stage 2:
Collapse of Financial Markets**

Date: 001-1125

With the factions receding into concentrated, centralized entities, the Imperium is no longer a well-integrated mercantile environment. The insurance industry collapses since risk is unassessable. Loans, mortgages and liens are no longer written since collection enforcement becomes impossible.

This stage does not include UWP changes.

Example

Stage 1A: Hice (2920 Pasdarou) has UWP values of A795222-E. Ni (A904) W (1124) (page 96). The "Shattered Imperium" (125) (page 17) shows Pasdarou Subsector as a War Zone giving Hice a -1 DM. It gets another -1 DM from its Starport A for a total of -2. A 12 is rolled, plus the DM equals 14, indicating that Hice has suffered biosphere damage. In addition to any effects resulting from the severity roll below, biosphere damage always results in reduction of the Starport to type X.

An additional 2D6 is rolled for severity of this damage, which is unmodified as Pasdarou is not a Black War Zone subsector. The result is 9, indicating three effects for Hice. As its atmosphere is already tainted, the first is no effect. However, its UWP population value is changed from 2 to 1, and when Stage 3 effects are assessed, its tech level will drop an additional 3 points beyond what is rolled at that time.

Stage 1B: Toggie (2910 Khavie) has UWP A100033-F. X Ni Va Lo 503 Ou n 1124 (page 96). Its DMs from the table are +3 for an Outland world with a type A Starport, no War Zone DM, no DM for Isolation (map on page 96 shows that it is within jump-2 of seven worlds) at 11 population DM, and no prewar tech level DM. This total DM of +4 is added to a 1D roll on the Degrees of Change Table (page 19). The roll of 6 added to the DM equals 10, which indicates "3 level/value". So the Starport A is reduced three steps to Starport D.

A: Biosphere Damage

The process for determining whether a world has suffered an attack which causes damage to its biosphere *does not* use the Degrees of Change Table to determine the level of change.

Only worlds located in a subsector that has been defined as a War Zone need to be checked for biosphere damage.

Procedure: Roll 2D+DMs. Biosphere damage occurs on 14+.

If this has occurred, roll 2D (add +2 if the world is in a Black War Zone).

For all rolls, change the starport rating to X.

DMs: War Zone: +1 Intense War Zone: +2 Black War Zone:

+3 Starport A: +1 Population 9-A: +1.

Roll Results

2-3 Average planetary temperature decrease (mlb). Permanent effect (will end in 10 years).

4-5 Permanent planetary temperature decrease of (1D+6)° C.

6-8 Atmosphere's Unaired (5, 6, 8) change to airless (9)

9-10 Change atmosphere to Tainted (see above), -1 to UWP population value and when calculating TL change in Stage 3, decrease UWP tech level rating by an additional three points.

11-12 Change atmosphere to C (Insidious), -2 to UWP population value and when calculating TL change in Stage 3, decrease UWP tech level rating by an additional six points.

13+ This world has been annihilated. Its UWP ratings for population, government, law level and tech level should all be changed to zero. Its UWP atmosphere rating is now C (Insidious).

B: Starport Value Decrease

Procedure: Roll 1D. Add DMs. Consult the Degrees of Change Table. Result is decrease in Starport type.

DMs: Consult the following table.

Prewar Starport Value

World Is:	A	B	C	D
Frontier	+2	—	—	—
Outlands	+3	+2	+1	—
Wilds	+3	+3	+2	+1
War Zone	+1	+1	+1	—
Intense War Zone	+2	+2	+1	—
Black War Zone	+3	+2	+2	+1
Isolated*	+2	+3	+4	+1
Population 0-2	+2	+2	+1	—
Population 3-4	+1	+1	—	—
Prewar TL0-4	+8	+7	+5	+3
Prewar TL5-6	+5	+4	+3	+1
Prewar TL7-8	+3	+1	—	—
Prewar TL9-A	+1	—	—	—

*An isolated world is a world not within jump-2 distance of at least four other systems.

Bases: Whenever a world's Starport level falls two or more levels, all bases are automatically eliminated. All other worlds should roll for base elimination as follows. On 2D, 7+ indicates Naval base eliminated, 8+ eliminates a Scout base. Apply DMs: Frontier: +3, Outlands +5, War Zone +1, Intense or Black War Zone +2. Bases are always eliminated in Wilds, but never eliminated in Safe areas.

EFFECTS OF STAGE 3

Note this is the most important of all changes a society will experience. Therefore, the number of DMs affecting the outcome are considerable.

Procedure: Roll 1D. Add DMs. Consult the Degrees of Change Table. The result is the drop in UWP Tech Level.

DMs: Consult the following tables. Note that rolls of 9-12 in Stage 1A(Biosphere Damage) will affect the result further.

World UWP Starport*

Condition	DM
B	+2
C	+2
D	+3
E	+4
F	+5

*After Stage 1 changes.

UWP Atmosphere

Condition	DM
0-3, A-B	+1
C	+2

UWP Hydrographics

Condition	DM
0-1, A	+1
Additional penalty if Fluid (not Water)	+1

UWP Population

Condition	DM
0-4	+4
5	+2
6	+1

UWP Government

Condition	DM
5, 6	-1
0, 2, 3, 7, B-F	+1

UWP Tech Level (Original)

Condition	DM
1	-10
2	-8
3	-6
4-5	-4
6	-2
A-B	+1
C-D	+3
E-F	+5

System Located In

Condition	DM
Outland	+1
Wilds	+3

Stage 3: Recession of Planetary Economies

Date: 181-1125

The collapse of a broad-based interstellar economy causes planetary economies to enter recessions. They turn toward austerity measures and begin to consider more conservative commercial ventures.

This stage is reflected by a potential drop in UWP tech level.

Stage 4: Corporate Reconfiguration

Date: 001-1126

The retracting, increasingly regionalized economy of the factions forces megacorporations to divest themselves of "unnecessary" subsidiaries and concentrate their key resources in the Safe areas protected by the factions.

This stage is not accompanied by UWP changes.

Stage 5: Raiding and Raiders

Date: 181-1126

With factions and megacorporations abandoning interstellar space, the transit routes between stars become less protected. The risk involved with being a pirate decreases, meaning that the profitability of piracy increases.

This stage is not accompanied by UWP changes.

Example

Stage 03: Nihesi (2908) (have) has UWP A7B1044-FN N1L0 8104 Ov in 1125. After the results of Stage 1, this has become 07B1044-FN1044 Ov. In Stage 3, DMs for Nihesi are: +2 due to Starport C, +1 for atmosphere B, +1 for hydrographics 1, +1 for Fluid hydrographics, +4 for population 3, none for government, +5 for tech level, and +1 for being an Outland world, giving a total DM of +16, added to a 1D roll on the Degrees of Change Table (page 10). The rolls 4 plus the DM = 19, which gives a reduction of +8 level value. Thus Nihesi's tech level is reduced from 15 to 7.

If we return to Hice (ruled) in Stage 1A, UWP reduced to X795122-E N1904 V1. At this time, we can generate a DM of +5 for Starport X, none for atmosphere or hydrographics, +4 for population 1, +1 for government 2, +5 for original tech level of E (14), and finally a +3 for its location in the Wilds. This yields a stunning, not to say sickening, total DM of +18. Adding this to a 1D roll of 1 on the Degrees of Change Table yields 19 for +8 level value. This reduces Hice's tech level from 14 to 6. And as if this weren't bad enough, we must remember to apply the additional +3 for tech level obtained in stage 1A when Hice suffered biosphere damage. Adding insult to injury, Hice's tech level is further reduced from 6 to 3. Happy trails!

EFFECTS OF STAGE 6

Stage 6: Separatism and Isolationism

Date: 001-1127

With interstellar travel now extremely risky and high-technology items a key target for raiders, many worlds do away with advanced technologies and/or facilities. They discourage contact with, or by, off-worlders.

Although not accompanied by UWP changes, this stage does involve determination of xenophobic and isolationist attitudes, and is therefore included chronologically in the sequence.

Stage 7: Readjusting to Locally Sustainable Technology

Date: 181-1127

As production centers are lost, supplies vanish, and trade diminishes, worlds begin to fall back on simpler, indigenous technologies.

This stage is not accompanied by UWP changes.

EXAMPLE

Stage 6A: Regulations for stages 6A and 6B are not shown to change UWP values. Rather, those results are noted by the referee to use when players visit those worlds. Medora (2504) never has UWP 423555-FRT Po.463 Cl. 10 (2) (page 96). By consulting the 100 UWP on page 89, it can be seen that after stages 1 and 2 it has suffered no change to its Starport or biosphere, but has suffered a drop in tech level from F(15) to G(14). It changes its government and law level indicated to double standard and, in Stage 6, this world suffers atmosphere damage in Stage 6A, no desert, no hydrosphere, population, or government (it has no DMs, it is in the Outland area with a base of 0), as its Starport value has not changed, its total DM stands at 0. This is added to 10A+2, also shown as 110, where 10 is government (or 2+1, 3 or 4+1 and 5+0, 3). Medora's case of 1's total, an +5 WWP indicates no change, showing that Medora has no double standard law for outsiders.

Stage 6B: This world (not apply) to Medora, as Medora has no double standard law, and only worlds that of a double standard law are able to become isolationist. In the case of Form (274), however, see also Chapter 10, already known to be xenophobic. In Stage 6A above, the DMs for isolationism are found as follows: Form's 26 UWP's 045550-CHENT 103 200 1 28 200 are 0+2+0+0+0+0+0. The absence of an atmosphere (the 0 on page 89 indicates that no biosphere damage was taken). Stage 6A: The change in starport happens in Stage 6B, and the change in tech level occurs in Stage 6. Any of the changes to the UWP have no effect on planet Form's DMs, which become 200+15+1 in Stage 6A, as described in Chapter 10. DMs are of 0 for atmosphere, 0 for hydrosphere, 0 DM for each level and 0 for Starport D. This gives a total DM of +2-1+1. This procedure does not consult the Degrees of Change Table, it is a change 40 from 100. The total is a 7, an +8, so Form does not become isolationist.

A: Xenophobia

Every level decrease actually represents a decrease in personal freedom for visitors.

Therefore, referees should *increase* the law level (restrictions) by the number of levels that freedom *decreases*.

This adjusted law level is the law level for visitors to the world.

Procedure: Roll 1D+2. Add DMs. Consult the Degrees of Change Table.

DMs: Consult the following table.

If the World Has	DM
Current biosphere damage of any kind	-1
UWP atmosphere rating of 0, 1	+1
UWP hydrosphere rating of 0 (hydrosphere is listed as being fluid)	-1
UWP population rating of 0-2	-1
UWP population rating of 3-8	-1
UWP population rating of 9-A	+2
UWP government rating of A or greater	+1
Outland	+1
Wiles	+1
Per level that the world's starport decreased in Stage 1	+1

B: Isolationism

The world must be defined as functionally xenophobic (it must have a double-standard law level).

Procedure: Roll 2D. Add DMs. The world is isolationist if the total is 11+.

Note that this procedure *does not* use the Degrees of Change Table.

DMs: Consult the following table.

If the World Has	DM
UWP atmosphere rating of 5 or 6	-1
Hydrosphere rating of 3+ (Nonfluid)	+1
TL4 or less	+3
TL5	+3
TL6	+2
TL7	+1
Current Starport rating of A	-5
Current Starport rating of B	-4
Current Starport rating of C	-2
Current Starport rating of D	-1

EFFECTS OF STAGE 8

Procedure: Roll 1D+2. Add DMs. Consult the Degrees of Change Table for UWP population multiplier value changes.

DMs: Consult the following table.

World UWPs	PostWar (Hard Times) Tech Level				
	0-2	3	4	5-6	7-8
Atmosphere					
0-1, A-B	+5	+5	+2	+1	—
3	+5	+3	+2	+1	—
4, 9	+3	+2	+1	—	—
Hydrographics					
0	+5	+4	+2	+1	—
2, A	+2	+1	—	—	—
If Fluid (additional hydrographic penalty)	+5	+3	+2	+1	—

Prewar (Original) Population	Population			
	Basic DM	War Zone	Intense War Zone	Black War Zone
3-5	-2	+1	+2	+3
6-8	—	+2	+3	+5
9-A	+1	+1	+2	+3

The Basic DM is always taken.

The War Zone DM is taken in addition to the basic DM if applicable.

If a world has an aggregate environmental DM of +5 or greater, it is categorized as a doomed world. If it has an environmental DM of +2 or greater, it is categorized as a failing world.

Note that the change indicated is not a change of the UWP value. Use it to reduce the population multiplier. If the population multiplier has a value of 1, reduce the UWP value by one and assign a population multiplier of 9.

Example: Clarksphere (2519 Khavle/Diaspora) has a Universal World Profile population rating of 3 and a population multiplier of 1. The die roll for determining population change is 6, which indicates a reduction of -1.

However, instead of simply reducing the population multiplier to 0 (PM 1 minus 1 level equals 0), we change the UWP rating to 2 and the population multiplier to 9.

Stage 8: Doomed Worlds

Date: 001-1128

Those worlds which lack adequate technology to answer their own life-support needs begin to show population decline. Increasing desperation leads to potential social unrest.

This stage is accompanied by a drop in UWP population only on those worlds determined in this sequence to be "doomed."

Example

Stage 8: Two things take place in this stage. A world may become classified as failing or doomed, and a world may see its UWP population multiplier reduced. Khedast (3-12 Pasdantir) had an 1124 UWP of 67/A232-2 NiLoFl 6/4 W. By the beginning of Stage 8, its UWP has deteriorated to 17/A232-2 NiLoFl 6/4 W (changes in UWP government and law level shown in 1128 UWP do not take effect until Stage 9, and change in the UWP population multiplier from 6 to 9 is being calculated currently). Khedast DMs as follows: Using the current tech level of 2, Khedast gets a +5 DM from its Atmosphere (A), no DM from hydrographics percentage, but another +5 DM because of its fluid ocean. Its prewar (and current) has no biosphere damage, was sustained in Stage 1A) population digit of 2, in a War Zone (see map page 17, Pasdantir is a War Zone) gets If: +3 Basic DM, and a War zone DM. Thus its total DM is +10-6=4. Not only is this DM added to the coming die roll to determine the reduction of population, but this total DM decides whether the world is doomed or failing. Khedast, having a final DM of greater than +5, is doomed. Now the +7 is added to a 1D+2 roll of 3 (roll see Stage 6 above). The roll of 3 plus the DM of 10 which yields the +3 level value result. The UWP population multiplier is therefore reduced from 6 to 9. Two notations are now appended to the UWP for Khedast: D for doomed world, and * to indicate that it has suffered a decrease in population.

Conversely, our old friend Hice, which suffered biosphere damage back in Stage 1A, only has a DM of +2 for atmosphere, no DM for hydrosphere, and a basic population DM of -3 and a 0 War Zone DM. This yields a total DM of -1, which has the surprising result that Hice, even though severely nuked during the war, is not a doomed nor a failing world (though still not ignoring prominently in travel brochures). The roll of 2 yields no change result. This indicates that Hice suffers no *further* population reduction. Remember, however, that Hice has already suffered such a reduction in Stage 1A. Please note that a world that suffered biosphere damage and lost 1 or 2 levels of population in A can *again* suffer population loss in Stage 8. This is the only time in which different Stages of Hard Times will affect the same UWP digit of a world.

EFFECTS OF STAGE 9

**Stage 9:
Failing Worlds**

Date: 181-1128

Although better off than doomed worlds, many "backwater" planets just manage to struggle by. Their re-trenchment is often dramatic as they try to ensure adequate life and maintain society.

This stage is accompanied by changes to UWP government and law level on those worlds determined in this sequence to be failing.

Example

Stage 9: Only worlds which suffered a loss of tech level in Stage 3 or a loss of population in Stage 8 are affected by Stage 9. Khavie (2605 Khavie) had a UWP of 884-995 FWHIP 705 QUA 1124 which has been reduced to 884-995 B/H 705. (It also reflected the loss of its Scout Way Station and its status as subsector capital) by the end of Stage 8. This also reflects a loss in tech of 4 points, and no loss in population. Thus Khavie's Div for Stage 9 is -2 for Stage 9 tech loss (-2=-2) and 0 for Stage 8 population loss. This -2 is added to a roll of 5, totalling 7, of a -2 level value. Counting down two rows on the Governmental Pluralism table from Khavie's original government type of 9, gives a 7/6. Therefore he must choose a result, and decides that the difficulties of the war years forced the Khavie armed forces to take over control from the inefficient impersonal bureaucracy for the good of the world. The chief officers of this force are now known as "archons" and their ability to make quick and efficient decisions are optimized by Khavie's ability to fund and lead an autonomous interstellar polity. (See Stage 10, next page).

With its new government, Khavie's law level must also be recalculated using the formula: 10-7+government die. A 6 is rolled, yielding a new law level of 8-7+6=7.

A: Government Change

Government change will only occur if either there was a decrease in tech level (see Stage 3) or a decrease in the population multiplier (see Stage 8)

Procedure: Roll 1D. Add DMs. Consult the Degrees of Change Table to see how many levels of governmental pluralism are lost.

Governmental pluralism levels are listed (in descending order) in the table which follows the DMs section.

DMs: Minimum value of each DM described below is zero.

From Stage 3: +1 per (TL lost-2).

From Stage 8: +1 per (population multiplier lost-1).

B: Governmental Pluralism

If a decrease in governmental pluralism is indicated, find the original governmental UWP rating on the table below.

If the original rating is 0, this means the entry on the first row, not the last row. Count down a number of rows equal to the indicated decrease in governmental freedom level

The listed value is the new government UWP for the world.

**Governmental
Pluralism**

UWP Government Type

0	No government (absolute freedom)
2	Participatory democracy
4	Representative democracy
7	Balkanization
8	Civil service bureaucracy
9	Impersonal bureaucracy
5-1/6	Technocratic feudalism
1/6	Corporate or company/military (martial law)
3-1/6	Self-perpetuating oligarchy
C	Charismatic oligarchy
A	Charismatic dictatorship
B/D	Noncharismatic/religious dictatorship
1-1/6	Traditional oligarchy/religious autocracy
0	Anarchy (no government)

C: Changing Law Level

Law level on all worlds will change due to the conditions of Hard Times. Determine the new law level by rerolling according to the procedure outlined on page 24 of the Referee's Manual. However, roll only 1D, not 2D.

EFFECTS OF STAGE 10

There is only one chance per subsector of an autonomous polity developing. Referees should find the most advantageous combination available within each subsector and use that as the basis of the determination.

The higher the total final result, the longer-lived the autonomous polity will be, but almost none are permanent.

For a group of worlds to qualify for inclusion in a possible autonomous polity, they must meet the following criteria:

- All worlds must be within the same subsector.
- All worlds must be linked by a common jump-1 route. The jump-1 linkage may not be traced through worlds that do not qualify for inclusion in the polity.
- All worlds must have a minimum population of 5.
- All worlds must be at least TL8.
- No world may be Doomed or Failing.
- No world may be isolationist or xenophobic.
- At least one world must possess TL10 or better.
- At least one world must be a High Population world.
- There must be at least three qualifying worlds for an opportunity for a polity. If only two worlds qualify, no polity can emerge.

Procedures: Roll 2D. Add DMs. An autonomous polity will arise on a result of 12+.

DMs: Each world may add a total die roll modifier to the determining die roll. For each of the following characteristics possessed by each qualifying world, apply the listed DM. As all Industrial worlds are automatically High Population worlds, any Industrial world will have a DM of at least +2.

Example: A world that was High Population (+1) and had an atmosphere rating of 6 (+1) would have a total DM of +2.

Two such worlds add a total of +4 to the die roll.

Condition	DM
Agricultural	+1
Industrial	+1
High Population	+1
Starport A	+2
Starport B	+1
Atmosphere 5, 6, 8	+1
Hydrographics 6, 9	+1

*Hydrographics must be Water. Fluid worlds do not qualify for this DM.

All polities will last at least two years.

For every point over the required total of 12, it will last an additional year.

Stage 10: Emergent Autonomous Polities

Date: 1125 onward

Clusters of worlds that still retain technological and trade advantages may attempt to formulate alliances and trade pacts, and otherwise organize themselves into (usually short lived) independent or autonomous polities.

This sequence involves no UWP changes and is optional. If these polities are to be used in a campaign, they should already be in the early stages of formation at the beginning of the campaign, well before 1128. However, as determination on this table requires the use of post-Hard Times UWP data, it is placed at the end of the sequence here.

Example

Stage 10: The Khavie Accordment featured in the Hard Times adventures is an example of one of the new Autonomous Polities, and consists of the four worlds Ishtar, Forward, Accra and Khavie. As mentioned in Chapter 14, referees may wish to base the establishment of these polities on common sense within the guidelines presented earlier. However, the formation of the Accordment is presented as an example for referees that wish to roll randomly.

First the referee must find a cluster of worlds that meet the jump-1, population 5, tech level 8, etc. criteria. In the example, the reason that the Accordment was restricted to only four worlds was because the next planet along the jump-1 route, Daasha, did not meet the population or tech level criteria. Once this group has been identified, DMs must be compiled. The UWPs of the four Khavie Accordment worlds are Ishtar: D472674-B, N1904; Our Forward: E:389C6-9, H1518; Our Accra: C6877A4-B; Ag:908; Our and Khavie: C334965-B, H1705; Our.

As Accra was one of only two agricultural worlds in the subsector eligible under the population and tech criteria for inclusion in a polity, and was tied to two of the three high population worlds of the Sector, this group of worlds was a logical choice to attempt a polity roll. Ishtar provides no DMs to the roll, Forward provides +1 for being high population and +1 for hydrographics 6-9, Accra adds +1 for being agricultural, +1 for its atmosphere, and +1 for hydrographics, and Khavie adds +1 for high population. The total DM is +6, added to a roll of 7 = 13, indicates that the Accordment becomes an autonomous polity, and will last for three years beyond 1128 (two years plus [13 - 12 = 1] year).

Campaign Background

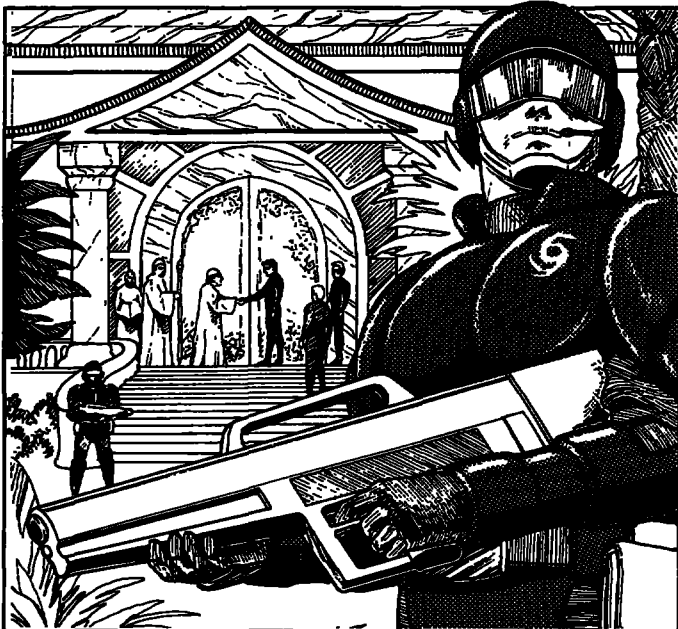
THE HARD TIMES CAMPAIGN: THE DYING OF THE LIGHT

Each stage of *Hard Times* includes an adventure which exemplifies and illustrates the changes resulting from that stage. Although they can be used as stand-alone adventures, the scenarios are intended for use as a complete campaign spanning the period from mid-1125 to mid-1128. This campaign is set in the Khavle Subsector (Subsector D of Diaspora Sector) and Pasdaruu Subsector (Subsector H of Diaspora Sector).

LOCATION DATA

Universal World Profile (UWP) data for these sectors is presented in two forms. Values and a subsector map as of 300-1124 are printed on page 96 for easy player reference. At the end of this chapter are UWPs and maps reflecting the changes that have taken place by the end of 1128. These are not for the players to consult. Rather, these give the referee information the players will have to learn for themselves, demonstrating to them the tremendous changes which are taking place during the *Hard Times* era. This information also allows the referee to institute UWP changes as they are called for in Chapters 5 to 13, without having to utilize the modification tables of Chapter 3. As the 1128 UWP tables show the final post-*Hard Times* values, all the referee has to do is change the particular UWP digit being altered in the current chapter from its 1124 value to the 1128 value. Since each stage calls for a different single UWP digit at a time to be changed, this can be done without confusion.

For example, the world Accra (2604 Khavle) is B6877A5-D in 1124 and C6877A4-B in 1128. When playing Chapter 5 (Stage 1), the starport value should be reduced from B to C. In Chapter 6, no UWP change is called for. In Chapter 7 (Stage 3), the TL digit is reduced from 13 to 11. From Chapter 8 through Chapter 11, again no changes are called for. When play reaches Chapter 12 (Stage 8), changes in the UWP population digit are called for. However, as the 1128 UWP indicates no change for Accra, none is instituted. And in Chapter 13 (Stage 9), the 1128



figures show no change in Accra's government digit, but the law digit is changed from 4 to 5.

SITUATION SUMMARY

The campaign takes place in and around the Khavle Accordment, one of a new type of political body known variously as Autonomous, Independent or Cluster polities. These are small collections of stars in Outland or Wild regions that have banded together in common cause and defense, attempting to jointly provide some of the services the Imperium no longer can. In 1125, the accordment, although quite new, is already in danger of dissolution.

Although the Khavle Accordment has no single leader *per se*, Matuhatpur Gorsu is its most influential spokesperson. Senior judicator on Khavle's Court of Archons, Gorsu sees the recent trend in raiding holds great danger for the accordment. Although she does not know who is responsible, Gorsu realizes that the once random activities of raiders from Pasdaruu Subsector are beginning to show a pattern—an attempt to erode the security of the Khavle Main. If this occurs, Gorsu is concerned—and rightly so—that the accordment will fail, plunging her region into the barbarism is rising all around.

Sharing her concern are Margaret's observers in this region—the field agents of Hortalez et Cie. The Hortalez presence in Khavle is due to an exchange of facilities with the Vilani megacorporation Makhidkarun. While converting these holdings to their own use, the Hortalez personnel have been surreptitiously observing and analyzing the developing situation, and they do not like what they see. It is in their interests for the Khavle Accordment to endure, providing them with local trade—and a buffer state.

Hortalez, new to the area and still short on operatives, is looking to hire a group of troubleshooters to find out who is organizing the piracy. Through its subsidiaries and front organizations, Hortalez employs many groups for miscellaneous one-time jobs. Unknown to the hired hands, these small jobs serve as auditions for more important future tasks. A group that proves its mettle in one or more small jobs may be hired on for something more tricky—like hunting pirates.

This is how the player characters become involved. By successfully completing the adventures in Chapter 5 and Chapter 7, they can pass muster and be hired on by Hortalez. The thrust of the campaign beyond this follows their Hortalez-funded adventures in rooting out the unseen hand behind the piracy, which will be that of Indro the Lightless. Ultimately, Hortalez hopes to lay a trap for Indro to end the threat of piracy to the accordment. Naturally, the PCs will figure prominently in this plot. If they live that long.

IMPORTANT CHARACTERS

The NPCs described below play major recurring roles in the *Hard Times* campaign.

Adrames Hsudllggar

Hsudllggar is the assistant head of new acquisitions management on Dehrapur (Khavle, 3102) for Hortalez et Cie. The third individual down on that planet's new megacorporate totem pole, Hsudllggar is assigned to watch for individuals with "essential talents." His primary job on Dehrapur is to smooth the transition between former Vilani ownership and the new Hortalez management. (Not surprisingly, Hsudllggar's specialty is in Vilani cultural relations.) His job is excellent cover for his other responsibility—management of local intelligence assets.



Hsudllggar is well spoken, suave and displays a casual,

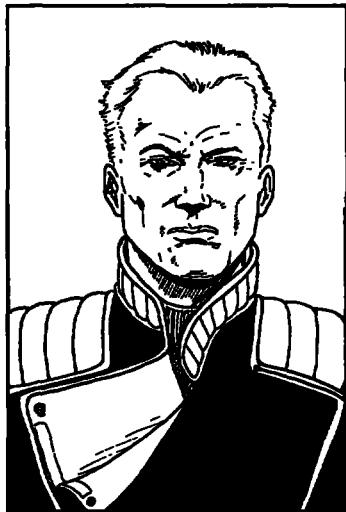
pleasant demeanor. However, he is a shrewd observer of human character and can be ruthless, if necessary.

469AB9, age 38, 5 terms.

Skills: Liaison-3, Leader-1, Admin-2, Carousing-1, Grav Vehicle-1, Handgun-1, Interview-2.

Colonel Skerrit Adan

"Skerry" Adan is the senior starmerc leader in the employ of the Khavle Accordment. His voice carries a great deal of weight in the councils of the accordment, which has less than complete faith in its own military experts (although the oligarchs would take great umbrage at any such doubts voiced by an outsider).



Adan is a former commodore with the Imperial Navy. He fought the Solomani with the Rim Fleet until 1121, when assets from the Core tried to "attach" his depleted unit to their CruRon. Adan agreed to their "request" cheerfully—and jumped out-system an hour later.

Now master of a *Fer-de-Lance*-class escort, as well as a 440-ton patrol cruiser, Adan commands the most powerful starmerc unit in the Khavle and Pasdaruu subsectors. He is a shrewd tactician and has a keen appreciation of the dirtside's view—he cross-trained with the Imperial Marines on two occasions. Adan's main concern is the raider menace oozing Coreward out of the Pasdaruu Subsector. Charged with maintaining the security of the accordment and (as much as possible) the Khavle Main, he doesn't have enough assets to mount any offensive operations into Pasdaruu.

Even a reconnaissance-in-strength is out of the question. However, he has been urging accordment representatives to consider locating outsiders to operate undercover in Pasdaruu to uncover the source of the raider menace.

Adan is popular with his men because of his concern for their welfare and his phenomenally successful record. The fact he deserted the navy disturbs him. He would never return to Lucan's Imperium, but he has thought about taking service with Margaret. He is a man of powerful conscience with a strong paternal instinct—which in combat manifests as a clinical commitment to the systematic dismemberment of his foes.

8A8BB8, age 44, 6 terms.

Skills: Leader-2, Ship Tactics-3, Fleet Tactics-1, Combat Rifleman-2, Laser Weapon-2, Battle Dress-1, Zero-G Environment-1, Ship's Boat-1, Turret Weapons-1, Grav Vehicle-1, Liaison-1, Handgun-1, Recon-1, Interrogation-1.

Indro the Lightless

Indro is a corsair whose roots go back to the pre-Rebellion era. His expertise in his dubious profession is rivaled only by his reputation and force of personality. Indro is a rarity among the raiders of *Hard Times*—he learned his craft in an era when an organized and oversized Imperial Navy was the primary opposition. Therefore, he makes fewer mistakes than the "new recruits" who have swelled the ranks since 1120.



His goal is to topple the Khavle Accordment, which Indro realizes is a fragile polity. By toppling the accordment, he hopes to be able to plunder up and down the Khavle Main, which offers much richer prizes

than the comparatively stripped planets of the Pasdaruu Subsector.

Indro operates out of the Campobello System but has a variety of ancillary bases scattered throughout the Pasdaruu Subsector. In addition to his own band, which has three starships at its disposal, Indro has built a network of alliances not unlike feudal vassaldom. He has gathered three other bands as allies, each of which is allied with at least one other band. As a result, Indro can muster a grand total of more than a dozen starships and eight bands to his dubious cause, and can influence countless others.

Indro is not a particularly talkative individual—his oratorical strength lies not in frequency but exquisite timing. He knows what people want to hear and how they want to hear it. He also knows how to subtly portray himself as the means by which they can achieve their goals. He is amiable, utterly ruthless and an excellent listener. His experience has taught him that if he is only patient enough, others will reveal themselves fully. And then they are his to manipulate.

8B6CA5, age 52, 9 terms.

Skills: Leader-3, Ship Tactics-2, Turret Weapon-1, Pilot-3, Navigation-1, Large Blade-2, Carousing-2, Streetwise-2, Grav Vehicle-1, Wheeled Vehicle-1, Vacc Suit-2, Laser Weapon-1, Handgun-1, Zero-G Environment-1.

Astallig Sumelor

Sumelor is Indro's lieutenant and—although no one other than Prateria Honshu knows it—his son as well. Sumelor is a crack pilot and gunner, and stays close to Indro at all times.



Their relationship has been kept a secret to protect Sumelor and to allow Indro an image of emotional invulnerability.

Sumelor is a quiet fellow who grew up as a pirate. He is held in high esteem by his peers and is considered to be a likely successor to Indro. Several have suggested that he "replace" Indro; they have inevitably met swift and untimely ends. When Indro cannot personally

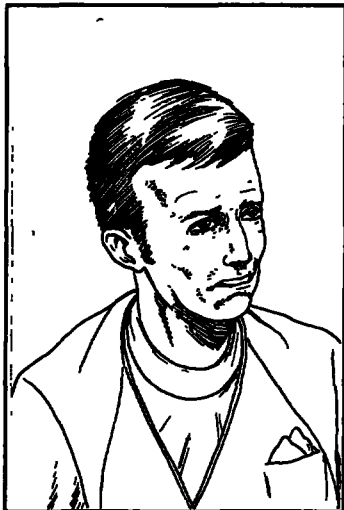
attend to an important situation, he is likely to send Sumelor.

AA8855, age 28, 3 terms.

Skills: Pilot-3, Turret Weapons-3, SMG-2, Brawling-1, Vacc Suit-1, Zero-G Environment-1, Leader-1, JOT-1.

Jarag Karsubaqa

Karsubaqa is a senior assistant to Matuhatpur Gorsu of Khavle, currently on detached duty as an operational overseer for the accordment.



It is Karsubaqa's responsibility to attend to the details of any activities concerning the Khavle Subsector's Rimward raiding problem. As such, Karsubaqa is the official with whom the player characters will interact.

Karsubaqa is an efficient individual, but his nervous demeanor makes him something of a social nuisance.

76AAC8, age 36, 4 terms.

Skills: Admin-2, History-1, Liaison-1, Computer-2, Persuasion-1, Ground Vehicle-1.

Prateria Honshu

Honshu is the leader of the corsair band known as the Blue Moon. She has been captain of the band (and its only remaining vessel, the *Blue Moon II*) for six years. She rose to this position by killing the former captain, Sangaa Shopbur, in his sleep.

Honshu has been notified of formal assassination proceedings twice. But on both occasions, she located the assassin within 24 hours and killed him. Her deductive powers are therefore becoming legend in corsair circles, which has been helping her to draw in new recruits. Actually, Honshu's identi-



fication of her two potential assassins was due to telepathy rather than to extraordinary powers of deduction. A skilled psionic (strength 8), she used Read Surface Thoughts during her Black Suit's formal announcement of both assassination attempts. The Black Suit's thoughts revealed the identity of the intended assassins.

7C9985, age 36.

Skills: Psionic Strength-8 (Telepathy), Pilot-2, SMG-1, Handgun-2, Zero-G Environment-1, Vacc Suit-1, Intrusion-3, Stealth-2, Ship Tactics-1, Leader-1, Electronics-1.

Juglsaal Lakidgussar

Lakidgussar's life was actually improved by the Rebellion. He had been a mental patient for 12 of his 36 years when



Solomani fleets arrived in orbit about his home planet of Garaag (Shumisdi subsector/Diaspora). In the resulting chaos and confusion, he escaped—a genius-level paranoid sociopath whose one ambition in life is to become God. While still falling well short of that goal, Lakidgussar has managed to attract a small but fanatically loyal ripper gang—known as the Killer Sharps—to his august person. His recent acquisition of a 400-ton corsair (from a rival band of rippers) has left him with a

powerful ship, but he is still shorthanded.

Any prisoners taken, Lakidgussar insists, are not to be killed by his crew. That lethal honor must be reserved for his special friend Sakki—an unthinkable sharp straight-edged razor that he keeps under his pillow.

87BD94, age 41.

Skills: Leader-3, Carousing-2, Streetwise-2, Brawling-2, Handgun-2, Ship's Boat-1, Ship Tactics-1, Vacc Suit-1, Computer-2.

INTEGRATING A TRANSPLANTED CAMPAIGN

Some referees will wish to continue a current campaign into the Hard Times era by physically moving the characters into the Khavle-Pasdaruu area, rather than by generating new characters. The journey from the current campaign location to Diaspora can present a number of exciting adventure possibilities, but the referee must convince the PCs to undertake such a journey. In general, it is easier and more believable if you use a carrot rather than a stick to get the PCs to the Diaspora Sector. Possibilities include the following:

• If the characters have their own ship, they may have refused a mobilization order to attach themselves to the spearhead CruRon of Lucan's most recent offensive. In fleeing these forces, they are pushed in the direction of Diaspora Sector. Upon arriving in Massilia or another sector next to Diaspora, a free-lance employment broker (a Hortalez et Cie field agent working undercover) will connect them with the company, which is looking for individuals to take on the first job in the **Hard Times** campaign.

• If the characters have no ship, they may have been captured by a group of mercenaries who, only days after the capture, experience a "change in leadership." The new leader has had her fill of fighting for others; she has decided to go corsair and fight for her own profit. Since the characters are of no use to the mercs, they are placed in low berths. Months later, when the ship is disabled in combat and taken over, the new crew finds and awakens the characters, then informs them that they are currently on Dehrapur (3102 Khavle/Diaspora).

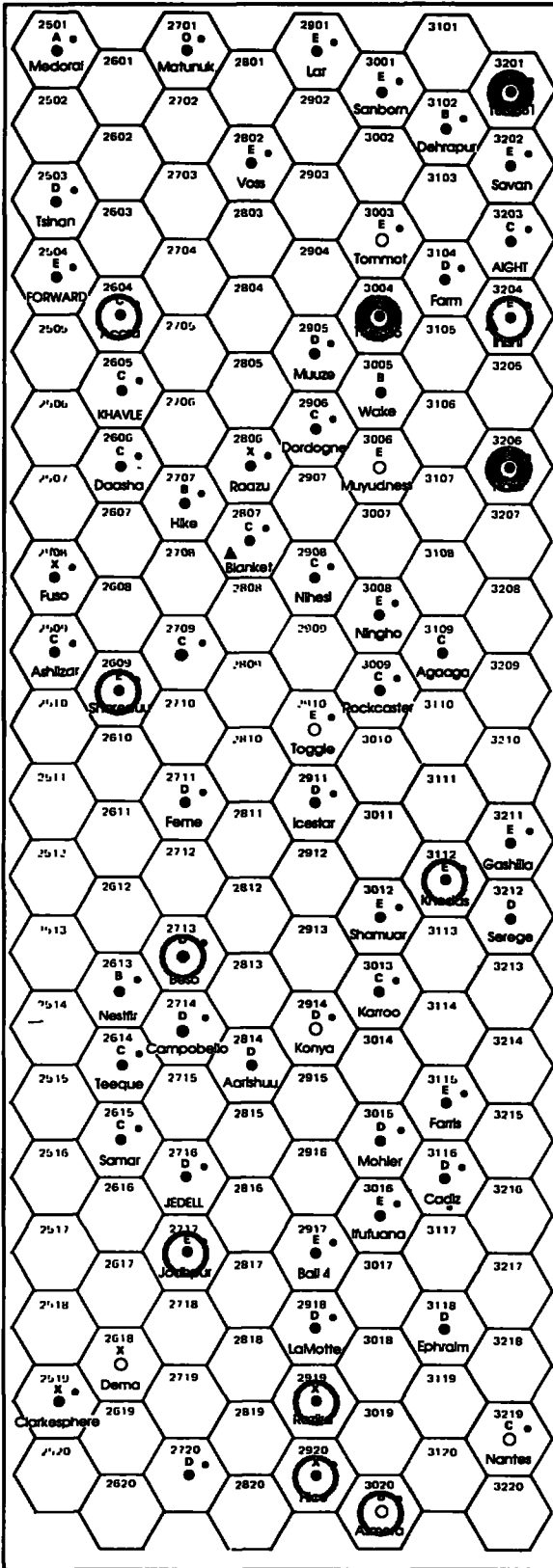
• One of the characters might receive word that his ne'er-do-well grand uncle has died back in Delphi sector and has remembered the character in his will. If the characters have no ship, the legacy takes the form of a beat-up *Type S* scout

or *Type A2* far trader. If they have a ship, the legacy can take the form of enough money to finally pay for long-overdue maintenance or battle damage repair on their ship. Either way, they must arrive in Delphi within six months to take possession of the goods, perhaps after some entertaining legal groveling and scraping.

• Perhaps the PCs are offered an attractive contract by Margaret's agents, who need a little troubleshooting attended to. This could be antipiracy work, the transport of an important shipment to Delphi sector, or even a small mercenary ticket just beyond her Frontier areas. But if this isn't enough to entice them, they might encounter legal difficulties in their current area of operations. After a few week-long dirtside impoundings for minor infractions, the PCs learn about the local authorities suspecting them of involvement with a smuggling ring. As this would only be the beginning of their troubles, that offer in Delphi might start looking pretty good.

The **Hard Times** campaign assumes the PCs have access to a starship. If they do not, the adventure patrons will have starships, and part of the PCs' job will be to assume the role of its crew. However, the PCs should be able to acquire a starship of their own at the end of the fifth adventure of the **Hard Times** campaign.





Khavie Subsector (D/Diaspora Sector) as of 365-1128

Name	Hex	UWP	Class	PPG	Alg	Str	Zn/Sp
Medora	2501	A422530-B	Ni Po	403		K1 V	Ou
Tsinan	2503	D472674-8	Ni	904	Kh	M0 V	Ou
Forward	2504	E8389C6-8	Hi	513	Kh	M2 VI M9 D	Ou
Fuso	2508	X7B3283-7	Ni Lo FI	504		G1 V	Ou
Ashizar	2509	C6548C9-7		711		G7 II M3 V	Ou
Accra	2604	C6877A4-B	Ag	903	Kh	G0 V	Ou
Khavie	2605	C334965-B	Hi	705	Kh	M4 V	Ou
Daasha	2606	C62A487-7	Ni Wa	403		K4 V M0 D	Ou
Shareduu	2609	E231585-6	Ni Po	121		M2 V	Ou
Matunuck	2701	D853721-7	Po	912		K8 IV	Ou
Hike	2707	B7824D9-8	Ni	525		F4 V	Ou
Gorakpur	2709	C000398-7	Ni As Lo	904		M4 V M0 D	Ou
Voss	2802	E867274-6	Ni Lo	903		M6 IV	Ou
Raazu	2806	X445593-5	Ni Ag	815		A2 V	Ou
Blanket	2807	C224551-8	S Ni	601		M3 V M1 D	Ou
Lar	2901	D331452-8	Ni Po	104		M2 V M8 D	Ou
Muuze	2905	D7920A8-5	Ni Lo	513		F5V M0D M4D	Ou
Dordogne	2906	C454587-9	Ni Ag	404		M3 V	Ou
Nihesi	2908	C7B1350-7	Ni Lo FI	804		M4 V	Ou
Toggle	2910	D1003FC-7	Ni Va Lo	503		K1V M7D M5D	Ou
Sanborn	3001	E483172-7	Ni Lo	304		F7 V M8 D	Fr
Tommot	3003	E210120-5	Ni Lo	612		M1 V	Ou/F
146-685	3004	H794475-0	Ni	600		M2 V	Ou/F
Wake	3005	B6525A9-9	Ni Po	300		M4 V	Ou
Muyudness	3006	E1005CB-5	Ni Va	500		G2 V	Ou/F
Ningho	3008	E5771C8-7	Ni Lo	104		M5 V M3 D	Ou
Rockcaster	3009	C69A473-7	Ni Wa	603		M0 IV M6 D	Ou
Dehrapur	3102	B423451-A	Ni Po	901	Ma	G3 V M4 D	Ou
Farm	3104	D656641-7	Ni Ag	404		M4 V	Ou
Agaaga	3109	C557385-7	Ni Lo	620		M3 IV M6 D	Ou
183-361	3201	X694886-3		212		G4 V	Fr/F*
Savan	3202	E444630-7	Ni Ag	703		M4 V	Fr
Aight	3203	C752A98-A	Hi Po	701		G2 V	Ou
Ihishi	3204	E5413BA-3	Ni Po Lo	904		M7 V	Ou/F
Halle	3206	X626040-2	Ni	302		G5 V	Ou/D*

Pasdaruu Subsector (H/Diaspora Sector) as of 365-1128

Name	Hex	UWP	Class	PPG	Alg	Str	Zn/Sp
Clarksphere	2519	X324272-3	Ni Lo	913		G9 V	Wi/F*
Westfir	2613	B326882-B		601		M1 V	Ou*
Teeque	2614	C545532-7	Ni Ag	613		M3 V K3 D	Ou
Samar	2615	C4765C6-9	Ni Ag	803		M0 V M5 D	Ou
Dema	2618	X200400-4	Ni Va	200		M3 V	Wi/F*
Feme	2711	D456375-8	Ni Lo	912		M8 VI	Ou
Beso	2713	D000382-5	Ni As Lo	321		K2 IV M9 D	Ou/F
Campobello	2714	D0004C9-7	Ni As	703		M1 V M2 D	Ou
Jeddel	2716	D434900-8	Hi	915		M4 V	Wi
Jodhpur	2717	E332496-6	Ni Po	304		M1 V	Wi
Riishu	2720	D2253A5-5	Ni Lo	914		M2 IV	Wi
Aarishuu	2814	D995587-9	Ni Ag	800		M1 V	Wi
Icestar	2911	D799020-4	Ni Ba Lo	114		K5 V	Ou
Konya	2914	D200294-5	Ni Va Lo	104		K4 VI	Wi/F
Bail 4	2917	E799710-6		505		G7 IV	Wi
La Motte	2918	D63A484-7	Ni Wa	604		M0 V	Wi
Raziira	2919	X866175-5	Ni Lo	100		M0 V M6 VI	Wi
Hice	2920	X795187-3	Ni	904		M1II M4V M8V	Wi/I
Shamaar	3012	E5443F7-5	Ni Lo	702		M1 V	Wi
Karoo	3013	C667363-9	Ni Lo	924		G5 V	Wi
Mohler	3015	D8A5595-5	Ni FI	713		M0 V M1 D	Wi/F*
Ifuwana	3016	E598462-7	Ni	414		G0 V	Wi
Asmera	3020	B110630-9	Ni Na	915		M2 D	Wi
Khedas	3112	E7A4200-2	Ni Lo FI	314		M6 VI	Wi/D*
Farris	3115	E536175-4	Ni Lo	224		M7 V M2 D	Wi/F*
Cadiz	3116	D799432-7	Ni	902		M4 V	Wi
Ephraim	3118	D789787-8	Ri	710		G8 D M2 D	Wi
Gashilla	3211	E879465-5	Ni	614		G2 V	Ou
Serege	3212	DAD6450-8	Ni FI	720		K4 V M0 D	Ou
Nantes	3219	C200453-5	Ni Va	602		M0 V M6 D	Ou/F

All columns are as in the standard UWP (Referee's Manual, p. 16) with the addition of the Zn/Sp column.
Alg (Allegiance): Ma: Margaret's faction Kh: Khavie Accordment.
Zones: No Indicator: Safe Fr: Frontier Ou: Outland Wi: Wilds.
Special Indicators: F: Failing world D: Doomed world.
 *: Population decrease I: Biosphere damaged.

SUBSECTOR DETAILS AND COMMENTS: REFEREES ONLY

This section offers brief sketches that can be the basis of further adventures for referees and players who wish to continue the campaign beyond Chapter 14.

Note: The Traveller's Aid Society has ceased to designate individual worlds by travel codes, except within Safes (which are almost entirely travel-coded as Green). Instead, the TAS has issued two broad, categorical traveller warnings: All Wilds and Outlands are considered Red, and all Frontiers are considered Amber.

Khavle/Diaspora, 365-1128

Having escaped the brunt of the major Imperial-Solomani naval clashes that dominated the subsectors just to Rimward, Khavle Subsector is a classic example of an Outlands region that is desperately trying to hang on to some semblance of order.

These attempts are greatly aided by the presence of the Khavle Main, which essentially trisects the subsector and offers a direct conduit to Margaret's Safe and the Vaward hi-population cluster in Old Expanses Sector.

The economic vitality still afforded by this jump-1 route has allowed Khavle (the world) to support the development of a small autonomous polity, known as the Khavle Accordment. Tsinan, Accra, Forward and Khavle are the member systems of the accordment.

The Khavle Accordment is not truly a centralized state, but a collection of trade and mutual defense pacts negotiated by the oligarchs of the three major member planets. The accordment is known to hold very conservative views and has friendly relations with Margaret.

It is also the single largest client at Medora's starship yards, in terms of both paid maintenance and the financing of new ships.

Raider incursions from Pasdaruu Subsector have been increasing recently along the Rimward border. High-level analysis suggests that the activity may be coordinated, not simply random. Plans for looking into this menace are being considered.

183-361: This is a classic example of a failing world. After suffering monstrous civilian casualties and emigration, it still exists only because of its association with Margaret's Domain and the annual fund subsidizing all its life-support costs. The inhabitants mine high-grade iron ore and a fair amount of rare earths.

Ihshl: This is another sad example of the fragility of Outland worlds. When pirates raided here three years ago, laser fire destroyed the air filtration apparatus. Attempts to rebuild it have been futile, and attempts to purchase a new one have not been successful.

Ningho: This world is home to a sophontic race of amphibians who have a low interest in technology or trade. They seem to be happy just the way they are, and they found pre-Rebellion efforts to conduct a census of their numbers both amusing and silly.

Hike and Wake: These worlds are the major repair centers for local shipping, particularly the starships that serve the Khavle Accordment.

Some of these ships will make the run up to the class-A starport at Medora, but most stay on the Khavle Main, which

cuts through the heart of this subsector.

Organized convoys occasionally journey to Delphi and Margaret's Safe, where the wonders of technology may be found and purchased—albeit at exorbitant prices.

Pasdaruu/Diaspora, 365-1128

The Pasdaruu Subsector contains 30 worlds with a total population of 9.6 billion. The highest population is nine billion at Jedell. The highest tech level is 11 at Westfir.

Once dominated by the high-population world of Jedell, the Pasdaruu Subsector no longer looks to that world for leadership, given the rising anarchy there.

Much of the Pasdaruu Subsector was the scene of major battles between Imperial and Solomani fleets. As a result, it slid further down the ladder of civilization than its Coreward neighbor, Khavle Subsector.

The majority of Pasdaruu is a moderate example of how far the Wilds have sunk by 1128: dismal tech levels and only six starports with ratings above 13 (and many below).

Piracy is on the rise in this region, mostly dominated by corsair bands. Rippers are increasing in numbers—probably spinoffs from the deteriorating situation on Jedell.

Pirate activity in the Campobello System has always been extensive. For decades, the belt was little more than a collection of pirate shanty towns. However, this activity has been expanding, and the loose pirate organization has been replaced by a powerful, almost religious raider-cult led by Indro the Lightless.

Some observers wonder if Indro the Lightless could also be the driving force behind the recent raider incursions into Khavle Subsector.

Westfir: Arguably, the most important (or frequently visited) world in the system is Westfir, which suffered over 50 million civilian casualties during the first 10 years of the Rebellion (and which has lost many more number due to 10 years of steady emigration).

Westfir's class-B starport and (comparatively) high tech level still make it an appealing place to trade, attracting merchants from the Khavle subsector as well. Westfir is still (technically) part of the Outlands, however.

Karoo: This world was recently seized by a mercenary company built around a renegade Imperial Army platoon gone adventurer.

Dema: This world is another pitiful example of planetary regression. Its environmental systems all but gone, and it survives by trading its hard-won ores for low-level maintenance provided by Samaran merchant crews. The level of hardship has shattered the former government, leaving anarchy in its wake.

Ifuwana: This world is being held hostage by three renegade Imperial warships, two of which are armed with particle beam weapons. This situation began six months ago, and general requests for help and intervention have thus far gone unanswered.

Gashilla: This world is occupied by merc units from Khavle Subsector.

The planet was originally balkanized. One of Gashilla's warring powers decided it could win a quick victory if it imported in some high-tech help.

The plan had the desired effect, but then the faction couldn't get the imported troops to leave.

Only the bravest—or craziest—traders ever ventured into the Wilds anymore, although rumors hinted at rich salvage, buried vehicle parks with air/rafts by the score, derelict ships with wartime cargoes still intact in the hold.

Me, I was just looking for a decent port where I could get some overdue—long overdue—maintenance done. But that proved to be a little harder than I thought.

The first world we arrived at was listed as having a class-A starport. Maybe it had one once, but it must have been a decade ago. As we came in—and double checked the library data—we noticed the ominous lack of any highport facilities. The downport wasn't much to write home about either—half of it was ashes, and the other half was covered in cobwebs. The portmaster's big selling point was he could offer us unlimited amounts of unrefined fuel at standard rates. We said, "thanks but no thanks," and moved on.

Unfortunately, the next place was even worse.

STAGE 1: DESTRUCTION OF INTERSTELLAR TRANSPORT

Date: 300-1124

The inevitability of the Third Imperium's economic collapse is fully evident by the end of 1124. The single greatest sign of this impending disaster is the decrease of interstellar trade and transport. And the single greatest cause of this decrease is the loss of high quality starports in all but the Safe areas of the Imperium.

Standing head-and-shoulders above the other reasons for the decline of starports is Lucan's scorched earth policy regarding his rivals' interstellar resources. His military logic was cold and uncompromising: If he could not retain an important resource, then it must be destroyed to deny it to the enemy. This erosion of interstellar capabilities further deprived opponents of the ability to seize the initiative and carry out reprisals. In addition to being effective, this strategy also appealed to Lucan's vengeful nature.

But Lucan overestimated his chances of a quick victory, and enemy factions discovered the most effective countermeasure was a response in kind to the scorched earth tactics. This contagious whirlwind of destruction—the Black War—escalated from 1120 to 1124, by which point the factions were too exhausted to mount many attacks of any type.

However, by this time, uncounted shipyards lay in ruins, and billions of Imperial citizens turned their backs on the interstellar community, rejecting the Rebellion and all the madness associated with it.

Without port facilities, worlds could not attract merchants. Commerce and transport dried up. And since the selective focus of raids was on class-A and class-B starports, new ships could not be built to replace the tens of thousands destroyed by years of warfare.

As of 300-1124, the Imperium's shipping industry is in full retreat. And with decreased shipping, only a fraction of the once vast Imperial markets are still available to the producers and traders of goods—too small a fraction to stave off the economic recession that begins the tumble into Hard Times.

Safe Areas and Starports

Within the safe areas, the drop in interstellar traffic is not perceptible. In fact, many safe areas actually experience a minor increase in interstellar transport. This seemingly paradoxical situation is due to the influx of merchants who have

decided that the Frontier and Outlands are too risky for further operations. Consequently, the functional starships tend to congregate in the areas known to be Safes. Also, no starports within the Safes have been damaged or degraded, making trade and maintenance much easier to conduct.

Due to this, Hard Times do not really hit the Safes too hard. Markets may be smaller, but they are still vigorous and self-sustaining. Thus, worlds in the Safes are not subject to the effects presented in Chapter 3 unless the safe area is also a War Zone.

The Frontier areas still enjoy a fair amount of transport, but the need for protection dictates that about half of all interstellar runs are now conducted in convoys. Starports in the Frontier are more likely to be damaged or gone to seed, although most have not slipped too far.

However, in the Outlands, starport quality has slipped dramatically. After the fleet actions of the Rebellion and the vicious strikes of the Black War, there is little reason for planets in the Outlands to rebuild their facilities—it only invites another attack. Furthermore, the need for starports has diminished since traders are now fearful of venturing into the Outlands. As a result, many facilities that survived the war have been allowed to decay as traffic dropped off and the benefits derived from operating them diminished.

The Wilds face the same problems as the Outlands, but to a greater degree. Since fewer worlds escaped military strikes, more starports were damaged or annihilated. While traders avoid the Outlands, only the most brave or foolhardy would even consider venturing into the Wilds. Pirates are common in this interstellar wasteland, and many planetary populations are no longer friendly; to them, an outsider is simply a harbinger of more trouble.

Annihilated Worlds

Another aspect of the scorched earth policy has contributed to the emergence of Hard Times by the end of 1124—the corruption or destruction of entire planetary biospheres by nuclear, biological and chemical attacks. Such terrible attacks were fairly rare, but in some subsectors—notably those where Lucan's Black War tactics were practiced—such events did occur once or twice.

The main targets for weapons of "mass destruction" were high population and class-A starport worlds. Since these were perceived to be the strategic keys of the Rebellion, worlds with such attributes were more likely to invite escalation—defen-

sive commanders felt it was more imperative to hang on to them. Paradoxically, this forced them to desperate measures when fighting grew heavy and, in turn, invited escalation by the attacker—with predictable results.

Lucan's demands for results at any cost made his forces the worst offenders in this regard. As the war progressed, the tactics of his surviving commanders reflected the attitudes of their ruthless leader more and more.

The physical results of scorched earth attacks varied. But the psychological response was invariable—any survivors acquired a deep and lasting hatred for Lucan and his forces. They also grew more suspicious of offworlders in general and recanted whatever love they had for the Imperium.

THE IMPERIUM AS OF 300-1124: DETERMINING THE EFFECTS OF STAGE 1

Worlds that experienced biosphere damage or loss of starport capacity in Chapter 3 should have these results applied now. Referees running the Hard Times campaign should apply these changes to the worlds of Khavle and Pasdaruu by comparing the 1124 values with the 1128 values.

Starport Facilities In Hard Times

All interstellar travellers need access to certain facilities that can only be found at starports. And since those facilities are becoming increasingly rare, they are increasingly important.

By 1124, class-A starports are becoming new meccas and growing into centers of civilization, education, exchange and—of course—larceny. Since they can repair and build starships, these installations represent priceless assets. Those few that are not found in Safe or Frontier areas are shining beacons in the darkness of the Outlands or Wilds, and they attract all manners of clientele. Although there are sure to be a half dozen plots afoot to seize each one, only insane raiders or Lucan's strike teams would consider actually damaging a class-A starport.

Class-A ports are sure to be running at peak capacity on a steady basis. The waiting list for repair and maintenance work is determined by rolling 2D6 (the result equals weeks of waiting), and prices are higher than usual. The increase is

equal to $(1D6-1) \times 5\%$. New ships are available for purchase only on a roll of 11+ with 2D (no DMs) since almost all are specially commissioned well in advance. It is not unlikely for contractors to be murdered in order to free up their nearly completed ships for purchase. In the Outlands and the Wilds, ships are only available for 100% cash up front.

Class-B facilities are also busy, but waiting times and costs are comparable to those of the pre-Rebellion era. Such ports handle a fair amount of customization and ordnance sales.

Class-C facilities, once considered substandard, have emerged as the workhorses of the interstellar transport industry (such as it is in 1125). Capable of repairing heavy damage, these facilities are used by many ship owners to keep their rustbuckets jump-capable until they can afford enough for an annual maintenance. These ports are also capable of building slower-than-light (STL) spaceships of TL8 or less that have a total cost of no more than MCr10. Such construction requires twice the usual time and may not incorporate any elements of more than TL8 as part of the standard equipment (although such craft can be retrofitted later).

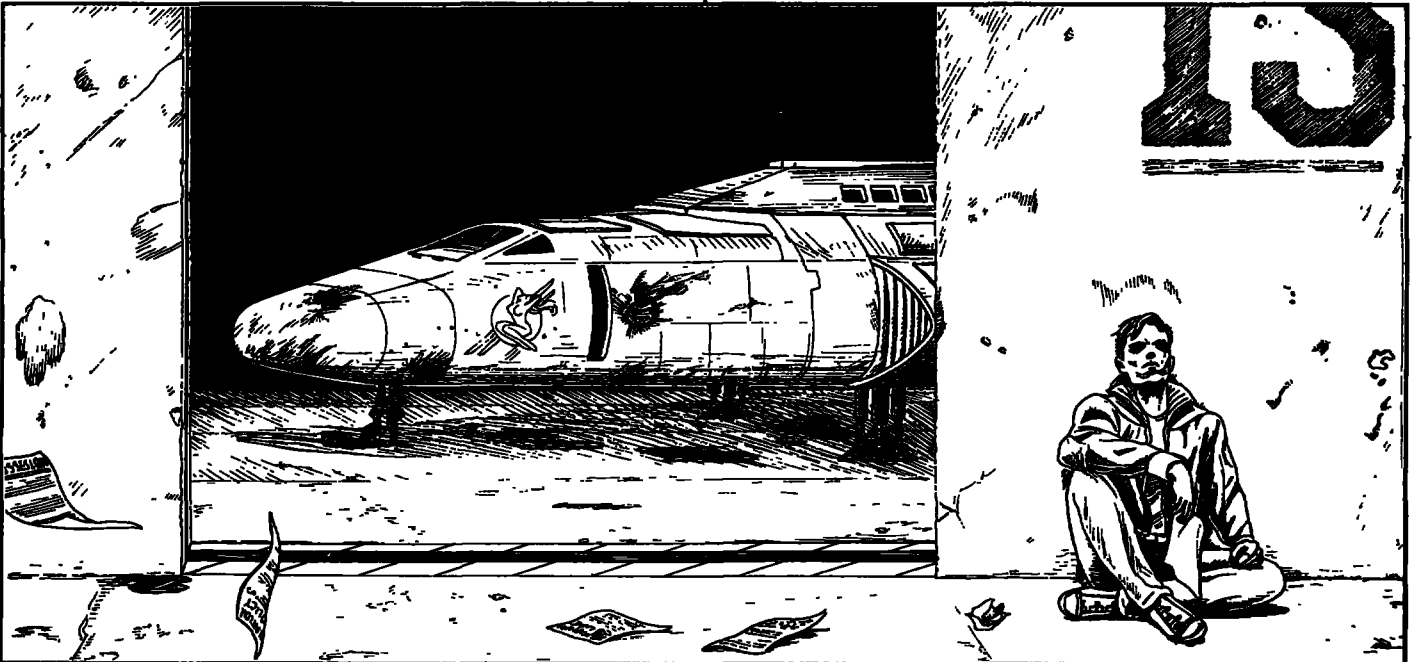
Class-D (and class-F) facilities are still substandard, but the lack of alternatives has increased their importance. However, due to the general dropoff in interstellar travel, they receive barely half the traffic they did in the years before the Rebellion.

All other classes (E, X, G, H and Y) are considered to be lesser facilities and are as unimpressive as ever. They attract almost no interstellar traffic now, unless they are located on a world that is an unusual source of trade or resources.

Maintenance

Referees who might have turned a blind eye on the effects of missed maintenance must now open that eye. The lack of adequate facilities and decreased potential for trade makes starship maintenance harder to find and afford. Consequently, the penalties for missed maintenance should now be applied in strict accordance with page 92 of the *Imperial Encyclopedia*.

In the event of a ship missing more than a single year of maintenance, roll an additional die for every extra year missed when determining the outcome of a mishap.





Starport Procedures

PCs wandering through the starports of Hard Times will notice a few changes.

Security: Security is tighter and more businesslike in better ports (A and B) but has decreased in lesser facilities (E, X, G, H, Y). In better facilities, patrols have expanded far beyond their traditional role of customs and immigration/emigration. In fact, the major duty of most armed security personnel is to protect the facility itself, particularly repair and construction yards. These guards have the right—and are encouraged—to shoot first and ask questions later. They are armed and armored to the maximum standards permitted by local (or imported) technology. Many starports have also emplaced missile batteries to repel unwanted visitors.

Flight Control: Flight control is a lot pickier about approach and departure vectors and is likely to deny landing rights to an uncooperative craft. The word at high quality installations is "safety first"—and those who don't agree are tersely invited to take their ship someplace else.

Extrality Zone: With the death of the Imperium as a centrally organized, law enforcing entity, the concept of the extrality zone being an area beyond local jurisdiction has disappeared in all starports except for those within the Safes. From the moment a craft enters the planet's declared airspace (many planets now define that as being "anywhere in-system"), the craft and crew are under the jurisdiction of the main world. Extrality zones are still maintained as areas where individuals without visa may walk about freely and conduct business.

Personnel: The personnel in class-A and class-B facilities are the best available—as befits the staff of the few remaining top-of-the-line facilities. In low quality facilities, however, the ports are often run by local crackpots who are sure that "the old days are gonna be back soon" or who refuse to leave the job. Out of touch and out of the trafficked lanes, many are going a bit daft.

Cargo: Cargo is now watched over very carefully by merchants. Although the trading process remains the same, the remittance of the goods and its landing are now given considerable security. This is not paranoia: Desperate ship's masters have taken to stealing cargos from each other during on- and off-loading.

ADVENTURE 1: TERROR IN THE MIST

After weeks of winding their way down the Khavie Main looking for work—or a halfway decent cargo—the characters jump into the Nihesi System. A drifting cloud of ruined structural members marks where the highport once was.

Planetside, things look equally dismal. Although the PCs' navigation charts show Nihesi as having a Class-A starport—obviously a prewar rating. The old starport is now a tangled jumble of blackened frameworks and gutted ships. The new starport—a secondary facility that has been spared the ravages of nearly a decade of war—is overburdened and understaffed. The eyes following the group through customs are either haunted, hateful or unfocused with war-weary boredom.

Startown—such as it is—is half boarded-up. Broken windows attest to looting some months back. Prices are trumped up, and drinks are watered down—at least that much is still the same.

Over the second round of carefully nursed drinks, the group is approached by a woman who identifies herself as Calada Unto'soth, senior expediter for al Baratha Reclamation, a local salvage company. After the customary preliminaries, she tells the party she is looking for a reliable, discreet group for a special salvage operation. The pay is quite good—Cr5000 per person for less than a week's work. All special equipment will be provided by the employer.

If the PCs express interest, Calada will reveal that while there is nothing illegal about the salvage operation, there may be some competition. The salvage involves removing test and repair equipment from the premises of a now defunct company—Bokor and Associates (B & A)—that specialized in jump-drive experimentation and customization. The competition? Security personnel from Tolex, Ltd., a large, off-planet corporation which had been a minor investor in B & A. When the little jump drive company went bankrupt, Tolex claimed the remaining capital assets as compensation for the loss. Jurisdictional battles in commerce courts have dragged on for two years, and now—according to Nihesi law—the abandoned property is legal salvage. It is the PCs' job to enter the facility, demount the specified machinery and return it intact to Calada.

World: Nihesi (Khavle/Diaspora 2908—C7B1344-F) is showing signs of domestic strife which will undoubtedly cause changes in its current representative democratic government. Although still claiming a tech level of 15, Nihesi is tooling toward TL8 and 9 for local production of its needs. Many suggest that even this is too ambitious; they expect a decline to TL7.

With a total population of only 8700, most of the trouble that Nihesi has known in the past 10 years has come from off-world—invasion fleets, raiders and smugglers. In open defiance of local law, many natives carry assault rifles as they walk the streets; the Nihesians have had their fill of passively accepting injustice.

Walking the streets in Nihesi is not a popular pastime, however. Saddled with a corrosive atmosphere, Nihesi is a generally cool world. Significant traces of ammonia exist in both the atmosphere and the Fluid hydrographics. Local fauna is not fully understood but is hardy, preferring equatorial zones—although some of the larger carnivores hibernate in the “temperate” regions and migrate twice a year into the equatorial belt to feed.

Referee's Information

All is as presented to the PCs with one exception: No one suspects that one of the large predator species has decided to make the old B & A facility its hibernatory lair. This creature is a light sleeper and is extremely territorial.

If the PCs check, they will find out Calada's employers already have a buyer for the jump-related equipment—the Santhromar Corporation of Vaward. Research will show this is a subsidiary of Hortalez et Cie. Consequently, the characters' actions in the course of this adventure will become known to Adrames Hsudliggar, who will begin to look into their backgrounds and consider them as possible employees for the long term mission against Indro the Lightless.

Adventure

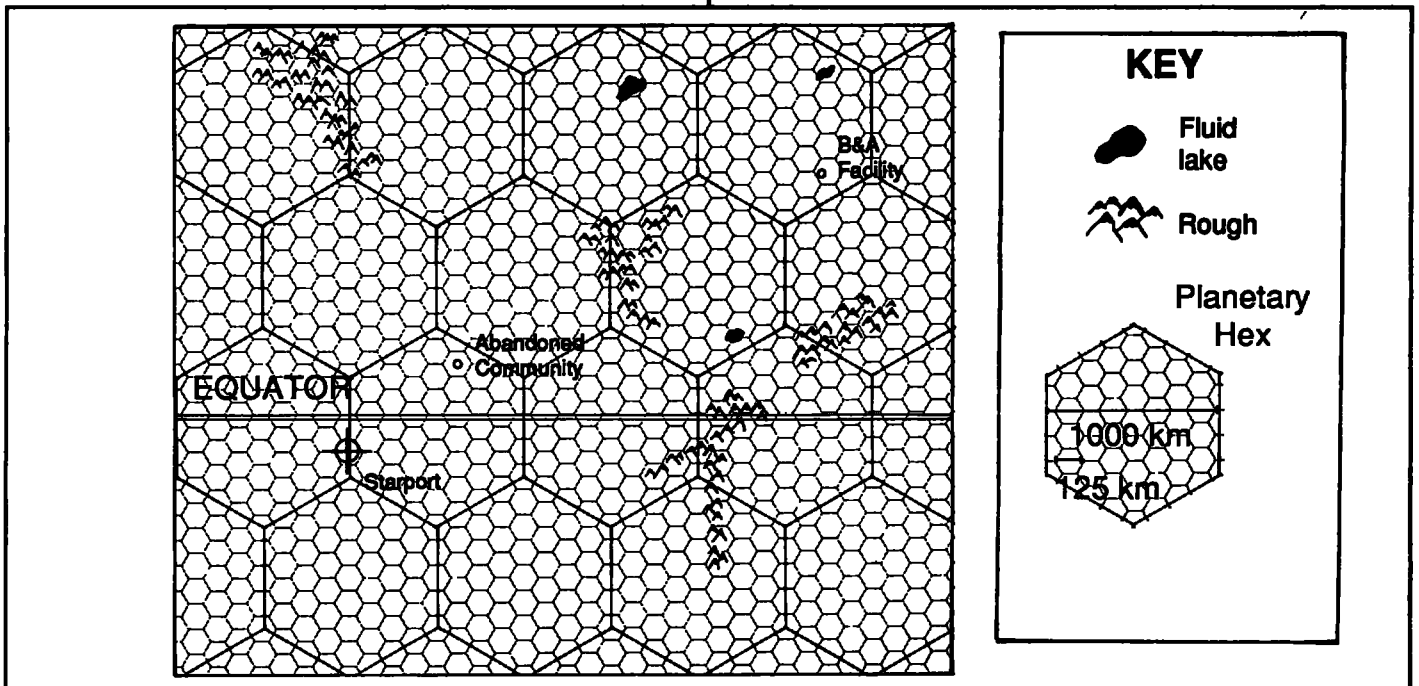
Al Baratha Reclamation will provide the characters two tracked ATVs with winches, hostile environment suits (TL8),

four sealed trailers for the salvaged gear, provisions, radios and assault rifles. The PCs may purchase additional TL13 (or less) gear locally with their own funds.

The group will be provided a map detailing the area between the starport and the B & A facility, a distance of 600 kilometers. Since it was built back in the days when grav transport was widespread, there are no roads leading to the facility.

Journey: The local atmosphere kills quickly, so vacuum suit breaches must be prevented at all costs. The group can make about 50 kph over the broken ground and stubborn flora of Nihesi. Visibility is poor; ammonia and peroxide vapors wrap green-white tendrils around the vehicles. Roll 2D6 once per hour. On a 9+, consult the following table. See pages 30-36 of the Referee's Manual as necessary.

Roll	Result
1	2D6 Grazers encountered. Flee 4+, Attack 10+, Speed 3, Cloth, Horns +1.
2	Pressure leak in ATV. Routine task, Mechanical, Intelligence, 5 min. to find and repair.
3	Electrical storm for 2D6x10 minutes. Roll each 10 minutes. On 11+, an ATV is struck. Difficult task, Electrical, Intelligence, 10 min. to find and repair damage.
4	One ATV mired in mud pool. Difficult task, Tracked Vehicle, Strength, 10 min. to extricate.
5	One large Pouncer encountered. Flee 10+, Attack 6+. The creature's statistics are: Pouncer, 3200 kg, 15 hits, Claws: Pen 8/damage 10, Acid: Pen 10/damage 4 with a range of 10 meters (to hit task is Simple), Speed 2.
6	Visibility reduced to zero for 1D6x30 minutes. Vehicles must stop or roll a Feasible task (Tracked Vehicle) each 10 minutes to avoid separation. If separated, both vehicles must roll on table each hour.



Arriving at the Facility: The player characters will immediately discover some unexpected company when they arrive at the facility.

Unless visibility is zero, they will be able to make out the steady glow of lights as they approach. When they come closer to the facility, they will note two light sources in the area, and they are not coming from any of the buildings. Instead, the PCs will find two ATVs parked near the facility entrance. The motors are not running, but the headlights are on. Radio hails produce no response. Attempts to board the vehicles meet no resistance; the hatches are not locked. No Tolex personnel can be found.

An expanded search will find only two other irregularities. First, the facility's main entrance was recently opened manually and is still ajar. Second, there is a huge hole in the compound's perimeter fence. Although the surrounding fence posts have been bent as though pushed against by something very large and heavy, the chain link of the fence shows signs of having been melted away—almost as though hit with a plasma weapon.

Besides that, there's nothing to be found.

Entering the Facility: The main entrance to the facility is a large double door opening into the central research and construction area. The administration and housing offices are accessed through a hatchway within the central area. The PCs' information indicates the central area can be pressurized and brought to standard atmosphere characteristics, but the main doors would have to be completely shut and sealed for that to be accomplished.

Upon entering, the group will find large crates piled in a maze just on the other side of the door. Judging from dust accumulations and differences in the crates, most of these boxes were loaded and stacked here by the original owners. The rest have been moved much more recently; a Routine Recon roll reveals they have been shifted within the week. Exploration will take

some time, as the room is unlit. However, they have to inventory all the boxes before they can be sure if they have everything they need. This means they will have to navigate the maze of crates and check each one separately.

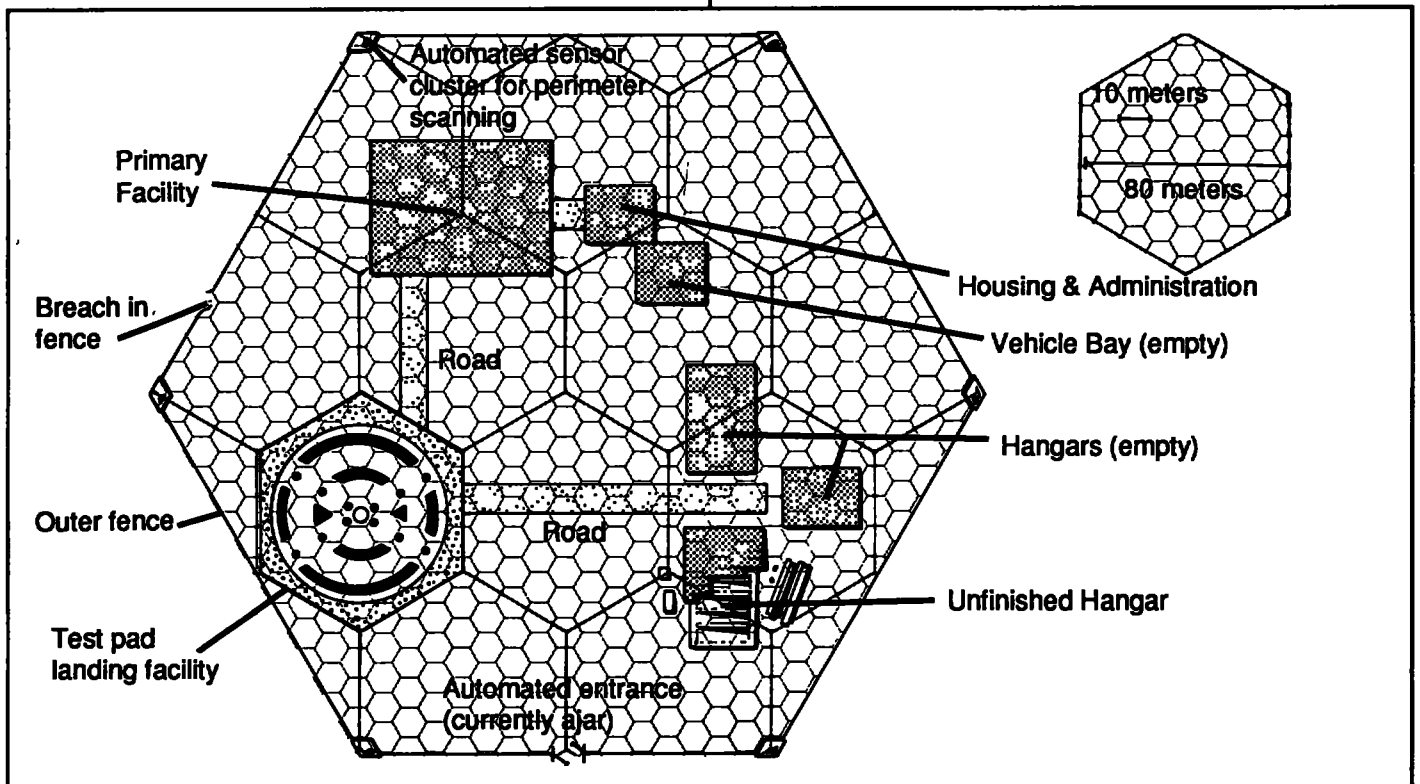
The characters will notice the wind howling through the main doors makes the slats of the crating shiver and rattle like dry bones. This is a good time to spook the characters: A flashlight failure plunges everything into darkness. A small indigenous creature scampers across someone's foot.

Before long, however, the group will come across the first body of a Tolex security guard. The first thing the group's flashlight will graze across is the bloodless face of the individual, staring up through the shattered faceplate of his vacc suit. Closer inspection will show that the vacc suit was first holed by some intensely hot or corrosive weapon, then torn to shreds. The guard's 5mm assault rifle lies nearby, four spent shell casings attesting to the fact that he fought back briefly before he died.

Just beyond the corpse, the PCs will find a broad hole bashed through the wall of crates. Apparently, something huge pushed its way out through the side of the maze, heading directly toward the administration and housing offices.

Administration and Housing: As the PCs follow the trail of whatever created this havoc, they encounter more Tolex bodies, ultimately 14 in all, all bearing the same kind of wounds. Whatever killed the security troops often went straight through walls to get to them. Judging from the small number of return shots fired, this tactic caught them by surprise.

Three bodies are to be found in the central office. It is clear they were using the old B & A files to determine which jump components had already been packed for shipment and which ones had to be disassembled and crated. The PCs can use these documents to determine that only the lanthanum coil refinement laboratory remains unready for shipment. The facility maps indicate where this lab is located.



(No Atmosphere: If the PCs decide to seal the central area and cycle out the native atmosphere, they will find out it cannot be done. Not only are the systems unreliable and slow in responding, but one monitor indicates that the chamber's pressure integrity has been compromised. However, there is no indication of where the breach is located; the sensor grid which would determine this is mostly inoperative.

Finishing the Job: Whether the PCs go to find the source of the other pressure leak or simply go to the jump coil lab to disassemble it and prepare it for transport, the result will be the same: They will awaken the creature that attacked and killed all the members of the Tolex team.

Accustomed to windowless, rocky dens with only a single entrance, the creature chose to lair in the chamber used to heat-test the lanthanum coils. Referred to as the "baker's oven," this chamber is located at the very rear of the laboratory.

As the PCs approach the lab through the clutter of debris strewn across the floor of the central area, the creature will smell them and exit its den. A PC with Recon or Stealth skill might hear this motion, but nothing can be seen.

The creature will exit the lab through a hole in the wall and make its way into the forest of small gantries, assembly frames and other industrial skeletons of the stripped facility that surround the lab. As the PCs move into this area, the creature will try to get behind them. It will enter the lab, then attack from

behind, thereby sealing off the only route of retreat (other than the hole it knocked in the side of the lab).

The creature has two methods of attack—a tremendously corrosive jet of acid spittle and its huge, stony claws, which it also uses for burrowing. Its claws allow it to smash through anything other than bulkhead walls in a matter of seconds. The creature does not attack humans due to hunger—it finds humans completely unpalatable. Instead, it is motivated by territorial instinct alone and will not pursue the PCs if they vacate the premises. However, as long as they remain in the facility, it will pursue them relentlessly.

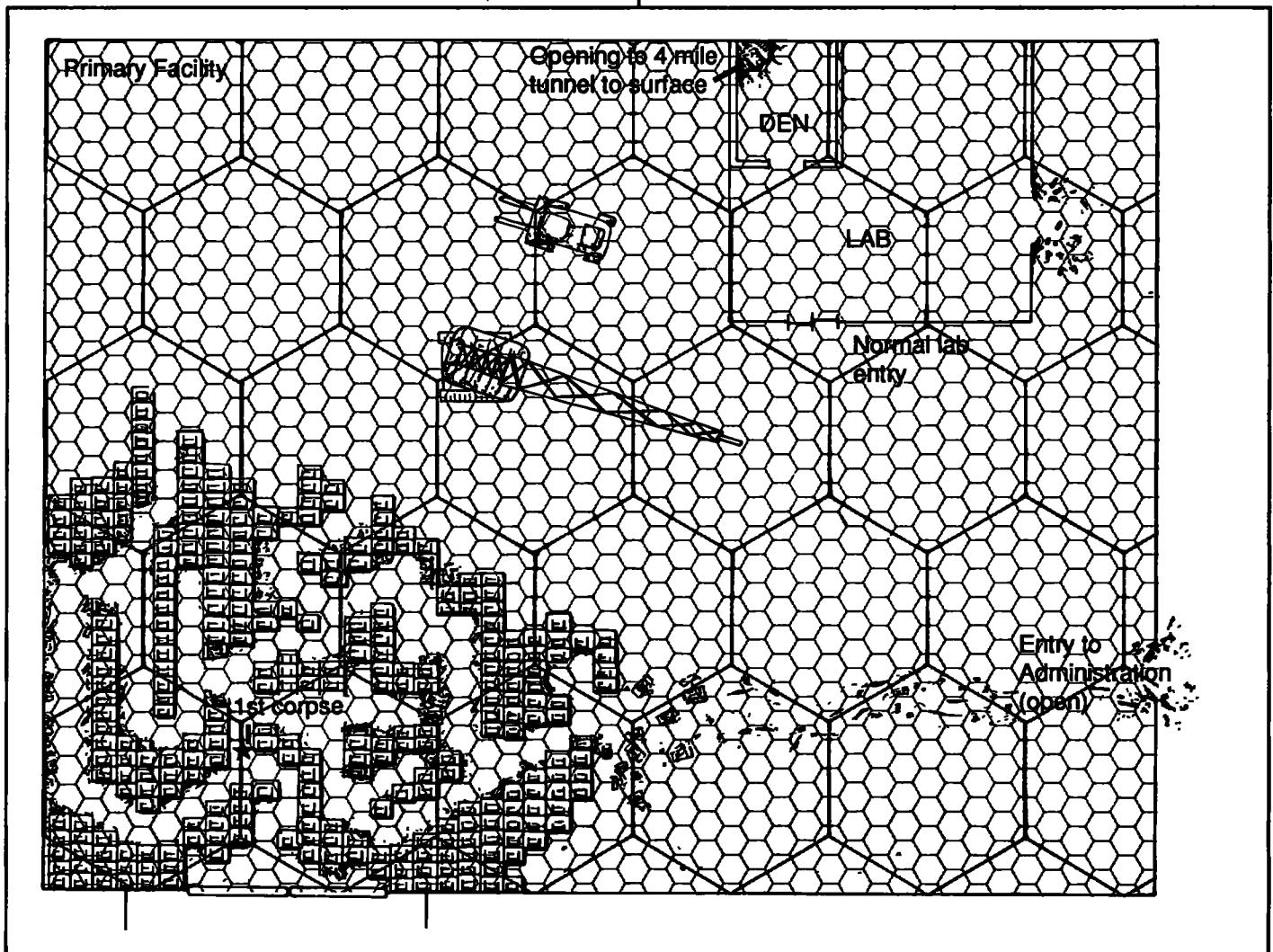
Twists: To turn the challenge up another notch or two, the referee might consider adding a mate to the creature already there or sending in a Tolex SWAT team armed to the teeth and wondering what foul play has befallen the first group. Woe to the PCs if these troops hear the PCs' gunfire and find the Tolex bodies.

Ending the Adventure

If the PCs survive and return the jump equipment intact, they will be awarded a lucrative freight contract—shipping the equipment to the purchaser on Westfir, a world in the Pasdaruu subsector.

If the Adventure is Used Alone

No change, except the PCs are not observed by Hortalez et Cie.



The slang we starmercs used became a language of its own, probably for the same reason that so many local dialects started veering away from Galanglic. There was no social touchstone, no larger sense of group identity that we experienced on a daily basis. As the Imperium became a warm, distant memory, we began to realize the only allegiance that really mattered was to the people we interacted with every day.

So, like every other subculture, we started evolving our own dialect. I think I first realized we were effectively speaking a different language when we came across a spinning shuttle just off the shoulder of the Feme system's big gas giant. The pilot started the conversation:

"Captain, I've got a bandit in a deadman's tumble at 300 KK, bearing 17-by-143."

"I roger that, Diceless. Turret?"

"Here."

"Bob, throw a lead head in tube 2."

"A lead head? Cap'n, this system's suitless."

"You're sounding as tumbly as the biofreight, Bob. You just hang on to your luckydice until I call for a body swap. 'Til then, we assume the sneak is a hosty."

Kinda sad, but we all knew exactly what the other guy was saying.



STAGE 2: COLLAPSE OF FINANCIAL MARKETS

Date: 001-1125

Even in the fragmenting Imperium, "money makes the world go 'round." Unfortunately, there's a great deal less money to go around as of 001-1125, which is why that date is considered the starting point of the Hard Times era.

Hard Times are not hard due to the damage done to the Imperium's ability to manufacture goods or acquire raw materials—although severe, this kind of damage is physically repairable. Rather, the crucial damage done by the war was the shattering of the economy.

In 1115, the Imperium represented a single, highly integrated market of exceptional fluidity. The economic environment allowed megacorporate planners to project production requirements and anticipated revenues decades into the future.

Commercial vessels of every size wandered the star lanes freely, carrying all types of cargos to all types of worlds. Corporate planning authorities were able to work within an economy that was broad and diverse enough to offer virtually infinite markets, yet the economy was also large enough, unified enough and standardized enough to allow security, predictability and huge economies of scale (*this was the miracle of the Imperium*).

Dulnor's first shot killed this market as surely as it killed Strephon. Suddenly, the Imperial economy was plunged into confusion and chaos. There were no more centralized authorities to detect problems and massage them away with 10-year economic plans and strategically designed subsidies. Markets became divided and trade routes interdicted by factional battle lines.

The spacelanes became battlegrounds, and merchants lived under the eternal threat of mobilization. Century-old trade relationships were severed; shortages became endemic; and industry shifted to war material or logistically necessary products. The once safe and reliable Imperial economy became a maelstrom of uncertainty and extreme risk.

By 1125, the Imperium ceased to exist as a single economy. Now, only the Safes function as they did before—all other markets are unknown quantities. Merchants have no way of determining the odds of success—or the likelihood of suffering a commercial loss—so fewer of them bother to venture into those areas which most need economic stimulation.

As Traders Pull Back, So Do Insurers and Banks

At the very basis of any speculation-based economy is the consideration of losses. Insurance rates are proportional to perceived risk. Consequently, as trade retracted and the areas outside Safes grew more hazardous, insurance companies and other financial speculators began withdrawing their services from these areas—particularly where piracy, theft or political instability were likely. Even in the Frontier, lending and insurance rates are now astronomical or simply unattainable.

Three major factors influence a financial company's willingness to serve a potential client. These are perceived protective measures taken by the insuree, size of the contract and reliability of risk ascertainment.

For instance, it is now almost unheard of for someone from a small planet in the Diaspora Sector to be able to get life insurance—at any price. The size of the contract is too small to make any potential insurer willing to overlook the fact that the risk probabilities are virtually unassessable.

Most commonly now, insurance beyond the Safes is only of interest to Frontier worlds. And in these cases, policies are taken out only for those facilities essential to commerce (starports, spaceports, industrial or resource extraction facilities) or for convoyed cargos of highly valuable items. The more protection the facility/convoy has, the lower rate it is able to get (and the easier it is to find an insurer). Single ships are generally unable to get insurance. Even in a convoy situation, the policy does not cover anything that occurs from the time the jump drives are engaged through the ship's reemergence into space normal. This last provision prevents attempts to make false claims of misjump, which can be faked by a last second jump coordinate alteration.

As a result, most smaller planets in the Frontier (and all the planets in the Outlands and Wilds) spend money on local defense rather than insurance. Even if they could find a company which would agree to cover them, collection would be a lengthy process, and lives cannot be replaced. Such worlds hope that as they grow, their heightened defenses will prove a better protection against catastrophic losses than insurance would be.

No Way to Finance Rebuilding or New Projects

The death of underwriting signals the end of loans, mortgages and liens. Small planets which are prime targets for raiders can no longer recoup their losses by borrowing credits to rebuild. As loan and mortgage collectors become more worried and less patient, barratry (starship crews "skipping out" on their starship loan payments) become epidemic. Merchant captains—already suffering from higher risks and outrageous maintenance, repair and protection fees—default on their ship payments and disappear along with them.

Those merchants who can still function at a profit are forced to adopt a new form of commerce insurance—starmercs. But as centralized databases break down and resumes become

increasingly uncheckable, convoy masters increasingly wonder whether the starmercs they are hiring are guard dogs or ravening wolves waiting to pounce upon their flock of ready-to-shear mercantile sheep.

In short, the majority of the banking, credit and development industries are beginning to topple. In the final analysis, markets will retract into local, barter-oriented economies.

As people see this handwriting on the wall, they leave the more benighted areas (creating a rush of immigrants bound for the Safes), start stockpiling technology they will not be able to produce in the future (driving up prices of key goods), or turn inward and shun the rest of the interstellar community.

The first two courses of action are becoming common in 1125 and have caused the creation of a new shuttle economy between the various regions of Hard Times. Merchants now leave the edge of the Safes bearing high technology, high-need goods. The farther outward they go, the more they can charge for these rare wonders. On their return trip, they load up with passengers fleeing these areas, as well as with raw materials and mail. This is a new method of trading—one fraught with danger. But hundreds of merchants are trying their hand at it as the year 1125 begins.

THE IMPERIUM AS OF 001-1125: DETERMINING THE EFFECTS OF STAGE 2

Effective with this stage, referees should begin using a modified starship encounter system when the PCs enter a new system. The new table is used in place of Starship Encounters Table 1 (page 91, *Imperial Encyclopedia*) except in Safe areas, where the old encounter system is retained.

DMs: -1 in Frontier system, 0 in Outlands, +1 in Wilds.

Note that beginning in Stage 5, there is a roll for raider presence in addition to the standard roll on this table.

Starship Encounters

Roll	Result
0	Merchant. Go to Table 2, page 91, <i>Imperial Encyclopedia</i> .
1	Civilian/Industrial. ¹ Go to Table 3, page 91, <i>Imperial Encyclopedia</i> .
2	Merchant. Go to Table 2, page 91, <i>Imperial Encyclopedia</i> .
3	Nonstarship. Go to Table 4, page 91, <i>Imperial Encyclopedia</i> .
4	Naval/Starship/Naval. Go to Table 7, page 91, <i>Imperial Encyclopedia</i> . (Starmercs consult Chapter 16, Section 3.)
5	Raider. Consult Chapter 16, Section 6. ³
6	Starship. Roll again for equivalent type, ignoring results of 0 and 6. Resolve as indicated, except that the encounter is with a non-gravitic vessel.
7	Raider. Consult Chapter 16, Section 6. ³

¹Industrial encounters include wildcatters, prospectors, ore freighters, mining vessels, etc. See Chapter 7 for discussion.

²Two-thirds of naval encounters are with local (not Imperial) units if tech level supports space travel.

³When using Chapter 16, Section 6, simply to generate starship encounters, only tables 2, 6 and 7 need initially be consulted. Depending upon the degree of the encounter, the referee may later wish to use other tables to add details.

Ship Operating Procedures In Hard Times

Transponder Discipline: Use of transponders is still required in Safe and Frontier areas, and the running standards still match those of the prewar Imperium.

In the Outlands, systems generally require transponder discipline as well, notifying arrivals insystem via broad band transmitter with a repeating message. Although details may differ, the thrust of these messages is that any ship in the system not running a transponder is assumed to be hostile and is fair game for any vessels wishing to engage it. In general, however, ships are too rare to be assigned patrol duties beyond the protection of key worlds and resources in the system.

In the Wilds, a complicated system of doublethink is developing. Many crews are experimenting with the new notion of "silent running," reasoning that transponder broadcasts only attract attention and serve as a beacon to any pirates in the area. However, the flipside of this is equally true: Given the prevalence of pirates in the Wilds, silent ships invite preemptive attacks by friendly forces as the presumption of ill intent still prevails.

Normal Running: Unlike in the old days, crews in Hard Times run in space-normal with their vacc suits on (helmets off but either attached to a belt or slung back). Sidearms are common, and if personnel are available, one individual patrols the ship's interior.

Contact with Other Vessels: Upon contact with other vessels, ships now depressurize most of their internal space, pumping the excess atmosphere into one or two designated rooms or into empty fuel tankage. This reduces the air to 0.2 atmospheres and allows personnel to breathe through compressors instead of having to seal their suits. If combat should commence and the hull is breached, this approach minimizes the loss of air since 80% of it will be in storage.

Rescue Operations: One of the most tragic casualties of Hard Times is trust: You can no longer be sure exactly who you are dealing with. This is particularly true in space.

A classic pirate tactic is to feign distress and radio failure. It is easy to mimic a real crisis by selectively bleeding atmosphere, adopting an awkward tumbling vector and operating the power plant in an erratic pattern. All these are frequent signs of a genuinely damaged ship and of a pirate ambush.

Consequently, ship's masters are now hesitant to engage in rescue operations. The more involved those operations are—and the more remote the area in which they occur—the less likely a captain is to stop and help.

Some old assistance maneuvers are no longer in use. For instance, no ship would consider directly mating its airlock to a crippled vessel anymore—too many times pirates have stormed aboard the assisting vessel as soon as the airlock is opened. Instead, grapnel guns and guidelines are used to transfer an inspection team over to a supposedly stricken vessel.

Technically, captains are still required to respond to ships in distress, but a great deal of latitude is now granted when it comes to assessing the validity of a mayday call. Of course, in many parts of the Outlands—and in the entirety of the Wilds—responding to a mayday has become more a courtesy than a requirement.

Combat Operations: When combat is imminent, crews "button up" (seal their suits) and "tie down" (secure themselves

with seat straps or safety lines to prevent being sucked out of the ship if the hull is breached and the 0.2 atmospheres are vented).

In general, ships during Hard Times engage enemies with lasers whenever possible. Having no ammunition supply to deplete, lasers are more cost effective and leave missile racks ready to fire if needed. Many ship's masters carry nuclear-tipped missiles, despite Imperial regulations that outlaw their possession. Upon entering a Safe system, the nukes are hidden; the old restrictions are stringently enforced in the Safes.

Ship's Troops: Although troops as such are rare aboard merchant vessels, many more ships now carry one or more persons as cross-trained crew/security assets. Desired skills for these "swings" are Zero-G Operations, Laser Weapons, Vacc Suit, and one or more skills useful to the running of the ship (Gunnery, Ship's Boat, Mechanical, etc.). Many ship's troops personnel are ex-marines.

Passengers and Internal Security: Hijackings have become more common than ever. Consequently, captains have increased security precautions.

- Neural Activity Sensor (NAS) or infrared imaging sweeps of cargo containers is now a common tactic to detect stowaway hijacking teams.

- Walking patrols are also a common sight on most starships, conducted by ship's troops or cross-trained swings. Whereas this would have seemed an unusual intrusion into the privacy of passenger quarters before the onset of Hard Times, such patrols are now reassuring sights.

- Crews often modify antihijack programs to have a lower response threshold, leading to some overreactive systems. But the attitude of most captains is "better safe than sorry."

- Engineering and other essential access points are now fitted with ID checking systems that will admit only authorized crewmembers. Access to such areas is controlled from the bridge, where watch-standers are armed at all times, and most ships now mount video sensors trained on the hallway leading to the bridge entrance. No one is admitted without being recognized.

- Hiring procedures have become much more painstaking since planted crewmembers are a favorite hijacker tactic, allowing the criminals to conduct an inside job.

Customs Checks: Given the dangers of ship-to-ship contact, the Hard Times customs check routine is for one individual from each side to be exchanged as hostages before the customs officers are permitted on board. Inspection tends to be more focused on specifics and less thorough overall. Each world has its own specific concerns (weapons, drugs, explosives, etc.), and officials check for those things very carefully. Other illegal materials are of lesser consequence, so it is much easier now to bribe officials to overlook them.

Cargo, Freight and Theft: It is now customary to stand watch over cargo and freight since theft is commonplace. Black markets are thriving just beneath every surface in Hard Times, so merchants (and others) must be doubly wary of scams, confidence rackets and other threats to their merchandise.

Dirtside Security: Many captains mount aggressive "hardstand watches." If no ship's troops are carried, a prudent captain can hire local security guards. The more expensive guards are available through the starport authority—which functions as a guarantee of dependability. Less expensive

security is available through independent channels, but you get what you pay for: The "guards" might be crooks setting up an inside job.

MERCHANTS IN HARD TIMES

The Hard Times environment is not an easy one for merchants. There are still profits to be made, but greater risks must be endured while making them. In addition to the obvious problems caused by the increase in piracy, merchants must also contend with changes in trading, cargo acquisition and brokers.

Finding Passengers, Cargo, Freight and Mail: The post-1125 environment is one in which passengers, cargo, freight and mail availability all differ from their pre-Rebellion standards. Tables showing the modifications necessary to standard *MegaTraveller* procedures are collected in the "Data Annex." These procedures should be followed starting with Stage 2.

Higher Tech, Higher Cost: Outside the Safes, high technology items are becoming increasingly rare. As a result, you must modify the tech level effects as listed on page 53 of the *Referee's Manual*. The procedure itself is unchanged, but instead of the 10% tech level multiplier, use 15% in the Frontier, and 25% in the Outlands and Wilds.

Higher Need, Higher Cost: There is one final modifier to the potential base selling price of cargo. If the goods are designed to serve transport, power generation, medical or combat needs, increase the base price by 10%. This affects all goods, regardless of comparative tech levels.

Return of a Barter Economy

One of the most unusual results of Hard Times is the return of a barter economy. With regular trade routes and production schedules a thing of the past, the buying or selling of large, standardized lots of material is just a memory in the outer regions.

The growing barter economy is also being fueled by the tremendous amount of salvaged goods that are in the marketplace—vehicles rescued from buried garages, weaponry taken from slain pirates, clothes found in a ruined department store. War's dubious bounty comprises almost 50% of all trading, and the proportion is growing. Anything not bolted down is likely to be sold as a trade item, and anything that *is* bolted down is likely to be sold as real estate.

Instead of being bought and sold by generalized lots, items are being marketed individually or in small numbers, based on their retail price. And an increasing number of trades involve exchanges of equipment or trade goods rather than credits.

On a roll of 7+, NPC buyers or sellers will suggest swapping equipment instead of exchanging goods for credits. Whether the PCs wish to swap—and whether they can cut a satisfactory deal—is left up to the referee and to the inventiveness of the PCs' roleplaying.

New means the item has never been used and is still in its shipping crate.

Prime means as good as new.

Used indicates visible wear but undiminished usability. Used equipment has over 70% of its useful life remaining.

Worn indicates an object whose useful life is clearly reduced. Worn equipment has over 50% of its useful life remaining.

Spare means the item is only usable as spare parts.

Junk is a device that has been damaged in an accident or in combat.

Condition	Percent of Retail Price
New	100%
Prime	80%
Used	60%
Worn	40%
Spare	20%
Junk	10%

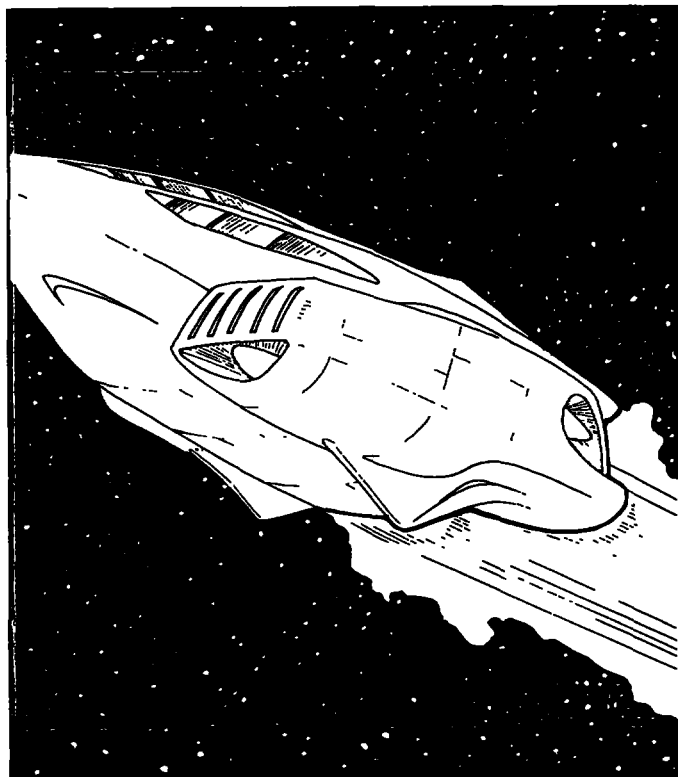
When determining the final selling price of these items, use the standard modifiers for tech level and for highly needed objects. Before buying such an item, PCs may roll a task to determine its future usefulness:

To determine the future usefulness of new, prime, used, worn, spare or junk equipment:

Routine, (appropriate skill), Intelligence, 5 min. (uncertain).

Spare and junk can be extraordinarily useful in the long run, reducing costs to mostly labor, as most of the parts are already there. Repair costs for a wrecked or battle-damaged vehicle (or engine or computer) are reduced by 50% if the PCs own a spare quality duplicate of the vehicle (or engine or computer). A junk quality duplicate reduces repair cost by 25%—or by 50% for routine annual maintenance. A spare quality device can be used once in this manner, then be treated as junk. A junk quality system can be used once for damage repair or twice for annual maintenance.

PCs with sufficient skills can make many field repairs on their own with sufficient spare and junk goods. The substantial drawback is that the spare and junk systems take the same amount of storage space as an operable system.



Brokers and Wheelers

The Hard Times era has changed the broker's duties immensely. In the pre-Rebellion era, a broker's job involved endless hours of staring at spreadsheets, making vid-calls, swinging large deals for hundreds of tons of freight at a time. That market has died, however, replaced by a narrower, more competitive market.

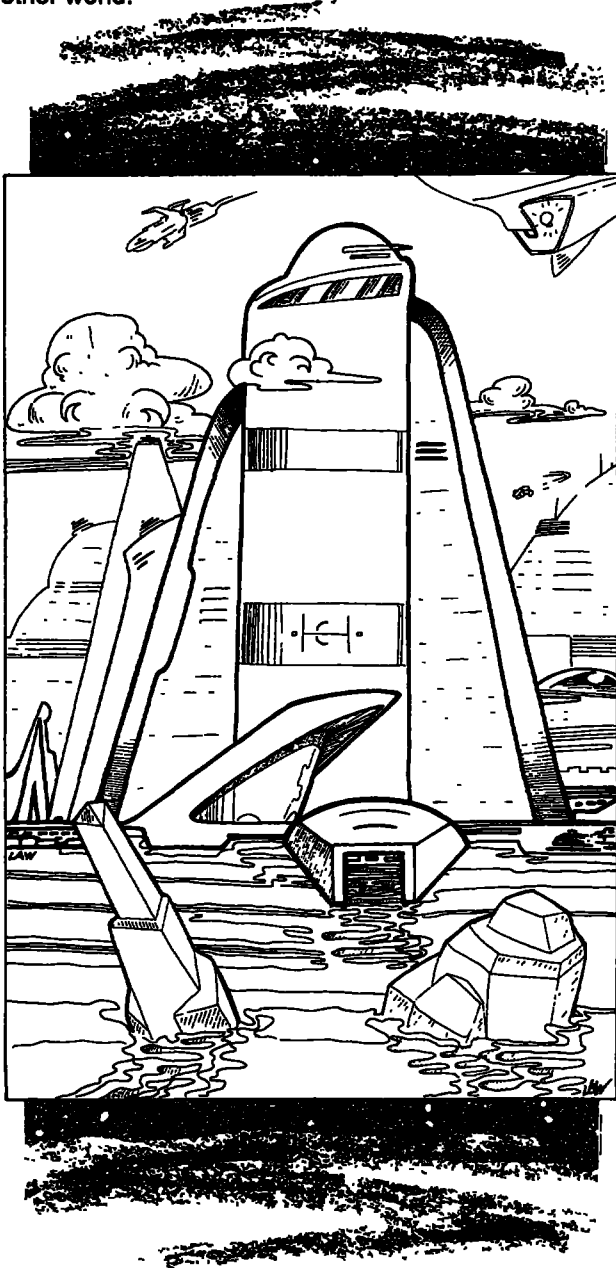
The new market is more dependent on local, personal knowledge and networking. Trade is less predictable; needs change rapidly; and it is all important to know who is in the market for what at the moment. Offworlders rarely have that kind of knowledge, nor can they get it rapidly.

Those who want to do without a broker can roll a task:

To find a buyer for a lot of goods:

Difficult, Intelligence, Streetwise, 1 week absolute (hazardous).

If the task is successful, the sale proceeds as normal. If not, the task may be repeated the next week, or the ship can go to another world.



If the individual attempting to circumvent the use of a broker is also trying to sell individual items rather than cargo lots, that individual is referred to as a "wheeler" (the shortened form of "wheeler-dealer"). Wheelers are hated with a particular passion by brokers, who correctly see wheelers as undercutting their ability to make a living. By finding buyers with an inexhaustible need for one type of item (armaments being a common example), the wheeler can effectively cut brokers out of the loop forever.

Consequently, the brokers wage an undeclared war against the wheelers. If a wheeler tries to locate a buyer using the task above and has a 3D (Major) mishap, the local brokers have gotten wind of the attempt. In response, they will make life miserable for the wheeler, creating administrative hassles through their contacts in customs, harassment (e.g., aggressive goons in the startown bar) and general blackballing. No broker on the world will deal with the wheeler ever again. If the wheeler rolls a 4D mishap, the brokers will make physical reprisals, including theft of goods, smashing of cargo, sabotage of the ship or outright attacks.

Miserable Prospects

Like canaries in a coal mine, traders were among the first to take ill from the disease of Hard Times. On the cutting edge of economic trends, traders dependent upon prediction and speculation found out the changing environment was making their methods impossible. Commerce was no longer a science—it was a crapshoot.

To reflect this uncertainty, characters with Trader skill operating in the Outlands roll their customary pretrade die. However, unbeknownst to the PC, the referee will only allow this roll to be valid on a 1D6 roll result of 1-3. The PC will not know the skill is invalid until the time comes for resale—then the pretrade roll is ignored and 2D6 are thrown for the base price.

Worse still, traders cannot use their skill at all for shipments into the Wilds. No matter how much data they have, conditions there are so fluid (and so bad) that there is no way to even guess the selling price.

Protection

Trade is not just more difficult in Hard Times—it's also more dangerous. Consequently, there has been a steady increase in the demand for mercenary vessels—the starfaring equivalent of dirtside mercs—to provide security for merchants. The individuals who provide these services—starmercs—are generally an honorable, if laconic, lot. They are experts at what they do and make their reputations by being smarter, braver and fiercer than their pirate foes.

Many use ex-navy vessels, although almost half of those ships currently in starmerc hands are well below the prewar Imperial technological standards.

Tables for generating starmerc units are collected together in Section 3 of the "Data Annex." This section includes information on starmerc availability, costs of services, unit composition and starmerc career resolution.

Not all the vessels in a starmerc unit need to be present for hiring at one world at one time. Economic and operational needs often call for the unit to be split up for multiple jobs or for starship maintenance. Thus, if a generated starmerc unit has three ships but the availability roll shows only one ship for hire that week, the ship can still be from the generated unit.

STARMERCS IN HARD TIMES

In *Hard Times*, the previously unthinkable notion of pirates operating non-jump capable spaceships has become commonplace.

With patrols by military craft now extremely rare, pirates can operate effectively and safely in a single system. Since non-jump ships are much cheaper to own and operate, many more small operators find it possible to be pirates in *Hard Times*, which means that the total number of pirates has skyrocketed.

This explains much of the chilling effect which has depressed interstellar trade and transport.

Convoys are more common, and the freelance security ship—the naval equivalent of the merc unit—becomes an important institution. As might well be expected, some of those same security ships may do some raiding of their own during lean times, but for the most part, they are manned by reliable professionals.

Who and What

After years of intense civil war, starmercs bear little resemblance to their pre-Rebellion forebears.

Their antecedents were employees of large corporations used for troubleshooting, antipiracy ops or support of dirtside merc excursions.

The war found starmercs being drafted into the service of any and all nearby factions. Whether by reactivated reserve commissions, nominal governmental ownership of ships or new laws, the factional governments pulled more strings than the average starmerc could dance to. And once brought into factional service, the mercs were used as expendable forces to save the cream of the regular navies. They largely killed—or died at the hands of—starmercs drafted unenthusiastically into the service of some other faction. Those who have survived to 1125 have been ill-used and are ill-preserved, but they are tough.

The starmercs have lost their youth, their illusions and their original ships. But what they have retained is a measure of their quality as living beings.

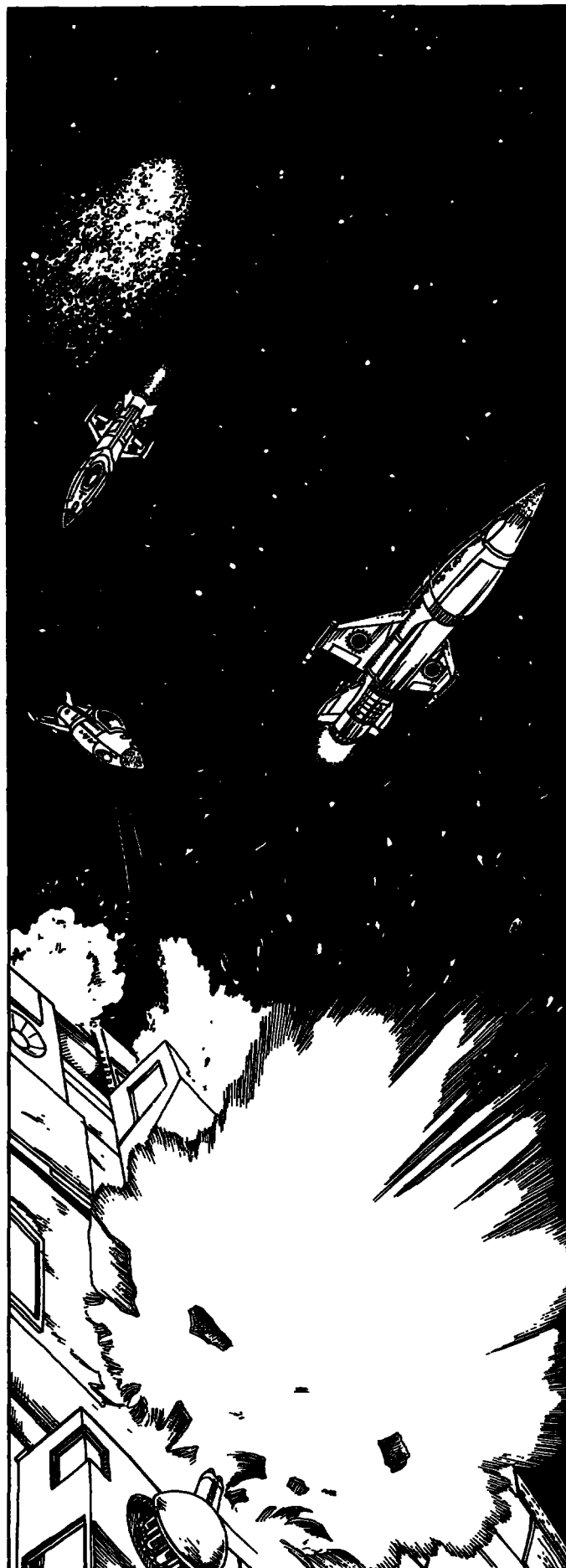
Starmercs are suspicious of large governments, of factions and of megacorporations. But having been battered flotsam in a maelstrom not of their own creation, they know what it means to be small and vulnerable in a universe of enemies. And in scattered, isolated worlds struggling to hang onto civilization—as well as in far ranging free traders striving to follow the beat of their own drummers amid the death throes of a society—the starmercs perceive kindred souls.

The starmercs and many *Hard Times* raiders came from the same origins. They were naval personnel who had seen too much senseless carnage and destruction. The worst of them, now rippers and pirates, grew inured to the violence and found their loyalties—all loyalties to anything—burned out.

Others, now vikings, made a separate peace. They kept their loyalties to themselves.

The best of these, the starmercs, took their loyalties to those who deserved it—not the squalid pursuers of thrones, not the builders and slayers of empires, but the ordinary people who merely tried to live through each day.

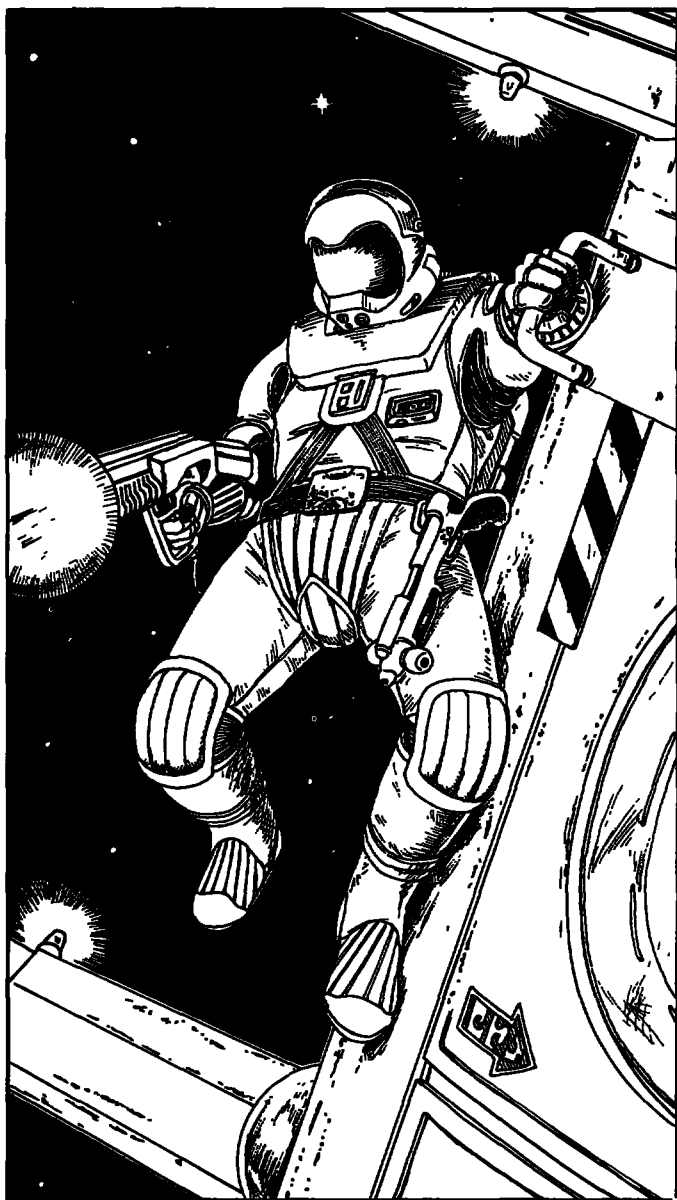
But if they are courageous, if they are the closest thing left to heroes in a dark time, you won't hear it from them. They're just doing their jobs.



Starmerc Shipping

Some starmercs carry a price on their heads payable by the last faction they deserted. Most have had ships shot from under them or have had to trade them for "paperless ships"—undocumented vessels that do not exist administratively—in order to dodge that one last remobilization. Their main concerns are their ships—most of which are down to TL13 or lower, and are hard to repair or replace. Outside the factional navies, starmercs are virtually the exclusive owners of their most cherished types of vessels—the sleek, classic 440-ton patrol cruisers, the burly 880-ton merc cruiser, the lean and hungry 440-ton corsair, and the darling of the starmerc's eye, the swift 330-ton *Gazelle*-class close escort. Although 1000-ton former Imperial Navy destroyer escorts are sometimes seen in starmerc service, the smaller vessels are the heart, soul and registered trademark of starmerc operations.

When arming their ships, starmercs hang onto a triple missile turret, then look for lasers. Needing nothing but a steady power supply and technology that's been around since TL7, lasers are the reliable and robust weapons to build a reputation on. While starmercs will mount finely tuned particle



accelerators, plasma guns and fusion guns, they are always a little nervous about these flashy, high-tech thoroughbreds. It's hard to think too far past the next spare parts chit.

As the protectors of legitimate traders and travellers, most starmercs see themselves as the guardians of what remains of the law. They began carrying nuclear-tipped missiles in about 1123, when they decided the Imperium had ceased to exist and those committed to law enforcement needed power to back up their intent. However, acquisition of such weapons can be tricky, and starmercs find that one of the most valuable additions to a crew is a member with Streetwise skill and an aptitude for creative scrounging (use Administrative and JOT skills).

Starmerc Firearms

Given the necessity of operating alone, the starmercs of Hard Times are more concerned with ship's troops than were their pre-Rebellion predecessors. Most captains feel at least a single fireteam of ship's troops is indispensable, providing boarding and seizure capabilities as well as shipboard and dirtside security. Those captains who can afford the space and payroll retain a platoon in order to give them a shot at standard mercenary tickets. For this reason, the *Broadsword*-class cruiser is still a sought after vessel.

Ship's troops are typically armed with laser rifles and carbines for shipboard use, plus weapons which can be resupplied from the more common tech levels of Hard Times—TL7-9 assault rifles, RAM GLs, LAGs and rotary MGs. Starmercs operating near a high-tech Frontier might be equipped with ACRs, and the gauss rifle is now the premier sniper/commando weapon. Personal armor is usually cloth or combat environment suit, but combat armor of all types is highly prized.

Making a Credit

Courageous defenders of civilization or not, starmercs have to get paid. Maintaining top-of-the-line starships and weapons doesn't come cheap, nor does risking your neck every day for a living. The charges for hiring a starmerc escort are a major source of income for the unit, but not the only one. Salvage is another major portion of starmerc income and often provides the margin of financial success or failure. Defeated adversaries leave behind valuable equipment, including disabled starships. It's an important part of their jobs to collect and haul the wreckage to market—the starmercs also double as part-time traders.

One advantage starmercs enjoy is the good grace of brokers. Brokers know full well that, in a sense, every starmerc works for them by helping commerce to continue. As long as starmercs resist the temptation to become wheelers, brokers will give the odd-fractional percentage point benefit to their local unit.

Like other entrepreneurs, starmerc captains have accepted barter as a market reality. When not paid in cash, starmercs accept shipboard and ground weapons, sensors and communications gear, vehicles, and repair and maintenance services.

Some starmercs engage in raiding, but "only under absolute necessity" or "during really hard times." No spacefarer dares repeat such phrases to "a real starmerc." Real starmercs take savage pleasure in hunting down and engaging "part-time starmercs" moonlighting as raiders, and they do not typically take prisoners.

Starmercs as PCs

Becoming a starmerc does not require generating a character with that specific career background. Most starmercs are former naval or marine personnel, or ex-scouts from the security branch.

Players who wish to add a few years in a starmerc career to a character with such a background, or those who want to roll up a pure starmerc, can do so with the tables located in the "Data Annex" chapter. Note that for player characters and referees who wish to quickly bring their campaign up to 1125, this might be an attractive way to fast-forward through the years between their current campaign date and the beginning of Hard Times.

Starmerc Slang

Frequently portrayed as the gruff but good hearted ne'er-dowells of the star lanes, starmercs have an informal sense of brotherhood.

As subcultures often do, they have begun to evolve their own slang. And as is generally the case with respected elites, they are finding their argot being adopted by other individuals who make their living in space.

A-Walls: Starmercs who began their careers by deserting one of the faction navies, usually Lucan's. Derived from "absent without leave" (AWOL).

Balloon Room: The chamber the onboard atmosphere is pumped into when a ship has made contact with another vessel of possibly hostile intent.

Blofreight: The standard crew complement that has no skills pertinent to the running of a spacecraft. The old Solomani equivalent is a person referred to as being nothing more than "excess baggage." This term is frequently used to refer to the ship's troops.

Body Swap: The process of swapping hostages prior to customs checks or other procedures requiring an intership connection to be made.

Buddy System: The practice of having a crewmember accompany customs inspectors as they conduct their inspection.

This procedure keeps a "false" inspector from stealing or planting demolition charges which might cripple the ship and make it vulnerable to hostile boarding attempts.

Closet: To be condemned to death by exposure to vacuum. Derived from the use of small, closet like airlocks to carry out the sentence.

Deadman's Tumble: An apparently stricken ship in a three-axis tumble—it has uncontrolled pitch, yaw and roll elements in its aggregate vector.

The name derives from the fact that vessels with this awkward collection of vectors are very difficult and time-consuming to rescue. Consequently, anybody on board the ship is a "dead man."

Pirates are known to imitate this tumble in order to lure would be rescuers, so many ship's captains refuse to assist any ship with this kind of motion.

Diceless: A person or thing that is invaluable, priceless. This term is often used to refer to a ship's captain and its pilot since these are the only two people who are not eligible for use in a body swap.

They have no need of luckydice and are, therefore, called diceless.

Dry System: A stellar system without gas giants, or any planets with ice or water. Jump-capable ships can often be stranded in such systems.

Hosty: A hostile.

Hot Spot: An area or object with dangerously high radiation levels. The term is derived from the reference to the part of a ship's outer hull that has been irradiated by externally mounted nuclear warhead storage boxes. Keeping nuclear weapons stored in boxes on the ship's outer hull is a common practice when starmerc captains have a lot of warheads available but not enough room to keep all the necessary lead boxes on the ship.

The hull sections where these boxes are mounted remain detectably radioactive for quite some time and must be avoided at all costs.

Kickback: Being in jumpspace. Derived from the fact that watchfulness for pirates, raiders, etc., can be relaxed after entry into jumpspace. Therefore, the personnel can kickback (or relax). Another analysis suggests the term derives from the jolt given off by old drive coils when engaging the jump drive.

KK: The spaceside term for 1000 kilometers. Differentiated from the dirtside expression "kiloklick."

Lead Head: A missile with a nuclear warhead. Derives from the fact that on ships without damper boxes, warheads are stored in massive lead boxes.

Luckydice: A good luck charm or spot of good fortune. Derived from the dice used to determine which crewmember is offered as the hostage during a body swap. "Hang on to your luckydice" is an expression which means you aren't safe yet (you might still have to roll the dice). This term is the equivalent of the old Solomani expression "don't count your chickens until they hatch."

Shmuze: A crewmember who interacts with passengers for the surreptitious purpose of attempting to determine if any of them are potential hijackers. The derivation is uncertain. One school of thought suggests connections to the Vilani term "shamuusa," meaning comfortable or easy.

More etymologists lean toward the Old Solomani Yiddish term "schmooser"—a person who interacts congenially with others in order to generate goodwill for some upcoming purpose.

Sling Jockey: The pilot of a pregravitic-era spacecraft. Spacecraft propelled by fusion rockets are generally not included in this definition. Derived from the slingshot-trajectories (gravity assists) utilized by the pilots of such craft in order to conserve fuel and shorten transit times.

Sneak: Any decoy or deception used to facilitate an ambush, or a ship (or object) suspected of being such. Similar to the old Solomani concept of the Trojan horse.

Suit-and-Tie: Travelling in normal space. Derived from the fact that when travelling in normal space during Hard Times, vacc suits are worn, and the helmet is usually slung over the back or tied to a harness by a lanyard.

Suitless: A safe area or situation. Derived from the fact that upon entering Safe systems, crews are usually allowed to conduct space normal operations without their vacc suits on because raiders avoid the well-protected Safe systems.

Tumbly: A person without skill in Zero-G, or a hopelessly naive person or behavior. Derived from the tumbling efforts of individuals trying to operate in Zero-G without appropriate training, a classic dirtsider trait.

ADVENTURE 2: PAPERWORK PIRACY

The PCs have arrived in the Westfir System, where they are delivering the shipment of jump drive equipment from Nihesi—attained from the first adventure. Landing in Westfir's class-B starport is a pleasure when compared to the marginal facilities encountered since Nihesi. Traffic is brisk; a half-dozen STL ships sit in varying stages of completion; and there seems to be a reasonable chance of acquiring a worthwhile cargo here.

Shortly after the PCs have remitted their freight to the designated recipient, a detachment of uniformed private security troops marches purposefully across the tarmac. The customs officer with them demands to speak to the ship's master. His message is blunt: According to computer updates received by the local starport authorities earlier today, the characters' ship is eight months behind on its loan payments. By law, the creditor company may repossess the ship and charge the PCs with attempted barratry.

("Barratry" is a nautical term referring to an attempt by a ship's master or crew to defraud the ship's owner, in this case a bank. Remember that the bank owns the ship; the PCs own the liability for the loan).

The customs officer indicates Oleg Sondor, the commander of the accompanying private security detachment, as being in charge of the creditor's repossession jobs in this subsector. Sondor smiles sharply and presents documentation—printed on the creditor's letterhead and accompanied by signed letters—attesting to the fact that payment on the hull is overdue, and repossession proceedings are formally underway.

The PCs may point out payments on the ship are current, or at least not so far behind that repossession is in order. But the customs official will not believe them unless they produce their own documentation.

At this point, Sondor's smile fades, replaced by a furious scowl. He demands the PCs to vacate the ship at once, or he will take it by force. The customs official intervenes, wishing to compare the PCs' documentation with Sondor's. He forbids Sondor to take any action for 24 hours while he researches the conflicting data. He also informs the PCs that until further notice, they are not to travel beyond the starship extrajurisdiction zone, and are not permitted to launch or otherwise move their ship for any reason.

Glaring at the PCs, Sondor mutters something about filing barratry charges, turns on his heel and stalks back to the starport's main terminal. Fingers tight on the triggers of their 7mm ACRs, the members of his security detachment follow him.

World: As of 1125, Westfir (2613 Pasdaruu/Diaspora B326842-D) has emerged as the new technological jewel of the Pasdaruu Subsector and does a thriving maintenance business at its class-B starport.

The planet's biosphere is marginal, the thin atmosphere being tainted with local spores which cause severe irritation to the human gastrointestinal tract. Much of the world's 60% hydrosphere is locked up in oversized icecaps.

Although it suffered considerable civilian casualties in the 1118 invasion by Solomani forces, Westfir managed to avoid the worst effects of the war.

TL13 cannot be maintained much longer, but adjustments to maintain TL11 self-sufficiency seem likely to succeed. However, the planet's republican government is beginning to devolve

into bureaucracy as long term appointed project managers enjoy the perquisites of power once held by elected officials.

Westfir's main city, Greenspire, is located with the starport and has been reconstructed along humbler, more practical lines. Most of the ruined environment domes remain unrepaired; underground dwellings were developed to replace them.

The expansion of trade has created a large, ramshackle second startown around the dome that used to house the old startown. This new community—nicknamed Wheeler's Run—is where much of Westfir's nonbrokered trade is conducted by some of the subsector's most active—and hated—wheelers. It is also rumored to be a pesthole of thievery, vice and smuggling.

Referee's Information

Sondor and his half dozen security troops are actually a group of very slick vikings masquerading as a repo team. They are part of a sophisticated raider group known as the Black Tear, Sondor has been keeping a watch on inbound shipping for some weeks, waiting for a likely target. The PCs' vessel was perfect—it was from far away, so no one on Westfir was likely to have personal knowledge of the crew or the ship's reputation.

Also, the Black Tear's bootlegged ship registry documents indicated the holder of the vessel's mortgage—and Sondor and his group had blank copies of the firm's letterhead. A little forgery and manipulation of the local computer database for ship registry and barratry listings, and Sondor was set to repossess the characters' ship.

Sondor was not surprised by the delay in his plans. In fact, he counted on it. He intends to wait the 24 hours, then attack—after formally accusing the Westfir starport authorities of aiding and abetting the PCs' attempt at "boldfaced barratry." He speculates (correctly) the locals will be too uncertain to interfere.

Adventure

It should be clear to the PCs that any attempt to shoot their way out will only confirm their guilt in the eyes of the authorities, and Sondor will get their ship. Instead, the PCs are going to have to disprove Sondor's claim. There is more than one way to skin a viking, even a slick one, and the following are places for the PCs to start.

Within the Starport: The PCs have several courses of action within the starport.

- By law, the PCs are allowed to see the evidence presented against them. A visit to the starport administrative offices within the extrajurisdiction zone will allow them to see the registry update report on their ship. It looks similar to reports they've seen before but prominently features the message about the ship being seized by local agents of the creditor for nonpayment. Characters with Admin-2 or greater can read the routing code information on the form and confirm it did indeed arrive that morning on the regularly scheduled mail run. The office personnel know the characters are suspected of barratry and give them the bare minimum of assistance. Only bribery or other persuasive interaction might gain the PCs a copy of the report. Any Major or greater mishap, however, results in a call to starport security and makes the PCs more suspect.

- If they attempt to contact Sondor or his firm, the PCs will

find out there is no listing for him or his office in Greenspire or Wheeler's Run. Starport officials explain that Sondor's team operates out of the starport security office, which is nothing more than a lounge where independent security teams relax and pick up messages when coming on duty. Sondor left no information on how the office can contact him; rather, he comes in to check his messages daily. If the PCs attempt to break into the office, they will still find no trail to Sondor, but a Major or better mishap will result in their arrest and will confirm their guilt in the eyes of the authorities.

Beyond the Extrallty Zone: The PCs might try to escape the starport area in one of several ways. Climbing over or cutting the perimeter fence will require Recon or Stealth skills. Bribery is another option, as is smuggling themselves out in a trash container or within a cargo shipment from another ship. The latter, however, will require the PCs to convince another ship's officers to help them, and may involve grovelling or bribery. With any of the above methods, Major or greater mishaps result in the PCs being discovered, with the attendant loss of credibility. If they make it out, the referee should periodically roll to see if the PCs become involved in a robbery, argument or fight.

- Asking around in Wheeler's Run watering holes about Sondor will require Streetwise, Persuasion and/or Interview skills. Several successful interactions will allow the PCs to form the following picture: Sondor has been on Westfir off and on for two years, but he wasn't always called Sondor. Rumor has it that he was a pirate, and he didn't always have a place in the nice part of Greenspire.

An exceptional success roll in any interview attempt will result in the PCs meeting an individual who can describe surviving an attempted piracy about three years back. Before being rescued, the individual was held at gunpoint for some time by Sondor, who then was called Graf.

An exceptional failure means some of Sondor's old cronies overhear the PCs and report to Sondor, who will pay his friends (four individuals, armed with shotguns and pistols) to find the PCs and eliminate them.

- If asking specifically about Sondor's whereabouts, with a successful roll the PCs can get vague directions to a location in Greenspire.

- While asking around Wheeler's Run, the PCs may hear a ship's officer complaining about the regularly scheduled mail run for that morning not arriving. A vessel did arrive that morning and unloaded some message traffic, it was an *unscheduled free trader (the Ha' Penny)* not the official mail run. The customs and admin offices seem to be unaware of the mixup. But this ship's officer is awaiting the new ship registry update which shows the lien against her ship is in order, so she knows for a fact that the mail run has not arrived.

- The PCs overhear an argument between a lawyer and his uncooperative ruffian client. The lawyer yells he's got too many other cases to worry about to waste his time on this one, and he storms from the bar.

Following up the Leads

There are several obvious next steps.

Evidence of Piracy: If the PCs try to take the evidence of Sondor's unsavory past to the starport authorities, the appropriate office will be closed for the day. If they return first thing the next morning, they will have to bring witnesses or deposi-

tions from their interviews in order to get a fair hearing. Even this will take several hours, but the port officers will start talking about delaying Sondor's timetable for repossessing the ship.

Visiting Sondor's Office: The directions will get them within a few blocks of Sondor's place, but it will take several hours before they find the door with the small plate reading "Security Services." If they knock, they will be met by one of the guards they saw earlier, who will lock them out and call the police.

If they break in instead, they will find the same guard dozing, but with his ACR close at hand. After subduing the guard, the PCs will discover schedules for barratry update deliveries (including the one that should have—but didn't—arrive the previous day), files full of blank letterhead for dozens of banks, illegally obtained authentication seals and other counterfeiting equipment. Again, taking this equipment to the starport customs authorities will have to wait until morning, but this will prove their innocence.



Pursuing the Mail Run Lead

Again, there are several obvious next steps.

- The PCs can contact the ship's officer they heard complaining that the regularly scheduled mail did not arrive with her new ship registry update. If they tell her their story, she will immediately wonder if the two events are connected. (They are not. It is merely an accident the mail ship is late. Sondor did not catch the change and inserted his false registry update into Westfir's database erroneously. It is a legitimate mistake the starport offices did not make the connection either.)

The ship's officer will take the PCs to meet a friend of hers, starmerc Captain Abrex Justinian. Justinian does not know Sondor but can give the PCs an illegal top-level access code to the planetary database which will allow them to track the registry update correspondence logs. He asks them to report back to him on the results; he might have to check into Sondor himself.

- The PCs might decide not to contact the ship's officer above but to try to investigate her lead on their own. This is a formidable task (Computer, Admin or Intelligence), and only one attempt is possible given their lack of access to a well-protected database.

- If they pursue the argument between the lawyer and the client, they can get to know A.W. Robertson, gunslinging Westfirian lawyer. His statistics are as follows:

586897. 42 years.

Admin-3, Computer-2, Interrogation-1, Legal-2, Carousing-1, Streetwise-1, Wheeled Vehicle-1, Auto Pistol-2.

No ordinary lawyer would have hollered at a ruffian in a Wheeler's Run bar, but Robertson is no ordinary lawyer. Operating in Wheeler's Run for five years has taught Robertson he can get away with a lot of bluff and bluster if he carries a firearm, and he carries it conspicuously, in a quick-draw rig. He is currently a lot less busy than he lets on, but pretending to be busy allows him to charge more for his services. He is not dishonest but knows it takes a large financial margin of error to get by these days.

If the PCs approach him, he will ask to see Sondor's documents or to hear an account of the charges. After this, he'll abruptly stand up and announce, "Sounds airtight to me. I'd advise you to settle out of court." This is a bluff to force the PCs to prove their seriousness, and if they do so, he will agree to look into the affair for Cr600 a day. "After all, your ship is worth a lot more than that," he says. If the PCs work with Robertson, they'll come across the registry update data described below.

- The PCs might approach the crewmembers of the *Ha' Penny*, possibly assuming they are in on the scam. It is only coincidence that *Ha' Penny* arrived on the day scheduled for the registry update, and Sondor mistook it for the scheduled mail run. Depending upon how the PCs approach *Ha' Penny's* crewmembers, they may be able to find out the guards answering the description of Sondor's men assisted in the unloading, giving them opportunity to insert their false message.

Registry Update: If the PCs succeed in the above attempts to access the registry update database, they will discover the correspondence logs of the registry update show a message corroborating Sondor's claims arriving in the database early that morning. However, the only vessel that arrived with mail that the *Ha' Penny*, and she was not carrying the monthly ship's registry update. When the PCs check the *Ha' Penny's* mail

download log, they will discover that her mail delivery was numbered in a routing code sequence completely different from Sondor's one message. Sondor's message is numbered in sequence with the scheduled registry updates, but this information has not arrived yet. Sondor's letters aren't worth the paper they're printed on.

Presenting the Evidence: The PCs should have enough information to at least postpone official action on repossessing their ship. But through the same inside connections which made his confidence game possible, Sondor has already learned his duplicity has been discovered and time is running out.

Meanwhile, Back at the Ship: While some of the PCs are trying to get the local authorities to dismiss the barratry and repossession proceedings, any PCs remaining at the ship will note Sondor and his six guards approaching the ship in a swift, wheeled vehicle.

The vehicle will drive up to the vessel's main airlock, and Sondor—along with three of his troops—will deliver an "official" document of the Westfirian government announcing he has been given permission to continue with his proceedings. He will push his way into the ship and, if the PCs let him, march toward the bridge with two of his troops in tow. Another will swerve toward engineering.

If the PCs attempt to block his way, a murderous short range firefight will commence. Sondor will appear to stumble into the nearest character and will slide a concealed dagger out of his sleeve. His troopers will fire over the head of their "stumbled" leader a second later. The troopers have skill levels of 1, with 7mm ACRs (loaded with DS). Sondor has the dagger and a 9mm Magnum autopistol; his relevant skill levels are 2.

Sondor and the troops with him plan to commandeer the bridge and make ready for launch. The troopers who remained with the wheeled vehicle will drive to the rear of the ship and blow open any available hatch or iris valve with a demolitions charge. Their job is to commandeer engineering and warm up the engines.

If Sondor cannot overcome the PCs within three rounds, he will attempt to withdraw since local security forces will begin to arrive on the scene in another 10 rounds.

In the event the PCs have left the ship untended during their encounter with the Westfirian officials, they will return to find two of Sondor's troops guarding the main airlock, with preparations for liftoff well underway. They will have to fight their way onto the ship within five rounds, or Sondor will be able to lift off.

Ending the Adventure

If Sondor is defeated, investigation will show his connections to the Black Tear viking band. If the PCs return to Abrex Justinian, he can give them some information on Black Tear in particular and vikings in general.

If Sondor escapes with the ship, local authorities will debate about what to do. Justinian will offer to help the PCs recover the vessel in exchange for a Cr100,000 IOU and will waste no time in getting about this business once an agreement is struck. But the PCs are expected to lead any attacks; it's their ship, so it's their hides.

If the Adventure Is Used Alone

No changes are necessary.

I don't think I realized how bad things were until that time we were laying over at Beso. The locals decided to take the fusion reactor off line to work on it. Being friendly types, me and my crew went down to take a look at the job and see if we could lend a hand. Maybe earn some good will and a few free meals in the bargain.

As the locals ushered us into the toroidal containment core, I saw a flickering blue light up ahead. I froze—what the heck was that? The machine was cold, so how could there be a short?

I turned to the local with us, who must have read my mind by the look on my face. He just smiled—a bit sadly—and shook his head. He waved us on.

"That's when I turned the bend and almost lost my vision. I suddenly found myself staring into an intensely bright point of blue-white light. I threw up a hand, closed my eyelids and watched the green-blue after-image chase around against the darkness.

I could hear the smile in the local's voice as he said, "Never seen one before, huh?"

"Nope. Used X-ray lasers where I'm from."

He sighed. "So did we—before the war. But tools wear out—or are appropriated by the military. Now, this is all we have to work with."

I nodded and opened my eyes again, cautious of the intermittent, violent glare outlining the welding team before me.

I had never seen an electric arc-welder before.

STAGE 3: RECESSION OF PLANETARY ECONOMIES

Date: 180-1125

One of the foremost changes in Hard Times is the decline of technology. Technology is a reliable indicator of per capita wealth and commercial health. It might seem that large, industrial worlds (particularly those which are self-sufficient in terms of food and water) should be able to retain their tech level in times of difficulty. Unfortunately, any given high population, high technology world in the Imperium did not develop its technology alone. Rather, it did so in the context of a vast interconnected economy, the various parts of which supported each other by providing markets for manufactured goods or by providing key goods for sale.

The nature of the pre-Rebellion Imperial economy was a highly integrated and interdependent marketplace. Policies stressing self-sufficiency were generally unpopular because they were seen (often rightly) as representing isolationist attitudes. Such policies were also costly in terms of damaged commerce (due to offworld merchants avoiding what they considered to be a xenophobic market), and in terms of decreased production efficiency.

Technological self-sufficiency means building everything yourself. While it may be a good survival tactic, it is a disastrous economic plan if a world is part of an integrated market. Instead, specialization in a few key products allows the world and its population to generate a great volume of carefully refined goods and thereby sell premium items at lower costs (which attracts a tremendous volume of business). The higher the tech level a world has, the more extreme the trend toward specialization becomes and the more vulnerable to the economic disruption that lies at the foundation of Hard Times.

Worlds are now scrambling to become self-sufficient in every way they can. Unfortunately, self-sufficiency requires a world to create supplies of systems covering the entire spectrum of civilized needs, which means they have to accept a lower common denominator. A world that once grew rich supplying a subsector with TL15 hairdriers and holorecorders must now develop innumerable other industries. Since it can

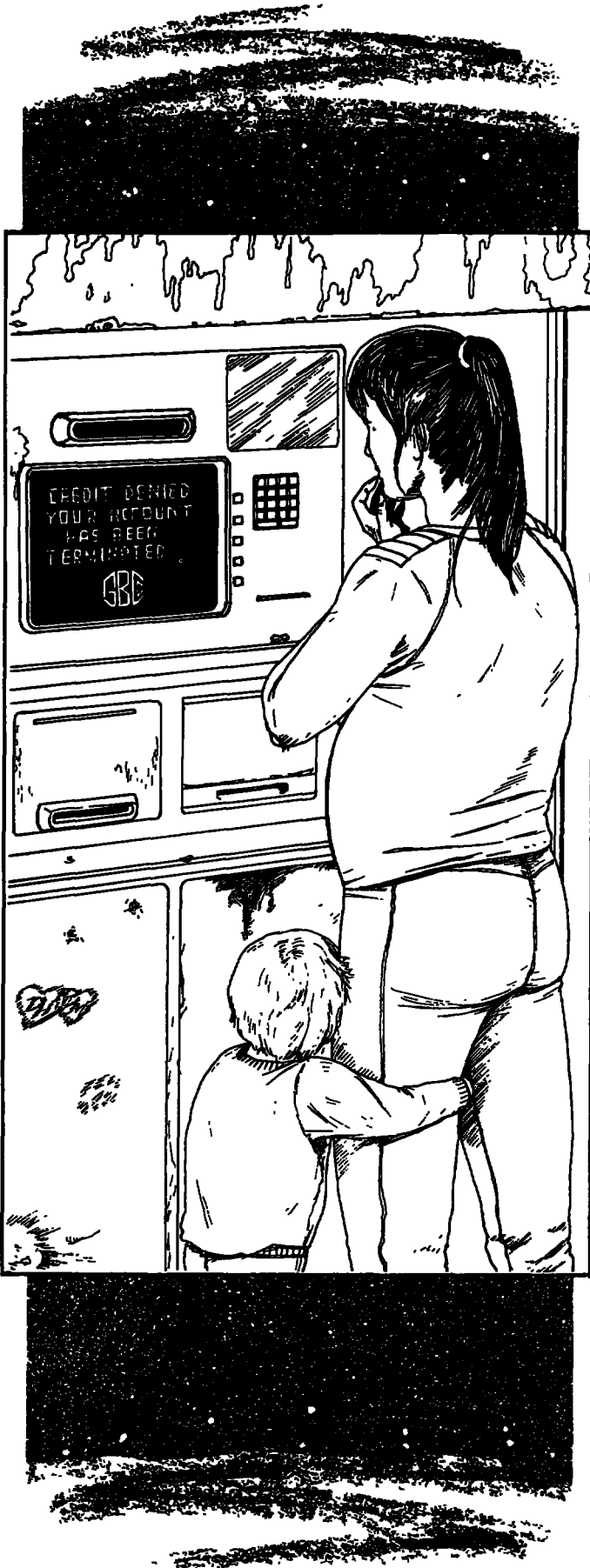
no longer devote the effort to the high-tech specialty items, it can no longer purchase TL15 fusion plants and footwarmers from its neighbors. Therefore, such a planet will cease to be TL15 in a few years. If economic collapse requires self-sufficiency, then self-sufficiency clearly demands a considerable reduction in technology.

Safe Money and Frontier Finances

As the economic recession sets in and tech levels roll backward, individuals, governments and businesses begin to look at the credits they hold in their hands. They not only count them, but they also consider the stability of whatever is backing their value. And many of the hands holding those credits begin to tremble.

With the Imperium cut into many small pieces and with huge tracts of it effectively out of contact (or out of control), there is good cause to wonder exactly what a credit is worth during Hard Times. Almost every faction and major power center has dallied with the notion of issuing its own scrip (money), but each has thus far rejected the notion because the value of any legal tender is based on the net worth of the issuer. The Imperial credit was—and is still—based on the net value of the Imperium. No one faction can hope to equal that value.

As the Imperium slides further toward permanent fragmentation, faction leaders begin to wonder whether the "greater value" offered by a unified scrip—the pre-Rebellion Imperial credit, also known as Lucan's credit or the Core credit—is worth the unpredictability resulting from "sharing" a currency with other power centers. For instance, Lucan's mercurial nature makes him likely to strike out on some rash new campaign of destruction—which will devalue the money and erode confidence in it. Some client states and large corporations have decided the higher value of the unified credit is not worth the instability, and they have begun to print their own scrip. However, they still use the Imperial credit as the basis of their currency—from subsector to subsector, there is no variance in its exchange rate or acceptability. Major scrip issuers are generally recognized without difficulty within their own Safe. They are rarely recognized beyond this area, except in some regions of the adjoining Frontier.



Cash and Carry in the Outlands and Wilds

On planets where contact with stable markets is dwindling, the relevance of the Imperial credit is diminishing. Cut off from larger markets and reliable scrip issuers, such worlds are forced to start printing their own money.

Individual worlds are comparatively risky as issuers (and subsequent backers) of currency. More generally accountable are banking institutions that serve as investment/transaction centers for multiworld trade routes in the Outlands. These institutions issue scrip which is locally recognized and accepted. They usually maintain a close watch on the markets in the Safe areas and adjust the amount of currency in circulation so as to keep the independent scrip on an equal value with the Imperial credit.

Smaller worlds (UWP population of 4-5) and those in the Wilds are likely to base their currency on bullion reserves, having an insufficient trade flow to generate confidence in capital-backed currency. Worlds too small to even have bullion reserves of any appreciable size (UWP population of 1-3) do not have a separate currency but operate via recognized scrip or specie (coins made from precious metals).

Referees are urged to stay away from trying to introduce exchange rates and the like. Rather, players paid 10,000 local credits on Jedell, for instance, may find their money is no good on Aight. The merchants and government of Aight might not want to risk accepting credits from a world that may be overrun by wild-eyed anarchists within the week. In actuality, money brokers might buy the cash at a depreciated value. But for sake of simplicity, referees should consider staying with the simpler black-and-white distinction of scrip which is universally recognized and scrip that isn't.

An easy and interesting option is the introduction of specie currency, which does have fixed values since the value of the coin is in the metal it's made of. Most areas turning to specie currency have adopted the following standard, which was common during the Long Night:

Coin	Cr	Mass
Copper	0.2	50 grams
Silver	10	30 grams
Gold	300	30 grams

All these coins are available from Outlands customs currency counters and are supplied at a 2% exchange surcharge. They are recognized on all Frontier worlds and are available via exchange on half of them. These coins can be cashed in on Safe worlds, but are not usually recognized by merchants there.

THE IMPERIUM AS OF 180-1125: DETERMINING THE EFFECTS OF STAGE 3

The changes in UWP tech levels are probably the most dramatic and crippling of all the changes brought on by Hard Times. Worlds with inhospitable environments have to devote more time and resources to ensure long-term self-sufficiency in life support. Such worlds are forced to build their own food production facilities, environmental system modifications, replacement parts—all at the expense of maintaining their tech level.

Tech level changes from Chapter 3, "Effects of Hard Times," or from the interpolation of the 1124 and 1128 Khavle and Pasdaruu data should be instituted now.

Rules for Using Old and New Tech Levels

The Imperium produced a lot of high-tech equipment in its centuries of industrial vigor. Not all of this equipment could possibly have disappeared by 1125, but what used to be common high technology is now very special and increasingly rare. For instance, military units can no longer acquire fusion or plasma weaponry except at exorbitant prices—and even then, most of it is used. More mundane items have ceased to function because the parts wore out—and no replacements were available. Each failed system becomes a source of spare parts for those devices which remain operable. Junkyards grow, and working items dwindle.

In addition to interrupting industrial output and the flow of replacement parts, the violence of the Rebellion also accounted for a tremendous level of technology being destroyed. Vehicles, weapons, power generation systems, starships, spaceships, environmental, medical and food production equipment—all of these were prime targets for attacks or seizures. And once a world's defenses were crippled, they fell prey to salvagers and scavengers.

As a result, much of the old technology is gone, and most of the remaining items are jealously hoarded by governments or other major power centers. Those last few PGMP-13s are not for sale—they've been assigned to a planet's crack security unit. Grav vehicles are retained for serving needs only they can fulfill, and they are pampered with endless hours of preventative maintenance and careful storage.

The new Hard Times tech level rating of a world reflects its most recently produced (and generally available) technology. The most important technologies (military, vehicle, spaceflight, medical, environmental, power generation and a planet's primary industry, such as agriculture on an agricultural world) tend to be produced at this new tech level. Consumer goods—including but not limited to food, clothing, toiletries and simple gear—are usually produced at one tech level less than the new local maximum.

An exception to this would be an industrial world, whose trade status as a competitive net exporter of manufactured goods would require these goods to be at the current maximum tech level.

Conversely, some goods may be produced at an even more regressed level of technology. For example, on worlds with pleasant biospheres, food production may—in some areas—be three tech levels under the current maximum tech level. This reflects the increased focus upon family plots, subsistence farming, part-time agriculture collectives and fishing or hunting to earn a few extra credits.

Referees and players can use the following rules to help them define the technoscape of worlds in the midst of Hard Times:

- The maximum tech level of any items present equals the pre-Hard Times tech level.
- The tech level of generally available important goods equals the Hard Times tech level.
- The tech level of generally available consumer goods equals the Hard Times tech level minus one.
- The tech level of more basic consumer goods equals the Hard Times tech level minus two or three.

Thus, a world with TL8 could be produc-

ing TL8 laser carbines and TL7 consumer goods, and using TL5 farming methods (with a good biosphere). If that same world were agricultural, farming would represent an essential pursuit of the society and would be conducted at TL8.

Determining the Availability of Prewar Tech Level Items

The location and acquisition of indigenous prewar technology is a task which has varying levels of difficulty, determined by the world's Hard Times starport rating and the level of technology desired (the prewar maximum or one less than that).

Refer to the Acquisition Tasks Table in the sidebar.

If an attempt via government channels (bribery) results in an Exceptional Failure, the characters' attempt to locate items will be discovered, and the local authorities will attempt to arrest them and bring them to trial. The more severe the failure was, the more severe the penalties will be.

DMs: If the attempt is through government channels: Admin and Bribery. If the attempt is via the general market: Streetwise.

NEW OPPORTUNITIES FOR WORK AND ADVENTURE

As worlds adjust to making do with lower technology and reduced resources, many old methods that were uncommon in pre-Rebellion times are being rediscovered.

The interaction of industries in even one system can form a rich campaign background, especially in the early stages, when many of them are being set up. The cross-cutting goals of many groups—such as economic warfare between the skimmers and cutters over control of the fuel market of a desert world, or competition between wildcatters, surveyors and prospectors for access to a certain planet—can create adventure opportunities unique to the Hard Times period.

Spaceside Industries

Although the Hard Times era is typified by decreased interstellar travel and technological retraction, this does not mean all planetary populations become less interested in space travel. In many places, quite the opposite is true. World governments with as much common sense as xenophobia quickly realize space is more important than ever. Space affords them the opportunity to acquire resources that (if available within their own biosphere) are either in limited supply or impossible to get without ruining the biosphere itself.

This means people on most worlds will be interested in protecting the dirtside ecology and acquiring energy, metals and other natural resources from the wasteland of space. By staying active in space, they also find it more cost effective to provide their own space defenses and maintain a capability for interfacing with the occasional interstellar visitor.

Spaceside industries increasing in importance are therefore concerned with intrasystem operations (not interstellar). They include the following:

Acquisition Tasks				
Starport				
Task	A	B	C	D, E, X
To find prewar TL	Routine	Difficult	Formidable	Impossible
To find prewar	Routine	Routine	Difficult	Formidable

STL Commerce: Just as ships ply the space between the stars, so too do they carry cargo between the planets within a single system.

However, as economies become more self-sufficient and insular, the importance of such insystem merchants and freight haulers rises dramatically. With a sudden surge in mining, prospecting and new settlements on previously underdeveloped worlds with marginal biospheres, Slower Than Light (STL) traders find themselves busier—and more important—than ever.

STL merchants and bulk haulers largely carry the same kinds of freight and cargo at the same rates interstellar carriers charge.

Optional Rule: To be more accurate, referees may want to show that these rates are greater in pregravitic systems due to the longer travel times and opportunity costs of interplanetary travel at early tech levels. To determine the precise increase in cargo/freight costs, use the following equation:

Percent increase of cost equals (9-TL of mainworld)×10.

So shipping freight within a TL7 system costs an additional 20%— $(9-7) \times 10 = 20\%$.

If referees elect not to use this option, they are strongly advised to study the cost effectiveness of freight transport for independent operators—they may not be able to make a profit. In this event, all such STL commerce would be government subsidized or by government craft. In turn, this means only key insystem resources would have been exploited.

Wildcatting: Wildcatting is hydrocarbon and petrochemical harvesting near gas giants. This is accomplished using heavy-hulled grav or VTOL craft within the planet's atmosphere as collection rigs.

Wildcatters generally collect in tanks the hydrogen, methane, ethane, and (more rarely) acetylene compounds and propane from the atmosphere of gas giants. These substances are then stored in liquid form and sold as fuels or industrial processing agents.

Hydrogen, methane and ethane can be collected from the upper reaches of a gas giant's atmosphere with a comparative minimum of hazard. However, the more complex compounds—acetylene and propane—can only be gathered as precipitation at the lower extremes of the atmosphere. Such compounds are usually only found in gas giants three or more orbits beyond the habitable zone of a system. They may also be found on worlds with dense, exotic atmospheres which are similarly located in the extreme reaches of the outer system.

A true wildcatting rig is capable of going into the lower depths of a gas giant atmosphere to collect the "propane rain" that provides one of the few complex hydrocarbons, it does not originate as a fossil fuel—and can therefore be valuable to many systems which do not otherwise have ready access to petrochemicals.

Wildcatters are from all walks of space life and are a rough, daring bunch. They are proud of the dangers they've faced and somewhat contemptuous of new hands (known as "kittens") until they've faced—and lived through—a crisis.

Skimmers: Rivals of wildcatters, skimmers are involved only in gathering simple hydrocarbons from less hazardous environments. This includes ice mining on outer planets and skimming gas giants for hydrogen.

Skimmers generally make a lower daily wage than wildcatters (who refer to them as "scummers"), but they are much

more likely to live to enjoy it. Hydrogen gas gatherers consider themselves to be the true skimmers and refer to ice miners as "cutters." Ice miners tend to have fewer useful space skills and be from poorer backgrounds.

Surveying: The Hard Times era forces societies to face the necessity of exploiting resources available locally, and many mainworlds now send missions to insystem worlds previously considered marginal.

Combined with the need to assess the availability of natural resources—metal, rare earths, frozen water, inert gases, free hydrocarbons—this push to explore potentially habitable real-estate has created an upswing in the demand for qualified surveyors, mineralogists, cartographers, sensor operators and the like.

Rare Earth Prospecting and Mining: One of the more lucrative—and violently competitive—forms of prospecting and mining involves rare earth elements. Uranium, thorium and their radioactive relatives are all in great demand. Whether for power plants or weapon systems, these substances command top prices on all worlds, regardless of tech level.

Rare earth prospector/miners are cagey and quick to shoot. They don't hire individuals—or trust them—quickly, but are generally as fair as the next fellow. Those who deal with the black markets, however, may also be connected to various raider groups, passing them information on flight plans for commercial vessels and supplying them with the necessary materials for nuclear missiles. All at a premium price, of course.

Metals Prospecting and Mining: The classic asteroid miners of pre-Rebellion fame, these operators have long years of experience in their trade and are usually quite honest. Newcomers are warily welcomed if they seem to be cooperative and not ruthlessly competitive.

Many of these operations are now springing up on small moons and planets, equipped with solar-powered mass drivers for delivering their payloads to pickup vessels. Called "rocksidlers" by the masters of prospecting vessels, these miners are often cut from rougher, more treacherous cloth.

Fuel Caches/Tank Farms: An increasing number of fuel depots are needed to support booming intrasystem trade and transport. Usually located in orbit around key planets or at key transfer points, these establishments are little more than living modules, a few support craft and a mammoth collection of tanks of every type, size and shape.

Depending upon the tech level of the system—and the craft still in service within it—these tanks may be stocked with just about any type of fuel—cryogenic, ionizates, refined hydrogen, unrefined, petrochemical, even nuclear (although that is usually stored at some distance in separate armored bins).

Tending a fuel depot is often a dangerous job; they are favorite targets for raiders.

And obviously, the chance of catastrophic results increases when almost all hits by hostile forces will be impacting fuel tanks.

There's plenty of work for qualified Zero-G combat personnel and fighter jockeys at these outposts—they never give in to raiders without a fight.

Solar Power Satellite Construction and Launching: Solar power satellites (SPSs) are one of the most inexpensive ways for prefusion planets to generate large amounts of power. Although the initial costs of such systems can be quite high, the long-term benefits are obvious: Sunlight is free, and its trans-

mission dirtside has minimal ecological effects.

Consequently, even a number of fusion capable worlds build a few platforms as reserve energy sources. Although most SPSs are locked in geosynchronous orbit over a dedicated dirtside rectenna (often occupying more than 100 square kilometers of flat, barren land), some SPSs may actually be located on a nearby moon.

Many worlds with extremely limited spacefaring capabilities will hire individuals to acquire and emplace SPS systems for them. In addition to putting the necessary components into the right orbit and then assembling them on-site, SPS jobs offer opportunities for long-term security contracts. After all, it wouldn't be wise to leave such a critical, fragile and valuable power system to the tender mercies of the first raider band who happened along.

Interstellar Industries

The changing nature of interstellar transport has created new opportunities for starship personnel.

Mercenary/Security Tickets: The starmerc and onboard security services are in high demand.

Acquisition of High-Tech Equipment or Stores: This job description covers both legitimate salvage specialists and market-savvy raiders who liquidate any high-tech equipment they don't need or want.

Salvage operators are a hallmark of the Hard Times economic scene. Daring to return to battered planets, old battlefields and abandoned cities, they concentrate on unearthing operable technological items of all types. The richest finds are naturally weapons, vehicles, ships, power generation equipment and medical supplies.

And since it's always easier to let someone else do the work and then steal it from them, raiders prey heavily on the salvage operators. Salvage operations usually take place in remote areas, so it's simple to seize the operators along with their rich finds. Salvage operators are therefore heavily armed and are large employers of ex-military and security characters.

Transport of Megacorp Strategic Coordinators: Since megacorporations are still trying to control their assets across the Wilds, Outlands and astrographic barrens known as rifts, they must maintain communication between their spread out holdings. This communication is usually in the form of strategic coordinators and their families. Strategic coordinators are highly skilled, highly placed megacorporate executives who are being assigned to a distant post—perhaps in a different Safes clear across the Imperium. They carry instructions and strategies to guide megacorporate holdings and operations in the area for at least the next five years.

The megacorps have a lot invested in these officers, and their safe arrival is a major corporate event. Consequently, the megacorps hire top quality security forces to ensure that the strategic coordinator will arrive alive.

Of course, raiders know they can name their price for returning one of these captured individuals to the original, or a rival, corporation. Therefore, such operations, already large and elaborate, often involve decoy convoys and covering forces to throw flocking raiders off the scent.

Mail Carrying Across the Outlands and Wilds: This is yet another lucrative, high-risk, security occupation. Although it is often assumed by starmercs, some merchants will chance it themselves, but much of the additional revenue goes to

beefing up their security measures.

Long-term mail contracts are awarded only to starship operators who follow a somewhat steady route. As a result, they are more predictable and are likely targets for pirates. So mail carriers arm their vessels heavily and are ready for combat.

Planetside Industries

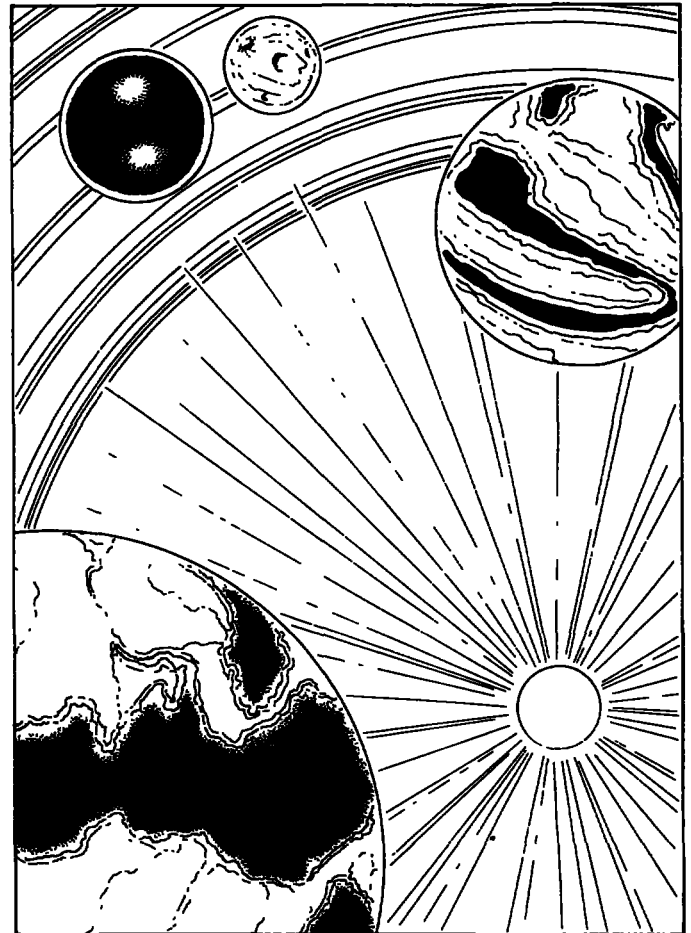
Lastly, some dirtside industries are also seeing considerable growth.

Mining: Although most worlds try to conduct their mining as a spaceside activity, not all can afford to do so. Low-tech worlds must turn to planetary resources rather than mount expensive and dangerous space operations.

Geothermal Energy: Many TL8 worlds are attempting to augment their energy supplies by sinking shafts for the generation of geothermal energy. This is an ambitious (and dangerous) mining job.

Tidal Energy: Worlds with hydrospheres of 4 or more—whether Water or Fluid—find they can generate energy from the power of the tides. Such projects are large and expensive, and involve a great deal of underwater work in submarines and in personal suits. They are also subject to weather and sabotage.

Hydroponics: On worlds without a biosphere, establishing a dependable indigenous food supply becomes a major issue. One method that has seen great success is hydroponics and related aquacultures. These tanks can be built on or beneath a planet's surface—or, more profitably, in orbit, where they can get sunlight for free.



ADVENTURE 3: UNPLEASANT PROSPECTS

Obron Harkar needs transport back to his native world of Konya, a small chip of rock with barely 150 people on it. Konya has little to offer on its own. But one orbit closer to the small orange star Konya circles is a large, dense planet which the Konyans call "Sutter." And on Sutter is gold—never very much in one place, but enough to support the people on Konya and the colony of 30 miners who work the planet.

Several weeks ago, Konya lost contact with the mining colony on Sutter. A ship sent to see what happened never returned. A tersely worded, anonymous radio request for Cr300,000 in ransom was all that came back.

Konya is a small system with few ships since the Solomani invasion, and almost all the system's ex-military personnel were part of Sutter's regular workforce—and are, therefore, already held hostage. The people of Konya decided they didn't have the strength to deal with this problem themselves—the only way to thwart the kidnappers was with outside help.



Harkar will pay for his journey back to Konya with a fistful of crumpled, old middle passage tickets (which are still redeemable for cash in the Frontier and Safe). He will then hold up six more tickets—Cr48,000. This is all the people of Konya can offer now, he explains. But if the colony on Sutter can be retaken and the hostages freed, then he will double the payment—in gold specie.

World: Konya (2914 Pasdaruu/Diaspora D200205-5) is an absolutely unremarkable little planet with almost no natural resources other than enough ilmenite to convert into its own meager oxygen (and, along with hydrogen, water) requirements. Once boasting TL15, Konya shows clear signs of rapid and tragic regression. The Solomani took the locals' best ships; Lucan's forces damaged their life support facilities; and time has caused numerous breakdowns. The end result is a rapid plunge down the scale of technological sophistication. Recent welds on the environmental domes show the uneven splatter of the thermite welding, a sure sign things can't get much worse. If they do, there won't be anything left at all.

Sutter (DAA4103-5) is a very dense world with an extremely turbulent atmosphere. Severe wind and lightning storms are exacerbated by the average surface temperatures, which range well in excess of 100° C. The mining colony dome is of TL13 construction, but efforts are being made to allow the life support to continue functioning even if the systems have to be adapted for TL5 parts. This will probably mean pressurizing only essential areas of the dome and venting any waste gases back into the mine shaft. Work will have to proceed in suits, which increases risk and decreases productivity.

Referee's Information

The mining colony on Sutter has been seized by one of the most dangerous—and ruthless—raiders in the subsector: Jugisaal Lakidgussar (see page 28). He and his band are not pirates by trade as much as they are by inclination. They are a collection of vicious brutes who kill and destroy for the savage joy of it, rather than for wealth and power.

Lakidgussar's band is typical of what starmerces are starting to call "rippers." This particular group—known as the Killer Sharps—descended on Sutter without warning, dodging the sparse protective radar envelope with ease. They landed a few kilometers away from the mining base (built over the main shaft) and sabotaged a small area of the environment dome in a manner that made it look like a natural pressure failure. Almost all the miners suited up and congregated to fix the growing leak. Then the Killer Sharps hot-wired the main entrance and broke into the dome, seizing the main control room and the power plant. The miners offered a brief but futile resistance.

Lakidgussar keeps his hostages in an area that can easily be vented open, allowing him to kill the miners with the superheated lethal atmosphere at the toss of a single switch. He maintains a small guard in the dome while he and most of his crew remain in his ship, grounded outside the main entrance and ready to flee at a second's notice. He has taken the 300 kilograms of gold from the site and is waiting for the ransom while he ponders his next move. Of course, Lakidgussar intends to kill the miners, even if the ransom comes. He's never seen people simultaneously scalded and poisoned, and he thinks it would make a fascinating spectacle.

Adventure

The PCs will have no problem getting to the Konya System, being debriefed by all the knowledgeable people on the main world and then getting to Sutter. Similarly, they will have no more trouble than Lakidgussar did when they attempt to evade the early warning orbital sensors. The difficulty lies in figuring out how to attack Lakidgussar and save the miners.

The PCs have no way of knowing where Lakidgussar has hid the hostages, or the numbers of his band. With Lakidgussar's ship commanding the main entrance to the dome, this approach is out of the question. That leaves several alternatives.

Old Shaft: Harkar (who accompanies the PCs on their mission) will tell the PCs about an old shaft the miners had to abandon almost 100 years ago. Tectonic shifts opened seams up along its length, making it impossible to gauge when a cave-in might occur. The miners sunk a new shaft, moved the dome and started mining a new vein. At one point, a natural crevice from the old mine passes within a few feet of the new mine shaft. With mining gear or demolitions charges, the two passageways could be joined. Of course, this would allow the outside atmosphere to enter the main dome (the old shaft entrance was not sealed off). However, the cooler temperatures in the deep rock will tend to slow that process.

If the PCs try this approach, they will emerge into the main dome and find the Killer Sharps in absolute chaos—atmospheric warning sensors are going off, but they don't know where the problem is. The PCs should be able to take care of almost all the rippers in the dome without sustaining any losses—not all the Killer Sharps have personal communicators, and the rippers are only encountered alone or in pairs. Lakidgussar will not have anyone left in the main control room to throw the switch that would kill the hostages.

Sabotage Breach: An even more devious—and possibly effective—entry would involve a slight widening of the breach Lakidgussar so thoughtfully provided when he sabotaged the dome. With a little demolitions, the opening can admit personnel one at a time. Harkar explains that the kidnappers will hear the blasts, but will have a hard time telling them from the cracking of lightning and the slapping blasts of wind—traits of Sutter's climate.

Since the breach is very near where the miners are being held, the PCs will be in a better position to secure their safety by cutting the wires controlling the vents. The PCs can then begin taking on the Killer Sharps.

The gang members will be a bit more organized in this situation since they will know where the new environmental problem is stemming from and may suspect a rescue attempt. But rippers are vermin sociopaths, not warriors. Once they realize they face opposition—not victims to abuse—they will run for the ship in absolute disarray.

Direct Attack: A direct attack on Lakidgussar's grounded ship, although unlikely to damage it severely enough to prevent escape, will compel Lakidgussar to abandon the complex and his guards. He will jump immediately upon reaching 100 planetary diameters. What the desperate and panicky rippers left inside will do is anyone's guess.

Ending the Adventure

A fitting last scene would be the party retaking the central control room, with several of Lakidgussar's bullyboys in hand-

cuffs. A final communication from Lakidgussar would allow the PCs to get a look at their fleeing adversary—an impeccably dressed, thin-faced individual with a midnight shock of hair. Lakidgussar will suggest that he'll be looking forward to their next meeting—which he says may be sooner than the PCs think. With a wicked smile, Lakidgussar will close the channel.

In the meantime, Harkar and several of the miners who require medical attention will return with the group to Konya, where the balance of the PCs' payment is waiting in the form of gold coins.

Special Note

This adventure qualifies for the optional bad karma rule. See page 95.

If the Adventure Is Used Alone

Lakidgussar does not have to run away to fight another day. Consequently, the referee might wish to play him as a psychopath who cannot accept defeat—he must stay and fight the PCs to the bitter end.



One night in Dehrapur, Shellene and I figured we'd find a 2-D movie and gather the rest of the gang together for a little communal R & R. Given the firefight we had been through the week before, we deserved the treat.

We may have deserved it, but we couldn't find it. Every single vidrenter's booth in startown was boarded up. So we went into the main city.

We spent almost an hour wandering from one folded business to another. You could hardly find an open theater (holo or vid). Banks and insurance offices apparently weren't doing any better; every one we passed was dark and empty.

When we got to town center, we found some signs of life—most of which was now operating as a subsidiary of one of the megacorps. We finally found a automated vidvender in a food market, but there wasn't a single vid that was less than seven years old.

STAGE 4: CORPORATE RECONFIGURATION

Date: 001-1126

Megacorporations thrived in the fluid, interconnected economy of the pre-Rebellion Imperium. However, the extreme regionalism of Hard Times and the lack of a strong central government are anathema to the continued health of these financial giants.

Consequently, they begin to consolidate their positions by centralizing. This strategy stresses a compromise between establishing defensible positions, focusing on astrographic regions they're already heavily invested in, and switching their emphasis to industrial production.

The effects of this strategy push along the decline of the Wilds and the Outlands while stabilizing the Frontiers and the Safes. Megacorporations move or abandon those assets which are not in secure areas, shifting whatever resources can be relocated to the heart of a nearby Safe or—if this is not possible—to Frontier planets with strong ties to the faction controlling that Safe.

This kind of corporate restructuring is neither an easy nor a rapid undertaking. In many cases, whole facilities are swapped between megacorporations. One of the first—and most famous—swaps occurred between Hortalez et Cie and the four Vilani bureaux in 1121. A staggering amount of capital assets changed hands—starports, continent-sized industrial sectors, natural resource rights, thousands of smaller factories and businesses.

When it was all done, Hortalez had traded away almost 80% of its capital holdings in and around Vilani space. In return, the Bureaux—led by Zirunkariish—remitted an equal amount of assets to Hortalez, all located within Delphi Sector, the Coreward edge of the Old Expanses, Daibel and the Spinward Marches.

The purpose of this strategy was to centralize assets under the protective umbrellas of faction Safes. By 1126, other megacorporations (as well as smaller companies) are following what is now known as the Hortalez Strategy, relocating or abandoning those assets that cannot be protected. These moves cause widespread unemployment and economic disaster for the already damaged and shunned Outlands. For the Wilds, this is the final death knell; in losing contact with megacorporations, they lose their last solid tie to the rest of Imperial space.

THE IMPERIUM AS OF 001-1126: DETERMINING THE EFFECTS OF STAGE 4

An important change caused by the megacorporate reshuffling of Hard Times has already been felt by PCs—the increased importance and price of certain goods. Military hardware, spacecraft, transport systems, food and energy production, environmental technologies, and medical equipment are all at a premium.

The severely reduced industrial capacity of the Imperium is naturally focusing on these products to the exclusion of less essential pursuits. Naturally, many leisure industries are suffering, not because people don't need or want an escape from the frequently bleak reality of 1126, but because the distribution system is straining simply to provide essentials, it has little room to spare for luxuries. Not only are entertainment businesses like 2-D and 3-D video renters and vidcasting/holocasting companies feeling the pinch, but art itself is a casualty of the Rebellion. These losses are obscured behind the sight of banking, insurance and brokerage firms collapsing, signalling more surely the ominous proximity of total economic failure. The trappings of the wealth and ease of an entire society are gone, and in their place is a harder, more practical lifestyle.

Megacorporate Structure

In addition to swapping assets, the megacorporations have also been exchanging shareholding positions. These two factors have altered the identities of megacorporations by 001-1126.

One of the most active traders in shareholding positions was Hortalez et Cie, often trading at a loss. Most of the competitors of this financial giant believed it to be attempting to redirect itself into more industrial pursuits when its trading activity reached an all-time high in 1122.

For almost five years, experts speculated that Hortalez's attempt to convert to a more production oriented basis might be undone by the financial rigors of Hard Times. However, 1126 brings a different perspective. With the full impact of its trading now publicly revealed (many exchanges had been closed-door deals conducted across many subsectors), Hortalez has emerged with a controlling position in four other megacorporations: Sternmetal Horizons, Instellarms, GsBAG and Ling Standard Products.

It now appears Hortalez et Cie concealed a number of

strategic shareholding buys within its frenzy of activity. These buys were aimed at gaining control over Sternmetal Horizons and gaining additional (but not overtly controlling) interests in the other target corporations. Sternmetal's interests in Instellarms, when combined with Hortalez's, represent a controlling share. Hortalez, along with the secured Instellarms, and Tukera Lines (an increasingly close ally), provide control of GsBAG.

This total array gives an aggregate 63% shareholding position in Ling Standard Products.

Although Hortalez often traded at a loss to secure these positions, it now stands as the controlling force behind one of the largest blocs of key industrial interests in Imperial space. Many detractors pointed fingers at IRIS (the Imperial Regency of Intelligence and Security) as playing a leading roll in the orchestration of this corporate coup. However, the absolute absence of any pronouncements from the organization since 1122 has led to a different school of thought. From 1116 to 1122, the four Vilani bureaux paid shareholding dividends to the man waging war on the Vilani Core. The Vilani penchant for tradition and propriety made it impossible for them to cease paying significant dividends to Lucan, that would be a disavowal of the basic values of Vilani society to disregard their long-standing legal responsibilities to the Imperial family's holdings. Public confidence in the four megacorps would be undermined if they were to simply cast aside one of their most visible and ancient corporate commitments, yet simple reason demanded the payments to cease.

The IRIS disallowal of Lucan's claim to the throne was a legal nicety which allowed the bureaux to finally discontinue those payments while acting in accord with succession law and tradition.

This situation has led some to suggest that by 1121 IRIS survived only as a Hortalez puppet, whose official rejection of Lucan was offered as a *quid pro quo* for the bureaux's agreement to enter into the great megacorporate swap. Under this analysis, IRIS was actually gutted during the first few years of the Rebellion, but whether Hortalez maintained the hollow organization for just this purpose or for other reasons is not known.

The following section indicates the essential information for all 13 Imperial megacorporations as of 001-1126. Despite tremendous losses due to abandonment of unprotectable assets and emergency retooling projects, all these entities still have the astrographic breadth and industrial might to allow them to retain their identity as true megacorporations.

The "concentrated in" entry indicates those sectors in which the megacorporation has centralized its assets. However, every megacorporation continues to operate in every faction's safe areas to some degree.

Delgado Trading, LIC: Miniaturization, heavy mineral mining and refining, publishing. Concentrated in Core. Ownership: Imperial family 5%, Delgado family 47%, noble families 27%, private ownership 21%.

General Products, LIC: Starships and other spacecraft, heavy machinery of all sorts. Concentrated in Core, Ilelsh. Ownership: Imperial family 5%, Hortalez et Cie 4%, noble families 37%, private ownership 12%, Antares Holdings, LIC 24%, Murdoch Holdings, LIC 1%, Ling Standard Products 1%, other 16%.

GsBAG: Star and spaceships, combat vehicles. Concen-

trated in Massilia, Delphi. Ownership: Hortalez et Cie 41%, Imperial family 1%, noble families (including, but not limited to, the families of the legendary founders) 44%, Instellarms 3%, Tukera Lines 3%, SuSAG 3%, other 5%.

Hortalez et Cie, LIC: Lending, industrial development funding, financial services. Concentrated in Delphi, Spinward Marches. Ownership: Hortalez family 71%, Zirunkarish 1%, Naasirka 5%, Makhidkarun 2%, Imperial family 5%, private investors 3%, Murdoch Holdings 3%, noble families 4%, other 6%.

Instellarms, LIC: Military equipment (manufacture and salvage), now including nuclear and biochem weapons. Concentrated in Old Expanses (Coreward edge), Ley Sector. Ownership: Murdoch Holdings, LIC 32%, Hortalez et Cie 40%, noble families 2%, Ling Standard Products 2%, Ichiban Instellar, LIC 5%, GsBAG 5%, Sternmetal Horizons LIC 8%, other 6%.

Ling Standard Products: Electronics, vehicles, ships, ship armaments, ship's drives, power plants, computers, software, weapons. Concentrated in Delphi, Massilia, Spinward Marches. Ownership: Imperial family 8%, Hortalez et Cie 32%, GsBAG 23%, noble families 8%, Murdoch Holdings, LIC 2%, other 27%.

Makhidkarun: Communications, software, computers. Concentrated in Vland. Ownership: Makhidkarun Directorate 2%, Imperial family 5%, noble families 30%, Hortalez et Cie 14%, investment trusts 25%, private ownership 14%, other 8%, Ling Standard Products 2%.

Naasirka: Computers, electronics, robots, communications, some ships and military equipment. Concentrated in Vland. Ownership: Imperial family 4%, investment trusts 24%, noble families 24%, Hortalez et Cie 6%, Sternmetal Horizons 6%, Ling Standard Products 6%, General Products 3%, Igsilrdi family 16%, private ownership 11%.

Schunamann und Sohn AG, LIC (SuSAG, LIC): Pharmaceuticals, biogeneering and related products, chemicals, medical equipment. Concentrated in Spinward Marches, Glimmerdrift Reaches, Ley Sector. Ownership: Schunamann family 52%, Imperial family 5.5%, Hortalez et Cie 6%, other corporations 23.5%, private ownership 7%, other 6%.

Sharurshid: Luxury goods, food processors, environmental systems. Concentrated in Vland. Ownership: Sharurshid trust 51%, Imperial family 3%, other corporations 14%, Zirunkarish 13%, Hortalez et Cie 4%, private ownership 10%, noble families 2%, Murdoch Holdings, LIC 3%.

Sternmetal Horizons, LIC: Mining, all forms of heavy manufacturing, including vehicle/ship powerplants, food synthesis equipment. Concentrated in Spinward Marches, Core, Daibel. Ownership: Imperial family 2%, Hortalez et Cie 45%, investment trusts 32%, noble families 12%, Antares Holdings, LIC 9%.

Tukera Lines, LIC: Long-distance shipping, secure travel, space and starship maintenance. Concentrated in Delphi, Spinward Marches. Ownership: Tukera family 28%, Imperial family 3%, Sternmetal Horizons 2%, SuSAG 5%, General Products 2%, private ownership 31%, investment trusts 28%.

Zirunkarish: Banking, industrial development lending, insurance. Concentrated in Vland. Ownership: Shilshuginsa family 33%, Imperial family 18%, Sharurshid trust 17%, Hortalez et Cie 3%, noble families 12%, investment trusts 8%, private ownership 9%.

ADVENTURE 4: NEW LANDLORDS

After wandering back up the Khavle Main a bit, the PCs find a message waiting for them at a starport. They are cordially invited to consider taking a contract with Hortalez et Cie on Dehrapur, a Frontier world with strong ties to Margaret's faction. The pay is quite attractive: Cr15,000 per person per week's work (a maximum of two weeks of employment is anticipated). Arriving on Dehrapur, the group will be contacted by the individual who issued the offer of employment, Adrames Hsudliggar (see page 27). Hsudliggar is quite cordial and treats the group to a fine dinner of local cuisine before discussing business.

The job is quite simple. Hortalez et Cie is completing a trade of capital assets with the Vilani megacorporation Makhidkarun. This operation spans many sectors and has been underway for almost three years. In accordance with the long and precise timetable that both financial giants agreed to, the time has come for a local Makhidkarun facility to be turned over to Hortalez et Cie.

The problem is things may not go quite so smoothly here. The Makhidkarun facility is a small, private starport (class C) and a small repair shop the Vilani company purchased in order to service and maintain its commerce vessels operating in this area. Many of the employees are of Vilani heritage, including the local management. Almost half of them refused relocation offers. Instead, they are determined to stay and agitate for a return to private ownership. They don't have a legal or financial leg to stand on, but they just don't want to move away from their homeworld, and they don't want to be co-opted more deeply into Margaret's faction—which most of them distrust as having Solomani leanings. This distrust has

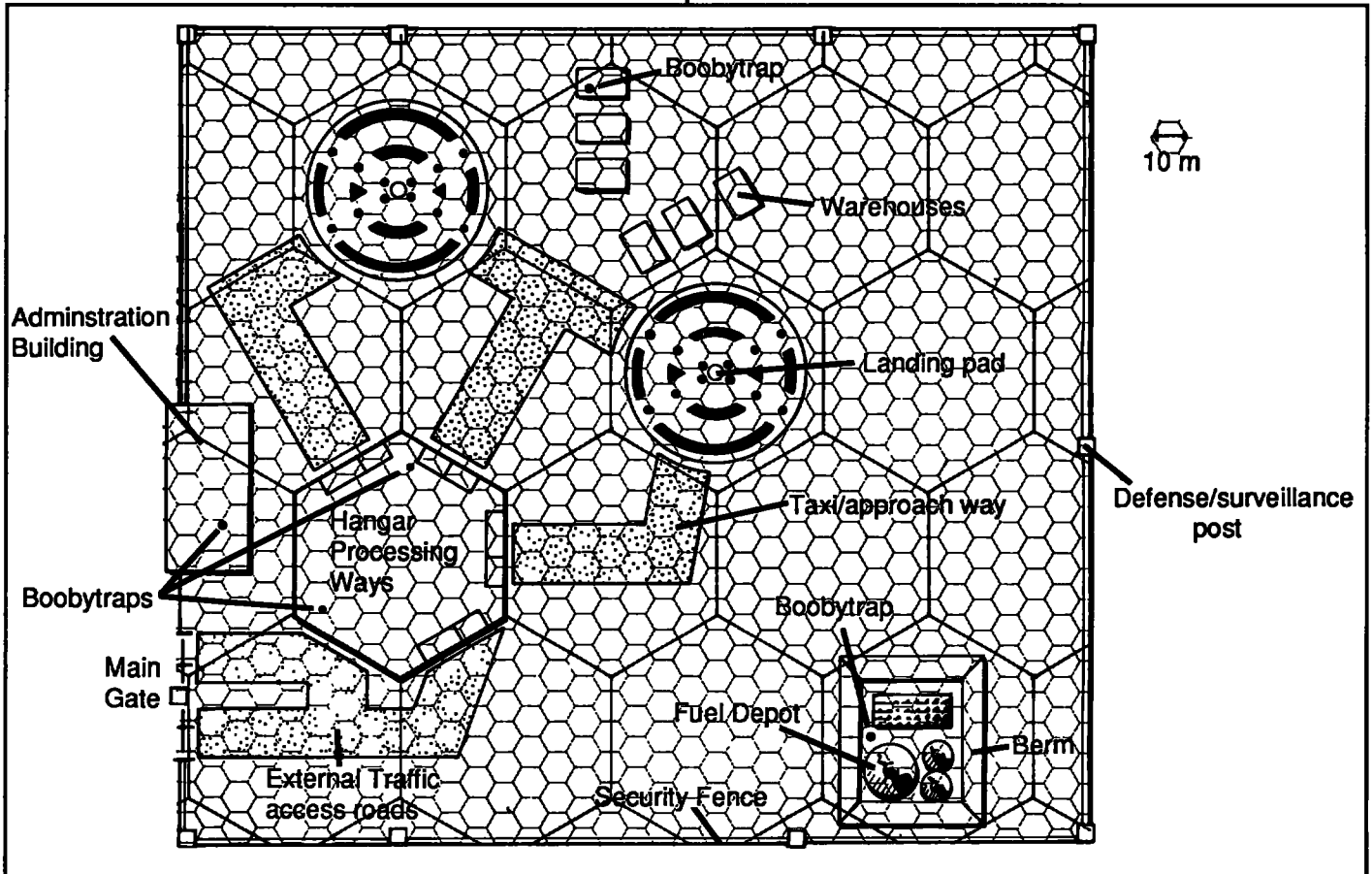
grown as Hortalez et Cie has heavily relocated into regions controlled by Margaret's faction.

Hsudliggar and his superiors expect that they may need outside troubleshooters as the transfer of control to Hortalez et Cie is carried out. Hsudliggar is most interested in getting off-world help for this job since the locals have all taken sides in this politically charged situation. If the PCs accept the mission, they may be offered another, even more lucrative contract. Hsudliggar leans back and sips at his wine—is the group interested?

World: Dehrapur (3102 Khavle/Diaspora B423474-A) is the farthest flung of Margaret's Rim/Spirward Frontier worlds. Always somewhat poor, the locals were well practiced in quickly and efficiently enacting austerity measures. They thereby managed to preserve their starport and maintain an interstellar-level technology. The population of 90,000 is actually experiencing some economic growth due to cottage industries and a favored trade status with Margaret's Safe. Dehrapur has a tainted and skimpy atmosphere. Most of its sparse water reserves are tied up in polar caps and latitudinally flowing rivers. Indigenous flora and fauna are sparse and exceedingly simple.

Referee's Information

The local Vilani resistance is actually not as large as Hortalez et Cie fears—many vocal individuals will eventually accept their new lot in life without struggle. However, a core group of three dozen radicals calling themselves "Ishima" (the shadows) have every intent of making it impossible for Hortalez et Cie to utilize the newly acquired facility. To this end, they have cultivated three separate plots—booby traps, a computer virus and a terrorist attack.



Adventure

After leaving their starship in a megacorporate secure dock, the PCs will be ferried by grav vehicle to the Makhidkarun installation the day after Hortalez et Cie has officially taken control. When they arrive, they will note a labor sit-in in progress outside the main gate. There are about 200 protesters, comprised mostly of the more vocal Vilani agitators. Inside the complex, local workers who have no problem with the new management are showing the new Hortalez managers and specialists around without entering any of the buildings. The time has come for the PCs to begin earning their pay.

Booby Traps: Since TL11 bombs can be nonmetallic, the only reliable sensors for checking the facility for explosives are chemical sniffers. The available chemical sniffers are TL9 versions that weigh four kilograms and are cued to detect the chemical presence of almost all forms of explosive.

To detect explosives:

(Difficulty varies, see below), Sensor Ops, Combat Engineering, 5 min. (per 360° sweep).

Referee: The task is Simple at contact range. Task difficulty increases one level per extra range band. A particularly large source of explosive material (two kilograms and greater) decreases the task difficulty rating by one level.

There are five booby traps in the facility, each with an explosive potential equivalent to a TL9 HE hand grenade. Once a booby trap is found, it must be disarmed.

To disarm a booby trap:

Difficult, Demolitions, Dexterity, 1 min. (fateful).

Any of the booby traps the PCs missed will go off within the next 1D days—tripped by some unsuspecting worker. If any workers are killed, local anti-Vilani factions may attack the protesters, possibly requiring armed intervention on the part of the PCs (the police are "busy elsewhere" throughout this sensitive crisis).

Computer Virus: After five days of system checks, the little starbase's main computer will be brought on-line. Although it will function flawlessly for a day, it will begin to behave in a most homicidal fashion in 24 hours (exactly). PCs with Computer skill may be able to detect a new, hidden subroutine within the programming if they check the system.

To find the hidden computer virus subroutine:

Formidable, Computer, Int, 30 min. (uncertain).

If the subroutine is not found, the virus will upload into the computer's operating system. The virus is a modification to the base's essentially mild-mannered defense and security programming. Now, the computer is looking for a clearance code from all personnel on site, every time they pass through a security clearance area (which includes all airlocks, all machinery and automation access points, etc.). The only problem is no one but the computer knows the security clearance code (which is 225 digits in length). When the individual fails to provide the code, the computer will attempt to kill him by slamming bulkheads closed, guillotining him with iris valves, sealing in airtight areas and then evacuating the atmosphere (or increasing the pressure). The computer may also instruct individuals to report to the central control room (in the administration building) to receive the day's clearance code. How-

ever, rather than give them the code, it will give them a taste of laser fire—there is an automated defense laser (equal to a TL9 laser rifle, skill level 1) at each of the two entrances to the central control room.

Terminating this defensive program will require disconnecting the computer from its power supply or turning it off. To turn the computer off, the PCs will have to enter the control center. Power can be cut by descending to the facility's engineering level (past multiple computer-controlled portals and other hazards) and manually shutting down the power plant's fuel feed. However, the computer will continue to run for two hours on a dedicated battery reserve before it finally goes off-line.

The Ishima conspirators will try to promote fear and terror in the facility workers when the virus goes active, suggesting that the starport will never be safe again unless Hortalez et Cie moves out and the rightful owners are given control once again.

Terrorist Attack: Although the computer virus scare may result in an increase in the number of "sudden illnesses" keeping workers home for the next few days, it will not have any lasting effect unless a great number of people are killed or injured. In fact, many of the pro-Vilani protesters will begin to fade away, embarrassed to be associated with this kind of ruthless violence.

Within a week, a dozen of the most ardent Ishima radicals will make their last attempt. Returning to work along with many other Vilani, they will dig up submachineguns and grenades they buried deep within the fuel dump's earthen berm. With these weapons hidden beneath their work suits, the 12 terrorists will attempt to capture the facility manager or Hsudliggar himself, seize the central control room and eliminate the PCs.

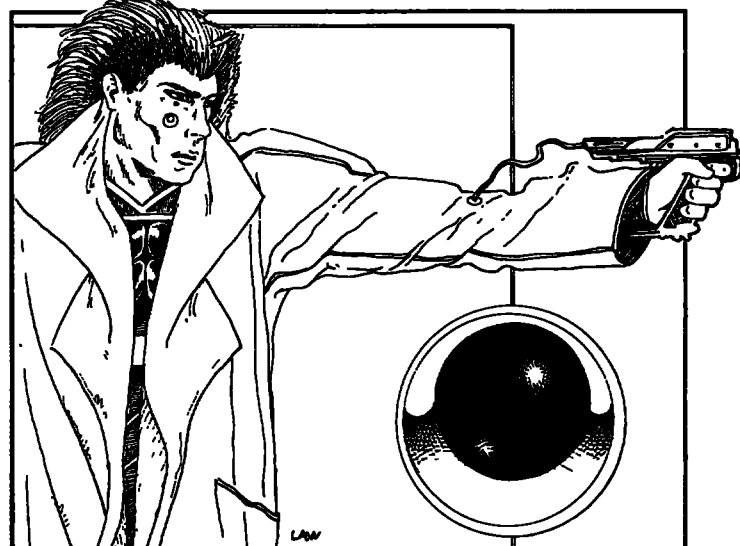
Since Hortalez's security forces have not yet arrived on Dehrapur, defeating the terrorists will be up to the PCs. If the terrorists manage to take hostages or seize the central control room, this final scenario could drag on for days as demands are met with counteroffers and the PCs search for ways of outflanking the radicals.

Ending the Adventure

Hsudliggar should live through the sabotage attempts. If the PCs demonstrated any kind of appreciable resourcefulness, skill and/or courage, he will request them to accompany him to Daasha, a planet where an even more lucrative—and dangerous—job is available for them, should they be interested.

If the Adventure Is Used Alone

Adrames Hsudliggar does not have to be kept alive.



The first encounter we ever had with rippers wasn't actually with the rippers themselves. It was with their aftermath. And it wasn't pretty.

We decided to try peddling some of our wares at a little outpost in the Karoo System. Tried the radio—no response. Tried hovering over the landing pad to see if someone would come out and wave—no one did. We finally just got out to see if anyone was home.

The mayhem had apparently started beyond the main entrance to the outpost. Bodies were scattered around like leaves in autumn. Some of them had been partially stripped of equipment and clothing. Others were missing more personal items—like body parts.

I'd been in plenty of after-action sites in my time, but I'd never seen anything like this—particularly when we moved on into the housing levels further under the surface.

These brutes had killed everyone—and every thing—that moved. We found a little girl—couldn't have been more than five—clutching a little dog—both had been shot. Not once, but repeatedly. Then there were the huge gaping wounds that must have been caused by melee weapons. Gunther swore some of the victims had been chainsawed, but I told him to zip it. Maybe he was right. I didn't know. And I didn't want to know.

Unfortunately, we had the opportunity to learn for ourselves three weeks later when we crossed paths with the filth who slaughtered the outpost.

STAGE 5: RAIDING AND RAIDERS

Date: 180-1126

As economies nose-dive deeper into Hard Times, the comparative profitability of plundering increases. This evolution is exacerbated by the dissolution of naval units. During the war, fleet commandeering of necessary supplies was common, and this eventually devolved into outright raiding. By 180-1126, those units which have not devolved into corsairs have either disbanded (rare), become starmercs (common) or attached themselves to the naval forces of some stable government (a faction leader or one of the worlds in the faction's Safe or Frontier).

The raiders of Hard Times are not all devolved ex-military units; many raiders can trace their origins to traditional pirate bands, organized crime, backgrounds of inhuman poverty and violence, or even mental illness. Raiders are a diverse bunch.

Raiders of Hard Times: Vikings, Corsairs and Rippers

It was starmercs who first divided raiders into three general types. The starmercs named these types "vikings," "corsairs" and "rippers."

Vikings: Vikings are the rarest type of raider, but they form the largest groups. Nearly all viking bands, called "lagers," trace their origins to ex-military vessels of one sort or another: They are deserters from factions, remnants of units cut off and decimated or privateers who eventually extended their letters of marque to include everybody.

As a result of their ex-military origins, vikings are the most organized and sophisticated raider type. They have well-hidden bases of operations where they keep their sizeable population of dependents.

Their operations are marked by military-style planning, including advance intelligence and reconnaissance, made possible by the groups' large size. Vikings are able to insert spies or observers into ordinary society to help set up their

operations. They are wary and canny, and hard to ambush.

Although militaristic, their society has democratic elements, "one gun, one vote" being the viking policy. Periodic votes of confidence in leaders are taken, and many bands are evolving a formalized system of challenges and duels to resolve challenges to leadership.

Honor is the highest viking value; they often speak of living and dying by their word.

Even so, vikings pose the greatest raider threat to civilization by virtue of the effectiveness that their discipline and size give them. Fortunately, they have no desire to cause wanton carnage and destruction, although under certain circumstances they might feel compelled to set an example to make their job easier in the future.

Most viking lagers contain several vessels, typically former military types. In fact, many vikings are able to masquerade as starmercs. Of all the raiders, vikings will sometimes operate fighters—their military background giving them the ability to conduct advanced integrated operations.

Corsairs: Corsair groups strongly resemble pre-Rebellion pirates in both composition and activities. In fact, many bands of corsairs can trace their history back to pre-Rebellion pirate groups.

As always, the bulk of corsair recruits are military deserters, criminals and desperate individuals from disadvantaged backgrounds. Corsairs do not like fighting against well-organized and comparably-equipped defense units—they prefer preying on the weak and attacking by surprise.

Many corsair societies have adopted an appropriately macabre, ritualized method of "announced assassination," which discourages casual attempts at assassination and thereby stabilizes the band's leadership. An individual who intends to assassinate the current leader must send the announcement to the intended victim via the band's "Black Suit"—an individual who is outside the pecking order of the band and who serves as herald and witness. The Black Suit (a reference to the official undertaker's garb worn by these individuals) may not be

assassinated or challenged, nor may he aspire to any position of leadership.

After announcing the intended assassination to the victim (without disclosing the assassin's identity), the Black Suit then makes a public announcement before the whole band. Twenty-four hours after this, the unnamed assassin may begin to make attempts. No other rules apply.

Corsair bands in 1126 are retaining increased numbers of dependents, who may either be stashed in a safe place immediately before a "hit" or brought along for the ride. The crowding and filth aboard corsair hulls are legendary.

Note that all raiders who work within a single system are of the corsair variety. Vikings are too smart to stay in one place, and rippers either self-destruct or are hunted down and exterminated.

Rippers: Rippers are in many ways the most dreaded of all raiders since they are completely without scruples—or mercy. The ranks of rippers are filled with escaped convicts, the worst of the pre-Rebellion pirates, war criminals guilty of ghastly acts and former inmates of mental institutions. These bands are highly fractious and divisive unless they have a particularly powerful leader. Many of the individuals who fill the leadership role for ripper bands are genius-level sociopaths. Whatever their background and skills, these individuals give a ripper band cohesion via their powerful (if dark) charisma and self confidence. Ripper bands without such leadership are likely to fight more amongst themselves than with potential prey—which accounts for the low numbers that typically comprise these groups.

The only law in ripper bands is the rule of the mob. Otherwise, all disputes are settled by violence—often to the death. Rippers may have a small number of dependents, but these individuals may not be anything more than temporary playthings; on a whim, they might be cycled out a nearby airlock.

Rippers take particular joy in inflicting damage and death. Most of their number are sadists, and many are also megalomaniacs. Few are particularly brave, however, which means rippers usually prey upon very weak settlements or targets. They may attempt to attack stronger targets if they can hit them from ambush with a debilitating first strike. In general, though, most ripper bands are not particularly astute in military matters—they are murderers, not soldiers.

THE IMPERIUM AS OF 180-1126: DETERMINING THE EFFECTS OF STAGE 5

Tables for adding vikings, corsairs and rippers to your campaigns have been gathered in the "Data Annex."

Referees should generate several raider bands prior to beginning Stage 5. These bands can be placed in suitable locations throughout the play area so each is near its allied bands and has a relatively secure base and radius of operations.

By establishing the raider ecosystem before starting play, the referee will find that running randomly generated raider encounters is greatly simplified—an encounter can often involve the already generated raider band whose territory the PCs just entered.

The raider ecosystem is like any other ecosystem: Carnivores (raiders) have defined territories which they defend against competing carnivores. Each territory also includes a source of prey, such as a grazing area or water hole (trafficked

world). The need to regularize boundaries is the primary motivation behind the raider alliances. In general, the larger the band, the larger the territory. Some degree of overlap is tolerated, mainly because most groups would rather be "hunting" than defending their boundaries. Smaller bands are careful not to offend their larger neighbors by encroaching too often—no small corsair or viking band will last long if it preys too often upon a large viking lager's prime "feeding ground." While it is true that there is no honor among thieves, there is enlightened self-preservation.

The following raider groups are featured in the *Hard Times* adventure campaign and are presented here as example to help referees who wish to incorporate raiders into their campaigns.

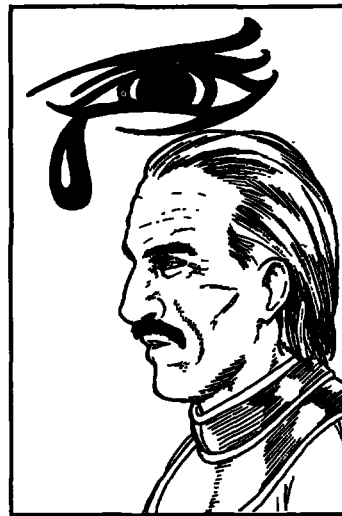
Black Tears

Type of Raider Band: Viking *Symbol:* Stylized eye with a single black tear being shed *Leader:* Commander (Sir) Mustafa

haul Woczec *Number of Raiders:* 65 *Number of Dependents:* 127 *Ships:* 330-ton gunned escort, 440-ton corsair *Allies:* 1 *Crew Skill Levels:* 2/3.

Leader's Personal Statistics: 8B8BBC, age 44. *Skills:* Leader-2, Ship's Boat-1, Laser Weapon-2, Combat Rifle-1, Ship Tactics-2, Tactics-1, Recon-1, Navigation-1, Pilot-1, Turret Weapons-2, Streetwise-1, Grav Vehicle-1, Interrogation-1, Vacc Suit-2.

The Black Tear lager gets its name from the event



which precipitated its commander's desertion—his compliance with a request to bomb a small civilian target in the Federation of Illeish with a small tactical nuclear weapon. Since that day back in 1122, former Baron Commander Mustafa haul Woczec has been a haunted man, but a successful—and typical—viking leader. Already master of a 330-ton gunned escort, he managed to parley the last useful weeks of a fleet tender's life into a captured 440-ton corsair starship. He and his men wandered down from what was left of the crumbling Zarushagar Salient into Diaspora, where they quickly surrendered the pretext of being an Imperial vessel and embraced the role of the raider.

Approximately 60% of his raiders have taken spouses, with children and a few useful prisoners rounding out the the balance of the Black Tears' dependents contingent.

Standard equipment is in line with viking norms, although the particle accelerators on the gunned escort are a useful means of securing the compliance of small vacuum-world settlements without argument.

Woczec—who is referred to both as "the commander" and "the baron"—is not a particularly aggressive man. He is looking for something—or some world—to fight for and call "home." He has the trust and faith of his lager, whose members have displayed (more than once) their willingness to follow his lead, no matter where it might take them.



Blue Moons

Type of Raider Band: Corsair *Symbol:* Blue disk *Leader:* Prateria Honshu *Number of Raiders:* 35 *Number of Dependents:* 32 *Ships:* 200-ton far trader *Allies:* 1.

Leader's Personal Statistics: See page 28.

The Blue Moons are a bit down on their luck and live in horribly crowded conditions. Most of the dependents (lovers, children, technologically useful prisoners and a pair of acrobat-comedians) live in passenger modules on the cargo deck.

Killer Sharps

Type of Raider Band: Ripper *Symbol:* Skull and crossbones—the skull has fangs, and one crossbone is a straight-razor *Leader:* Jugisaal Lakidgussar *Number of Raiders:* 14 *Number of Dependents:* 6 *Ships:* 440-ton corsair *Allies:* 0.

Leader's Personal Statistics: See page 28.

The band is currently shorthanded, but it plans to fill out its numbers. Members are fanatically loyal to Lakidgussar.

Three of the dependents are terrified prisoners whom Lakidgussar has given to his crewmembers for amusement. They still survive due to Lakidgussar's standard injunction not to kill prisoners, as they are being saved for an appointment with Sakki (his razor).

Raider Encounters

Beginning with Stage 5, there is an additional starship encounter roll for raider groups when entering a new system. This is in addition to raider groups that may result from the starship encounters procedure. The new check is discussed in the "Data Annex." When raiders result on either encounter table, the situation may be resolved in one of two ways:

- The referee can rule that the encounter is with a raider group who has already been generated and is operating in the given area. In this case, the encounter proceeds using the details already prepared by the referee.

- If no band conveniently fits into play at this point, a "one-time only" band can be created by using tables 2, 6 and 7 of Section 6 of the "Data Annex." This section includes information on the number and types of ships encountered, which will be sufficient in circumstances where the PCs manage to quickly avoid contact. If the PCs open communications, are attacked or boarded, etc., the referee should consult other tables as needed. After such a detailed encounter is concluded and any changes resulting from the encounter are assessed, the band can be included in the campaign continuity for future use in that area.

Where Raiders Hide and Congregate: Raiders of all types prefer sparsely populated systems when gathering together or setting up base camps. They are fond of hiding their ships in asteroid belts, rings and complex moon systems surrounding gas giants. They also hide in the asteroid clusters found in any planet's Trojan Points.

New Combat Skill and Weapons Preferences

Many raiders attain proficiency in the Main Gauche skill, which is not commonly encountered in the Imperial mainstream. When generating pirates or rogues, this skill can be taken in place of Brawling, Hand Combat or Blade Combat. (See page 94.)

Also, raiders tend to use melee weapons more often than other armed forces. Melee weapons are logistically efficient (no ammunition to replace), and they are aesthetically pleasing to sociopathic types who like to get up close and personal when engaging their foes.

ADVENTURE 5: DOUBLE CROSS AT DAASHA

Adrames Hsudligger wishes to travel alone during the ride to Daasha, so he purchases all the staterooms on the ship for himself—at the high passage rate. Arriving at Daasha some weeks later, he introduces the group to a nervous individual with an apparent penchant for wringing his hands—Jarag Karsubaqa (see page 28). As they sit over cups of an odd-tasting coffee substitute, the PCs listen to Karsubaqa's summary of the Khavle Accordment and Hortalez's concerns (see page 26).

In order to find out who is behind the pirate attacks, Karsubaqa wants the PCs to infiltrate the pirate operation. His plan is for the PCs to go along with the pirates on their next Daasha raid. They are to secretly foil the raid, while at the same time impressing the pirates so they'll be invited along on future raids.

Karsubaqa has already taken the liberty of spreading the rumor among local pirate groups that the PCs are actually successful up-and-coming pirates who are good at maintaining a law-abiding appearance. Based on these rumors, some local pirates have put out feelers on Daasha to make contact with the PCs to perhaps add them to their group.

Karsubaqa offers Cr10,000 per person up front, plus another Cr10,000 each upon completion of the assignment. Of course, all damages and hospital expenses will also be paid.

World: Daasha (C62A445-7) has a tainted atmosphere which is very thin. The world is also covered with shallow, mist-covered seas which are brackish with high mineral content. Most of its 43,000 inhabitants harvest algae and hope for better days as they struggle to keep their starport from declining any further.

Referee's Information

Karsubaqa is setting out some nice bait for the raiders—a 200-ton STL merchantman is (supposedly) loaded with crystals and industrial-grade diamonds from the largest moon of the nearest gas giant. The PCs have been given information on the crew and abilities of the ships, which they will represent as being "inside information" when striking a deal with the pirates. The PCs are not to insist on a particular location from which to spring the attack; they are simply to be the legitimate-looking decoy which will lure in the 200-ton merchantman.

One thing that is important is about the attack is it takes place within 80 planetary diameters of the large gas giant. This should be easy to arrange since pirates traditionally like the cluttered space around such planets—it provides them with good concealment until they strike.

Karsubaqa will give the PCs a special device to cause momentary, predetermined interruptions in the operation of their ship's transponder. A few hours before the PCs are about to start their attack, they should turn the device on. The stutter in their transponder signal will let Karsubaqa's waiting units know the operation has commenced.

Skerrit Adan and his starmerc unit (see page 27) will join in this operation, so there should be no problem in handling the pirates.

Adventure

After waiting around for a few days in the seediest part of startown, the characters receive a handwritten note from a

young boy inviting them for drinks and discussion at a nearby bar. Waiting for them in the shadows of the farthest corner table are Prateria Honshu (see page 28) and several of her associates. Honshu is a strikingly attractive woman with a great deal of poise; her associates are as taciturn as they are ugly. Acquiring Honshu's trust is a task.

Gaining Prateria Honshu's trust:

Difficult, Streetwise, Persuasion, Carousing, Intelligence, 20 min.

Referee: The success of this task can be influenced heavily by how well the PCs handle the subtle banter of underworld arrangements. If they do very well, the task level should be reduced by one. If they bungle the contact, the task level should be increased by one.

Remember, Honshu is psionic. She uses her talent sparingly, especially when in legitimate society—the majority of people still harbor violent prejudice against psionics. However, if the PCs give her a strong enough reason to suspect they are impostors, she will use Read Surface Thoughts. Even so, she won't necessarily know the PCs are trying to dupe her—the results would depend upon what the PCs are thinking at the time.

Once she is satisfied the PCs will make suitable accomplices, Honshu will want any information they have on the target she expresses interest in—the 200-ton STL merchantman. She will be suitably impressed with their information and will readily accede to the group's desire to play the part of the "stalking horse" as she moves in for the kill.

Daruu the Skrag, an allied corsair captain, is in on the job, along with 15 of his 25-member band on board their *Type S Seeker* hull (already insystem).

Honshu wants to hit the merchantmen at about 60 planetary diameters distance from the gas giant; this will put the entire encounter near an asteroid cloud that used to be a small moon of the gas giant. In case something goes wrong, this will be an excellent hiding place.



Hit: Just one day later, the PCs must begin to make their way out to the gas giant to rendezvous with the pirate craft. They have installed Karsubaqa's instrument. Once they arrive at their destination, they will be contacted by tight-beam laser communicator and informed that everything is ready and the merchantman is on schedule. It's time to start the show.

After stuttering their transponder briefly, the PCs can begin to angle their ship in toward the merchantman. Hiding in their radar and emission shadow (only 40 meters away) and running without a transponder is Honshu's craft. Daruu the Skrag's ship is lurking in the asteroid cloud.

The 200-ton merchantman (which is, of course, aware of this entire operation) sends a routine hail to the PCs. Normal intership chit-chat ensues. Then Honshu's ship starts her attack run, just as Daruu the Skrag's vessel emerges from the asteroid cloud.

One space combat round later, Skerrit Adan's two ships show up on the sensors, heading inward from an outlying moon. Given their tremendous maneuver ratings, these ships move in on the pirate ships very quickly.

Honshu breaks off the attack, and the raiders scatter. Daruu the Skrag's vessel is not so lucky. The plan does not require him to escape, so the starmercs will attack.

The PCs now have the opportunity to "draw the enemy's fire" and allow Honshu to escape. They can do this, apparently occupying one of Adan's ships in the process, but not without risk. In order to fool the withdrawing Honshu, the starmercs must actually fire at the PCs' vessel, and the PCs must return fire in kind. Resolve the fire from the starmerc exactly as if it were normal combat, but use the crews' gunner skills (see Chapter 14 ship list) as DMs to miss, not to hit. The PCs should

not maneuver violently, as this will make it harder for the starmercs to miss by a safe yet convincing margin.

Pursue and Destroy: As the PCs begin to angle back to join with Adan's group for a safe trip back to Daasha and the rest of their reward, a sensor contact is detected leaving the asteroid cloud—a small craft of some kind. It appears that a vessel has been left behind by either Honshu or Daruu—and the PCs' actions after combat suggest they are in cahoots with the starmercs. If the long-term undercover operation is to be preserved, the ship and its crew must be stopped.

The mysterious ship is a shuttle with a triple missile turret and a small crew. The crewmembers will fight for their lives, having little trust for promises of fair treatment if they surrender. The starmercs will radio the PCs to try to take prisoners.

Ending the Adventure

If the PCs take any prisoners, interrogation will eventually reveal Honshu is headed back to Pasdaruu to her secret base—and to her lover, Indro the Lightless. Indro is the mastermind behind the raiding on the Khavie Main, for which he has gathered a large band of corsairs.

Hsudligger will offer the PCs another contract and a bond of Cr500,000, payable when they reach Jedell. The new mission is to make sure Indro the Lightless or his agents manage to steal a certain ship waiting in that system.

If the Adventure Is Used Alone

It is unnecessary to keep Honshu alive to report back to Indro the Lightless.

The purpose of the adventure in this case will be to eliminate all the pirates involved in the operation.



Xenophobia

10

By 1127, locals everywhere started getting real wary of us offworlders. I can't say I blame them, but it made trading real difficult at times.

I think the first time we realized how suspicious locals could be was when we arrived on Matunuck, looking to conduct a little business. Right as we got off the ship, a local drove up in a quaint little petrol-burner and started jabbering about the quality of his vegetables and livestock. Freshest on the planet, he claimed. Just like they all do.

Well, Rrurrao decided a little meat might do his Aslan spirits some good and selected a little critter—a hlurgu—as the upcoming addition to his diet. So he started to get down to some serious bartering.

Unfortunately, the local's response was to raise a ruckus of protest, claiming his prices were not any more negotiable than the quality of his wares. Rrurrao held himself back and tried to stay polite, but I could tell he was getting angry.

When starport security came over, hands on weapons, they made the mistake of assuming we were hassling the local over trade goods. And they weren't interested in listening to explanations. They just didn't want us on their world—then or ever.

That's when I heard Rrurrao's dewclaw snick out of its sheath.

STAGE 6: SEPARATISM AND ISOLATIONISM

Date: 001-1127

The death of the Imperium's communications network has impacts beyond the decline of markets and the upsurge of piracy. It also brings a change in personal perspective.

By 1127, many individuals no longer see themselves as Imperial citizens. In the Outlands and Wilds, there is an increasingly regional focus. Abandoned by what is left of the Imperium, these isolated and often forsaken worlds are beginning to turn their collective backs upon the old notions of unity and Imperial destiny. Mixed in with resentment for the Imperium is their pressing need to tend to those matters with an immediate impact on their probabilities of survival. They now see themselves as the citizens of subsectors, worlds or

even continents. As Hard Times wear on, there is every reason to suspect that these governments will continue to divide themselves into smaller—and more xenophobic—polities.

No world feels responsible for the results of the Rebellion and Hard Times. Rather, people feel themselves victims of Imperial madness and indifference. In their eyes, the problems came from beyond their system, from "out there." Of course, interstellar travellers hail from "out there" and are often painted with the same broad brush used on the Imperial monsters who brought about the miseries the locals have suffered for the past decade. As a result, travellers in the Outlands and Wilds may find that interworld travel no longer has the charm it once held. There are fewer bright faces waiting to hear stories of other worlds and starflight. In their place, furtive, narrow looks inform travellers that offworlders are not welcome—and are possibly at risk. This is not true on all worlds; not even a majority of them have attained this level of xenophobia and regionalism. But there are many—and the number is growing.

On many worlds, groups actively espouse a return to simpler times. They want to do away with the technologies and/or facilities which invite offworld visitors and their often excessive meddling. Only military forces are excluded from this general "back to the good earth" push. However, this exclusion contains its own seeds of disaster. High-tech military equipment is still a lure for raiders. Furthermore, equipment does not remain operable for very long without adequate support and maintenance—which a "good earth" regressed society would be unable to provide.

One final concern is that this arrangement increases the possibility of a military coup. By allowing the military to expand its technological edge, groups are voting to give the military a comparative growth in power. And an ambitious general who feels this "good earth" stuff is sheer nonsense might have to declare martial law in order to nip it in the bud.

THE IMPERIUM AS OF 001-1127: DETERMINING THE EFFECTS OF STAGE 6

Tables for the determination of xenophobic status of a world are in Chapter 3, along with the UWP modification tables.

Once determined, these changes should begin to be instituted now, in accordance with the guidelines below.



Law Levels and Double Standards

Resource shortages are what create xenophobia. Shortage of living space, life support and personal security are the most common factors to bias worlds toward xenophobia.

The best practical measure of a world's xenophobia is the degree to which it makes visitors unwelcome by treating them more harshly with regard to laws, restrictions and penalties—even for minor infractions. If there is no discrepancy between the law level for locals and the law level applied to visitors, the world is effectively nonxenophobic.

The double standard only represents an actual separate law for visitors in the most extreme cases. Usually, visitors are technically subject to no more and no fewer prohibitions than the locals are. The double standard is therefore applied when the referee is consulting other law level-influenced events, such as the frequency of encounters with local law enforcement officials, the willingness of those officials to shoot first and ask questions later, the likelihood of surveillance or harassment, and the strictness of officials and courts. This includes any customs checks, exits from and entries into a starport's extrality zone, trading permits, visas—everything.

If the double standard discrepancy is 3 or more, then a separate law level equal to the increased level pertains to offworlders. Local officials will stringently enforce and uphold this "visitor code," insisting it is for the safety of the offworlders themselves. Failed attempts to bribe such officials will be dealt with severely.

Isolationism

If a world has a double standard law level for visitors, it is sure to be the site of isolationist agitation. Some isolationist groups will advocate that technology be voluntarily reduced and space travel be discontinued. In 1127, this will not yet have incurred any change in those ratings which reflect upon tech level or space flight (namely, the tech level and starport ratings). But the signs of decline may be evidence if the world has decided to turn its back on spaceflight.

Many of the factors which bias a world toward xenophobia do *not* increase the likelihood of its becoming isolationist; in fact, they often have the opposite effect. For instance, life-support shortages bias a world toward xenophobia. But when determining if this same world is isolationist, a human-friendly biosphere is what creates a positive bias because worlds that are considering isolationism are also appraising their long-term viability without external aid and trade. For worlds with marginal life support resources, the outlook is grim. But for green worlds with plenty of air and water, isolationism may be quite appealing.

Although starports and technological capabilities will not have experienced yet another slump by 1127, those worlds with isolationist tendencies will be apparent. Perfectly good factories lie abandoned, no effort having been taken to preserve the machines. Starports and spaceports are run down and plagued with failures of every conceivable kind. It's difficult to find buyers for offworld goods, no matter how desirable they might be to the locals. People are moving out of the city—not in droves, but in a slow trickle outbound to smaller communities or personal homesteadings.

Few of the locals are angry at offworlders. They just want to be left alone.

ADVENTURE 6: AN UNWELCOME HOUSE CALL

On the way to Jedell, the PCs enter the Feme System, where their help is requested by local medical authorities.

Feme has been suffering through a recent increase in corsair incursions. This has inflamed a rabid xenophobic movement, which has interfered with the funding of almost all public service agencies including drastic cutbacks in medical supplies and salaries. Those of a defensive nature are maintained.

The local senior medical expert, Dr. Achmed Mpoh, has reason to suspect the return of an indigenous plague. Although the original settlers eradicated the plague with a biogenerated virus, some of the plague must have survived and mutated into a form capable of resisting the old virus. The doctor needs the PCs to help him make an arduous journey into the outback to gather samples and prove the presence of the plague. He doesn't have much to pay, only Cr5000 total, but he is desperate for help—his world's population could depend on it.

World: Feme is blessed with a breathable atmosphere, large oceans and pleasant temperatures. Warmed by a very dim red star at fairly close range, the world has a slowish rotational rate (30 hours), resulting in uncomfortably cold midnights and uncomfortably hot noons. It also lends the planet a dim, black-on-red landscape and dull orange sky that is hard on human eyes.

The 9300 inhabitants have always welcomed outsiders, but now there is a growing feeling of xenophobia. Almost 1000 persons proclaim themselves to be radical xenophobes.

Feme now has a double standard law level: Offworlders will encounter a practical law level of 2, with harassment by the most dedicated xenophobes.

Referee's Information

Feme's ultramilitant xenophobes believe that Mpoh's suspicions stem from an elaborate offworld hoax and the PCs are in cahoots with the pirates. These radical xenophobes believe the return of the plague is simply a ruse to divert spending from defense and back into luxury areas—like scientific research. So the PCs may find discover more than long miles and difficult terrain standing between them and their objectives.

Adventure

The PCs and Dr. Mpoh are provided with TL7 jeep-like vehicles by the planetary medical agency. Other equipment is available locally, but shopkeepers are likely to charge excessive amounts—who wants offworlder business, anyway?

The destination sampling site is in a distant, upland valley where a plague outbreak was reported among the local wildlife by a hunter.

The PCs find local light conditions tiring to their eyes, and get headaches when they do something requiring concentration.

Therefore, drivers must roll a *Fateful* task (*Wheeled Vehicle*) for each two hours they drive. The first such period is Routine; each subsequent period without four hours of rest in between is raised a level in difficulty. Failure indicates an accident.

Encounters for the journey are generated on the tables below, and take place on a 2D roll of 8+.

In addition to these encounters, the player characters might run into difficulties when attempting to ford rivers.

Lowland Encounters

Roll	Result
1	<i>Rough terrain.</i> Difficult driving task (Wheeled Vehicle, Recon) or a one- to six-hour detour. Failure requires detour. Mishap means the vehicle is stuck. Major Mishap means the vehicle is wrecked.
2	<i>4D Grazers.</i> 200 kg, 4/8, None, Horns and Hooves, F5, A10, S3 (Veh: F3, A6).
3	<i>1D Grazers.</i> 800 kg, 6/8, Jack, Horns and Hooves, F7, A9, S2 (Veh: F12, A2).
4	<i>Rainstorm.</i> A one- to six-hour rainstorm forces a Difficult driving task (Wheeled Vehicle, Recon), or the group must wait out the storm. Mishap means the vehicle is bogged in the mud. Major Mishap means the vehicle is wrecked.
5	<i>3D Chasers.</i> 50 kg, 4/6, Jack, Teeth, A if more, F 6, S3 (Veh: A No, F2).
6	<i>1 Pounce.</i> 25 kg, 4/6, None, Stinger, A if surprise, F if surprised, S1 (Veh: No encounter).

Highland Encounters

Roll	Result
1	<i>Ravine.</i> One- to six-hour detour.
2	<i>3D Chasers.</i> 50 kg, 4/6, Jack, Teeth, A if more, F6, S3 (Veh: A No, F2).
3	<i>2D Intimidators.</i> 50 kg, 3/6, Jack, Claws and Teeth, A7, F6, S2 (Veh: A10, F5).
4	<i>Rainstorm.</i> A one- to six-hour rainstorm forces a Difficult driving task (Wheeled Vehicle, Recon), or the group must wait out the storm. Mishap means the vehicle drives into a ditch. Major Mishap means the vehicle drives off a cliff.
5	<i>1D-3 Hunters.</i> 400 kg, 6/12, Jack, Claws+1 and Teeth, A5, F5, S1 (Veh: A8, F3).
6	<i>1 Pounce.</i> 200 kg, 5/10, Jack, Claws and Teeth, A if surprise, F if surprised, S2 (Veh: No encounter).

Veh: Animal behaviors when the PCs are driving their vehicles. Animals listed as attacking on 2+ are bothered by the white-light headlights and attack the vehicles. Animals that attack on other numbers are dazzled and dash about in confusion, running into or dangerously close to the vehicles.

Gathering Samples: After the journey to the upland valley, the PCs have several days to set up camp and help the doctor.

Individuals with Medical, Chemistry or Biology skills will be invaluable to the doctor. With their help, he can finish gathering samples to prove the return of the plague by the end of the second day. Without help, the doctor will require six.

During the wait, more animal encounters are likely, as well as a visit from three of the most dangerous creatures on the planet—irate xenophobes. The xenophobes are armed with 7mm rifles (skill 1) and will snipe at the party from concealment at long range. They will move on after one shot each.

They are not interested in hurting anyone—yet. They just want to disrupt the activities and scare the PCs away. If the PCs hit, kill or capture any of the xenophobes, the rest will retreat to tell the others about the offworlders' viciousness.

Return Trip: After gathering his samples, Mpoth will be eager to return to Betel, Feme's tiny capital (it is the only community on the planet with more than 20 people in it).

The trip back is similar to the trip out, except this time the xenophobes are out in force—and they mean business.

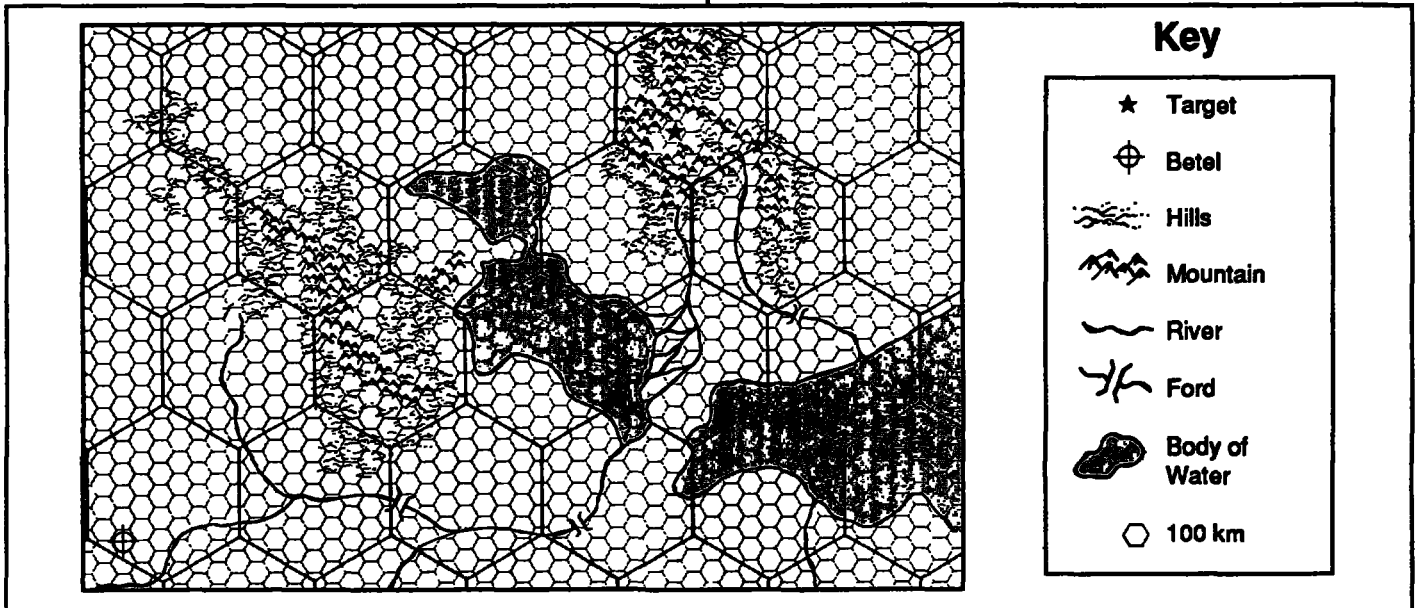
As the PCs drive near or through high ground or woods, the xenophobes will spring their ambush. Two leaders (skill 2) are equipped with automatic rifles. They are accompanied by 15 ambushers (skill 1). Five have 5mm assault rifles; five more have shotguns; the last five are equipped with 7mm rifles. (Refs should alter the force's size to match the PCs abilities.)

The xenophobes have six vehicles like those of the PCs. They will flee in their vehicles if any seven individuals or both leaders are killed or rendered unconscious.

The xenophobes won't try to shoot the doctor, but he could wind up taking a hit or even being killed. This could make matters more difficult for the PCs since he is the only local who would offer testimony to corroborate their side of the story.

Ending the Adventure

If the PCs return the samples to the capital (whether or not Dr. Mpoth survives), they will eventually be cleared of legal charges. The local government will rule against the xenophobes and offer the PCs a Cr10,000 bonus. The local lab will immediately get to work on discovering another retrovirus to defeat the plague.

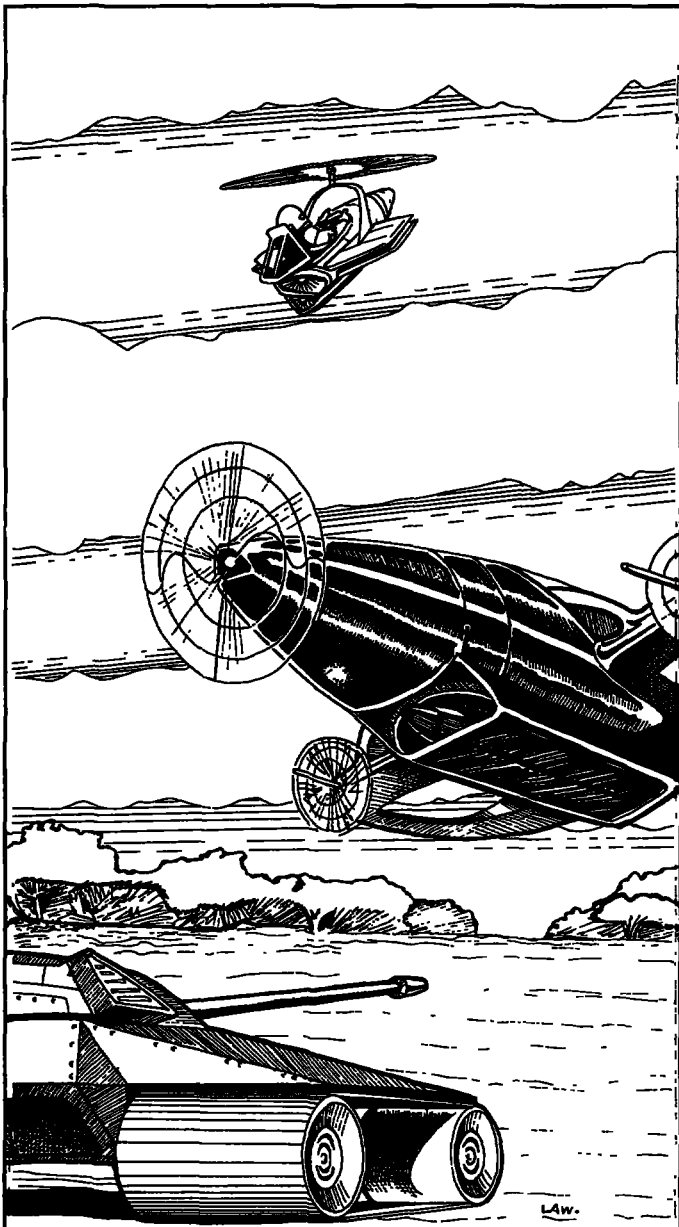


Times are tough, with plenty of hardship to go around for everyone. But we still see some humorous moments. One of the funniest was during a little corporate disagreement we found ourselves involved in on Wake.

The opposing side was a large firm—Aspardan, Inc.—still headquartered back in the Core. Their good buddy, Lucan, made sure they stayed up to date with the best available technology—grav carriers, air/rafts, ACRs, the works. I guess Aspardan figured if they got into a shoving match with the local authorities, they'd either win hands down or intimidate the natives into acquiescence.

Instead, when H-hour came, the local military came brewing over the hill in the oddest collection of vehicles you've ever seen. Internal combustion, high-speed, wheeled APCs, variable-attitude propeller (VAP) troop carriers, track-laying tanks with autocannons, VTOL attack jets—and a few grav sleds of their own. I don't think any two vehicles were the same kind—it looked like an attack by the Junkyard Legion.

The offworld security specialists had to admit they were wrong about cowing the natives with their technological superiority. They never got the chance to admit they were also wrong about beating the locals hands down—I don't think there were any Aspardan troops among the survivors.



STAGE 7: RETOOLING AND RETHINKING HARDWARE

Date: 180-1127

As production centers are lost, resupply vanishes and trade diminishes, people will have to use whatever equipment is on hand and will eventually get used to lower-tech, locally supportable gear. A referee can—and should—have a field day with the various tech mixes that might result. Personal ornithopters for worlds with low gravity and dense atmospheres. Solar-powered vehicles. Slow MPD-propelled (magnetoplasma-dynamic) space barges. VAP turboprop attack craft instead of GCarriers.

Remember, a planet's tech level indicates its construction capabilities. This is not synonymous with the tech level its inhabitants and experts can understand. Ancient Terra had to discover everything for itself—and usually the hard way. That is not the case for most worlds within the Imperium, regardless of their tech level.

On a world discovering everything for itself, the laser carbines it develops at TL8 may only be perfected once the world has entered TL9. However, if patented designs for a laser were available to that same world, then the limiting factor is no longer knowledge. The limiting factor becomes the ability of the world's factories to duplicate hardware which is already understood. This is why much standard Imperial equipment shows sophistication or elegance of design that seems beyond the tech level it was actually manufactured at. Once a principle has been discovered, its implementation can be "back-dated" into the designs of equipment built at lower tech levels, as long as those lower-tech factories possess sufficient abilities in metallurgy, chemistry, etc.

When knowledge, rather than ability, is the limiting factor, any concept knowable at TL15 is available for learning at any lower level. Each world does not have to struggle along the road of discovery on its own—the road signs are all there. Some technologies exist (in rudimentary form) at much lower tech levels than their first Terran equivalents—the Imperium and its thousands of worlds have perfected these systems at each level of capability. Given these vast research resources—and several millennia of study—even primitive tech levels are capable of producing some important technologies.

Design Imperatives

The onset of Hard Times brings changes in the way people look at technology and in what they want from it. The following concepts are central to this evolving mindset and provide era-specific strategies used by worlds when designing the vehicles of Hard Times.

Economies of Construction and Purpose: In the height of the Imperium, personal vehicles were not perceived to be luxuries in most places—they were necessities. But in Hard Times, the industrial and distribution systems can no longer support such bounty. Thus, the fewer systems that are obtained have to be able to meet more needs. Vehicles owned by individuals and groups have to fill many different roles and not be specialized in purpose. Similarly, vehicles with only one purpose are now required to provide services to many more recipients. As a result, the principle of jump carriers has experienced a tremendous resurgence in shipyards throughout the post-Rebellion Imperium.

Essentially this an extension of the military's jump-rider concept—one large, jump-capable starship with a large set of jump drives to do the work previously achieved by 10 or 20 separate, smaller units. Instead of a dozen 200-ton traders plying the starlanes, convoys of a dozen 200-ton STL barges hook up to a modular frame and travel together.

Many advantages to this design strategy are quantifiable, yet one disadvantage is hard to measure—the asset of personal freedom. The growth of this technology portends an era in which many captains will no longer be their own masters. They will operate less-expensive STL ships and be forced to contract with frame operators for interstellar transits.

Economy of Operation: Another major concern for designers is a vehicle's fuel requirements. Pre-Rebellion commerce made almost all fuel types available in every market. The rigors of Hard Times makes it clear that designers must create vehicles which can be fueled from indigenous sources. In general, solar-electric energy sources experience a huge increase in use—a system without a sun has bigger problems than vehicle design.

Economy of Maintenance: Pre-Rebellion vehicle design was characterized by luxurious amounts of space for crew and all sorts of impressive optional equipment. These indulgences are no longer possible in Hard Times. Vehicles are now practical, bare-bones creations. Their design reflects an attempt to minimize maintenance requirements, costs and dependence upon computers.

It Doesn't Have to Go Fast—It Just Has to Go

With the onset of the Rebellion, functional spacegoing ships have skyrocketed in value. Because of their comparative economy (in terms of both maintenance and fueling) many older vessels are being restored and pressed into a variety of service roles. The reduced flow of high technology has even propelled some TL9+ systems into new production runs of these older vehicles. The logic is each system may have to fend for itself in the years to come, and the easier a space fleet is to maintain, supply and build, the more likely it is to endure. This signals an era of renewed importance for spacecraft employing pregravitic technologies.

THE IMPERIUM AS OF 180-1127: DETERMINING THE EFFECTS OF STAGE 7

By late 1127, the technological look and feel of the Imperium is changing. The familiar, old amortized designs of ships, air/

rafts and everything else are seen less often. In their place are more basic vehicles and technologies that lack the finish and class of the pre-Rebellion goods. These new items seem rough-hewn, rugged and, above all, business-like.

The UCP design sequence included in the *Referee's Manual* reflects the technological focus of the pre-Rebellion Imperium: Much, if not most, of the technology is of an interstellar level.

But in Hard Times, many of those items have been destroyed, and those remaining are clustered in the Safes or Frontiers, or are in the hands of local governments. New technologies are being produced to fill the void—but they reflect a different focus and, often, a much more basic tech level.

Consequently, additions to the UCP design sequence are necessary. Chapter 15, "One Small Step," covers the design of pregravitic spacecraft, allowing the creation of the sort of rudimentary spacecraft making a comeback during Hard Times.

ADVENTURE 7: SURVEY AND SETUP

When the PCs arrive on Jedell to cash their Cr500,000 note (received from Adrames Hsudliggar at the end of Adventure 5), they will find an efficient looking young businesswoman waiting for them among the largely disheveled and turbulent crowds.

Introducing herself as Milana Sydow, she leads them to an office mounted at the top of a spire which towers over the enclosed city's thermal-retention baffles. Sydow is a field agent for a company based on Khavle. Assuming the PCs wish to keep the money they just received, she outlines the contract that has been waiting for them.

Jedell's government is ready to come apart. In the midst of this political uncertainty, everyone is jockeying for a good position from which to rise to power when the central government finally gives way. One of her clients, Youngbrother Enterprises, has decided it will stake its bid for power on the development of a new resource site for Jedell—a nearby captured planet known to the natives simply as "Brother."

No one has ever bothered to survey Brother very carefully. The Scouts were supposed to, but when Jedell turned down the IISS request to place a way station on the world, it seemed the survey team had an emergency to attend to elsewhere. Since then, Jedell has never had much reason to explore Brother.

Now it does. With the recent plummet in its tech level, people fear that when the fusion reactors finally give way, there won't be enough energy to go around for Jedell's billions. The M4 red star hanging nearby could be harnessed for the solar power, but it would take countless launches of huge salsats—and what if the fusion failures start before such a project could be completed?

So Youngbrother Enterprises is interested in surveying Brother as a prelude to prospecting for radioactives—the new energy answer for Jedell's teeming billions.

Sydow drums her fingernails on the plasteel desktop and mentions one additional consideration. The PCs won't be using their own ship for the survey, but will use a local, low-tech model. The surveying work is genuine, and Youngbrother Enterprises does need the results. But there is something Youngbrother Enterprises doesn't know—the PCs are expected to lose the ship to a pirate. To be exact, they're supposed to have Indro the Lightless steal it from them.

World: Jedell (2716 Pasdaruu/Diaspora D4349BC-8) is a chilly planet, equatorial temperatures never getting much above 10° C during the height of what passes for local summer. Frozen seas and frozen tundra dominate the surface. Native protoplankton—the only indigenous life form—is present near thermal vents in the ocean depths and is used for biomass in the fertilization of the planet's many hydroponics farms.

Jedell's population of 9.6 billion is down from the last prewar census of 9.9 billion. Most of these losses were the result of

collateral damage inflicted during strikes against the starport and military storage facilities early in the Rebellion.

Only 9 million miles beyond Jedell orbits the captured planet, Brother (XAA5000-0), long suspected to be a source of radioactive ores. Brother is a frozen iceball of methane, ammonia, water and carbon dioxide.

Referee's Information

The characters and one survey specialist are to go to Brother in a TL8 vessel, *Happy Roger*, and conduct a three- to four-week survey of the planet. This will include orbital mapping and the analysis of selected sites on the surface. Surface missions will be conducted via the on-board *Little Renegade*-class spaceplane. Although there are no landing fields on Brother, the spaceplane has been equipped to make landings on icefields.

Sometime after the third week, Indro the Lightless is expected to show up and seize the ship. Indro will have been informed the PCs are in town and have a "present for him" in exchange for favors at some future date and a little cash up front.

What neither the PCs nor their employers can know is Indro's attitude. Will he show appreciation to the PCs for this favor—and for getting Prateria Honshu out of a tight jam in the Daasha System? Or will he simply take the ship and kill them,

Spaceplane

CraftID: *Little Renegade*-Class Frontier Courier, Type GP, TL8, MCr=19.371

Hull: 18/45; Disp=20; Config=VAF (LALV)
Armor=40C; Unloaded=300.6 tons
Loaded=424.69C

Power: 1/1, Fuel Cell=63Mw, Duration=10 hours

Loco 1: 2/4, HiPrRkt=1.8578971, Duration=3 minutes, NOE=None, Cruise=750kph, Top=1000kph

Loco 2: 2/4, HiBypsTboFn=2.6/1250Tt, Duration=1 hour, 50 minutes, NOE=None, Cruise=1328kph, Top=1770kph

Commo: Radio=Far Orb; Maser=Regional

Sensors: Radar=Regional, ImgEnhnc, HdLgtx2, ActivObjScn=DIFF, ActivObjPin=DIFF
Nonstandard sensor package TL10, LowPen, Densitometer & radiation sensor

Off: 1 hardpoint

Def: None

Control: Computer=2x3; Panel=ElectroLink
Environ=bsc env, bsc ls, extended ls

Accom: 1x1 (1 bridge), 3 adequate positions

Other: Cargo=2019.0; NetFuel=175.8KI
CryoFuel=26KI; Fuel=028; ObjSz=Avg; EmLvl=Faint

The zero value assumes the craft has devoted all its cargo space to the amount of fuel required to meet the performance specs outlined in the rest of the entry.

The *Little Renegade* class is a small, versatile spaceplane/courier design that can handle small passenger and cargo transfers, as well as performing the standard away boat role. The cryo-rocket turbofan combination enables this LALV (air-assisted launch vehicle) design to handle both frontier launches and orbital/in-atmosphere operations. However, since each different planet size and atmosphere type implies different missions and fuel needs, the *Little Renegade* employs an ingenious system of modular collapsible tankage, which occupies some (or all) of its cargo hold when in use. The total tankage available is equal to the cargo space (21.09 kiloliters) and is divided into one-kiloliter sections. Two of these sections are further subdivided into 0.1-kiloliter bladders, allowing flight crews to manipulate fuel allowances down to increments of 0.1 liters. The end result of this is the *Little Renegade* is capable of lifting off from (and landing on) even a size-A world with an A3 atmosphere type—impressive performance for a relatively tiny TL8 spaceplane.

Happy Roger

CraftID: *Far Rebel*-Class Slow Merchant, Type MW, TL8, MCr92.808

Hull: 180/450; Disp=200; Config=0
Armor=40C; Unloaded=1598.5 tons
Loaded=3312.3 tons

Power 1: 4/8, Solar=20.8Mw, Duration=Unlimited

Power 2: 1/2, Fuel Cell=12.15Mw, Duration=60/180

Loco 1: 27/54, MPD=003/8Tt, Duration=60/180

Loco 2: 1/2, HiPrRkt=1.18/390lit, Duration=20 minutes, NOE=None, Cruise=0, Top=0

Commo: Radio=Systemx2, Maser=Far Orbx2

Sensors: Radar=Far Orbx2
ActivObjScn=Routine
ActivObjPin=Routine

Off: 2 hardpoints

Def: None

Control: Computer=2x3, Panel=ElectroLink, Environ=bsc env, bsc ls, extended ls

Accom: Crew=2x2 (Bridge=2; Eng=1; Gunner, and/or Med=1), 6 staterooms, MidRsd=8

Other: Cargo=1392 KI, Fuel=365.6KI, ObjSz=Average, EmLvl=Faint

The *Far Rebel* class slow merchant is a common sight throughout Imperial space, with thousands still in operation. Of particular interest is the solar power source, which allows an extremely long duration. With all fuel needs being hydrogen, the *Far Rebels* are capable of living off the land indefinitely if retrofitted with a fuel purification unit. Some models have a sectional cargo hold arrangement, which allows one area of the hold to be isolated for the storage of a small away vehicle (see the *Little Renegade*). The inclusion of cryogenically fueled rockets reflects how megavitic vessels cope with the need for rapid, high-speed maneuver capabilities.

having nothing but contempt for their attempt to curry favor with him? In the latter case, the PCs can try to escape in the spaceplane and hope for the best.

The reason it is important that Indro takes this particular ship is because of what it does best (carry nuclear materials in its heavily shielded cargo bay) and what that bay has now been secretly equipped with—a TL13 nuclear damper. For a few seconds every day, the damper will activate and render the warheads stored there inert. The bottom line is that when Indro shows up to whatever battle he's planning on, he'll be shooting blanks.

It is known Indro wants a *Far Rebel*-class ship in order to move a large number of nuclear missiles to advance bases in the Khavle Main, in preparation for an assault there. Although the *Happy Roger* is non-jump capable, Indro can use it as a barge, carried by a starship, to transport the cargo his other ships cannot handle safely.

Adventure

The PCs depart several days later for Brother. With them is Youngbrother Enterprises' survey specialist Edsduban Maxan (Sensor Ops-3, Geologist-2) who will try to identify sites for rare earth exploration. This is an opportunity for the scientifically inclined members of the party to come forward. This is also an excellent time for individuals with Ship's Boat skill to practice frontier landings and launches, as well as low-speed, low-altitude reconnaissance runs, as the survey specialist looks for radiation readings.

After three weeks, the group will have made a detailed orbital map and discovered several promising lodes of radioactive ore.

Capture of the *Happy Roger*: If anyone aboard has been keeping an eye on the heavens with their sensors, they might have had two opportunities per day to detect a powered-down, 400-ton ship at 150,000 kilometers range—Indro has been watching the situation, always wary for a trap.

On day 27 of the surveying mission, the PCs will detect a ship rising from behind the planet, matching their orbit and overtaking them rapidly. Indro the Lightless (see page 27) will hail the *Happy Roger* on tight-beam laser communicator and instruct them to stand to and prepare to be boarded. He warns

them any attempt to signal Jedell for help will result in their immediate and utter destruction.

Once Indro has mated airlocks with the *Happy Roger*, he will send on a prize crew led by Astallig Sumelor (see page 28) to secure the ship. Indro will then come aboard himself. At this point, interacting with Indro the Lightless becomes a task:

To gain the trust of Indro the Lightless:

Difficult, Streetwise, Persuasion, Intelligence, 10 seconds (fateful).

Wise PCs will let their best talker handle this situation. Indro is not terribly suspicious of the PCs; he has enough ego to believe they would want to curry his favor. Besides, they saved Honshu's life. But he is ever-watchful for a slip of the tongue that might suggest an ulterior motive.

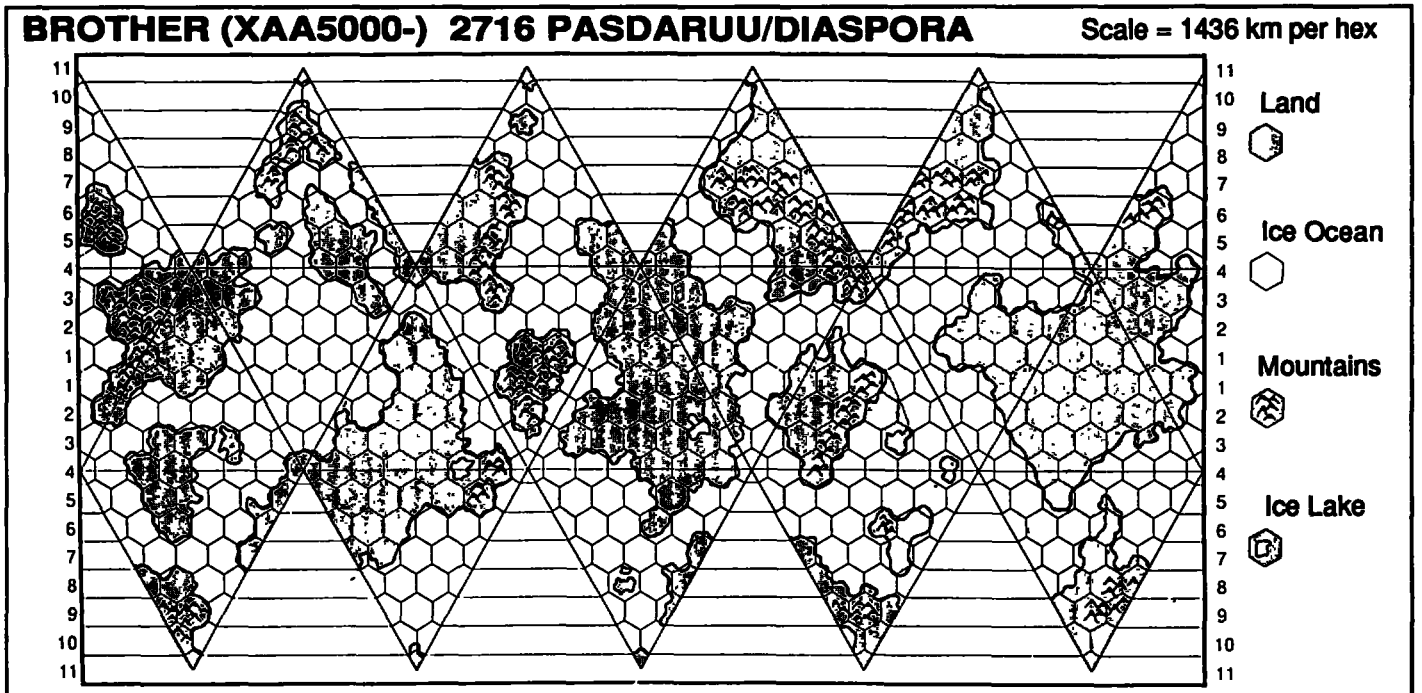
If the PCs gain his trust, he'll play out the role of the corsair leader who is trying to decide whether to slay his captives, hold them for ransom or just let them go. He will (of course) decide upon the latter, letting them leave in the spaceplane after removing the densitometer for his own use.

Ending the Adventure

The PCs would do well to act as shaken up over the whole hijacking as Edsduban Maxan does since any hint of insincerity on their part may prompt an investigation. It will turn out Youngbrother Enterprises managed somehow to find insurance for the ship and will continue operations after a slight delay. After some brief questioning, the PCs will be allowed to depart with Sydow as their high passage charge bound for the Khavle Subsector—her job on Jedell is done.

If the Adventure Is Used Alone

Referees must either ignore the false piracy scenario or play it as the real thing, with Indro seizing the ship after (perhaps) a fight. In this case, there will be no damper in the radioactives storage hold, nor will Sydow be an agent for a Khavle firm—she will be a native Jedellan working for Youngbrother Enterprises.



Of the many Doomed worlds we came across, I remember Duster the most clearly. Almost no water, air too thin to breathe, a tech level of 5 and poverty matched only by the lack of industry. We were the first ship to pass through in two years, they told us. They offered us money to take their children away to a world—any world—with air you could breathe without machines. We tried to fix their colony-sized compressors, and we managed to get the capital's plant working at full efficiency again. But the unit at the other major city was a wreck—beyond saving.

We were heading out of the system when we heard via radio that the one crippled compressor had broken down for good and the city's inhabitants were starting overland to seize the capital—and its compressor. Some of my crew wanted to go back, but I vetoed the idea. They asked for an explanation, so I gave it to them bluntly: "There's nothing we can do."

Seems like I've been repeating myself ever since.

STAGE 8: DOOMED WORLDS

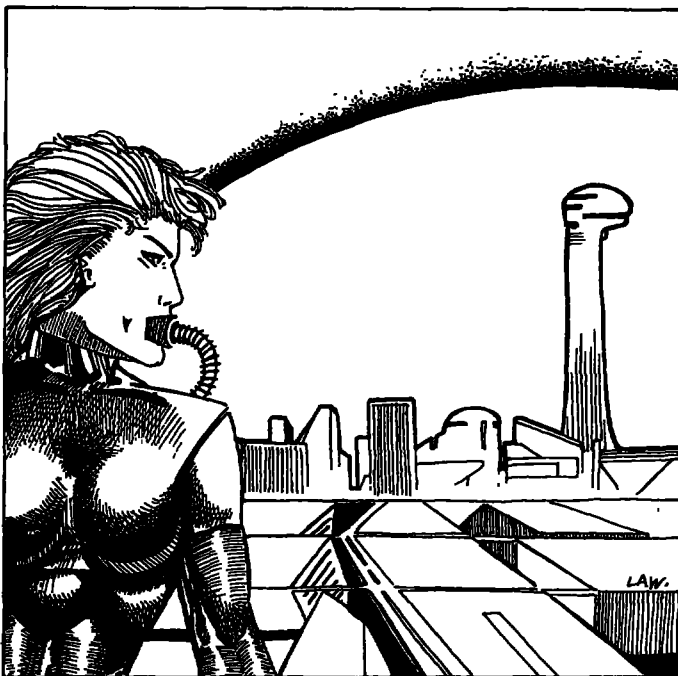
Date: 001-1128

Many planetary environments are inhabitable only because of advanced technology—technology which many populations can no longer maintain or create on their own. In Hard Times, the populations of many desert worlds, ice worlds, and—particularly—worlds with hostile or otherwise unsuitable atmospheres must find indigenous answers to their life support needs.

For low-tech worlds, this may be impossible.

Those worlds which cannot meet their basic life support needs are labelled Doomed worlds. By 1128, it is clear which worlds are Doomed and which are not. It has been almost three years since most local technologies took a stumble into lower values. During this time, each world depending upon mechanical systems for life support has nursed those systems along, lavishing an almost fanatical degree of care and maintenance upon them.

However, by 1128, failures have occurred—as was inevitable. Worlds could either meet the challenge of repair or they



could not. If they couldn't, then they had to meet the challenge of constructing a new system of their own, in accordance with their new, reduced technological capabilities. Those worlds that could not succeed in this regard and have harsh environments are clearly Doomed.

Doomed worlds will eventually become completely uninhabitable, although this grisly end may still be years away. Almost all have already suffered population losses as a result of the life support problems.

However, not all—or even most—of these losses are outright casualties. Those individuals, who could have pulled up stakes and moved on, did and went someplace—anyplace—where air, water and food are still available. Many more people want to follow them, but that will only be possible if enough starships arrive to carry them away to other systems.

Desperate Blofreight: The Doom Trade

One of the most lucrative businesses for traders operating in the Outlands and the Wilds is the transport of individuals back into the Frontier and the Safe. Refugees attempting to escape from Doomed worlds are generally their best—and most desperate—customers. The severity of their plight makes them willing to pay *anything* in order to get away. If denied a spot on the ship, some of these individuals are likely to consider violence, hijacking or becoming stowaways. This is an excellent source of adventures, since these people have *nothing* to lose and everything to gain if they can pull off their plans.

Consequently, PCs who decide to engage in what is known as the "doom trade" have to be careful—the profit potentials may be high, but so are the risks.

Adding Injury to Insult: War Damage

In addition to whatever natural environmental difficulties are presented by a world, those which were located in War Zones have the additional problem of possible war damage.

Passing fleets and invading armies were often given orders to cripple life support systems and/or power generation systems of those worlds deemed sympathetic to the enemy or likely to fall out of friendly hands. This was not intended as a genocidal tactic but it was rather intended to slow down the

enemy, who had to rebuild these damaged facilities.

Or so ran the assumption. Unfortunately, as the war progressed, many worlds were never visited again—either by friend or foe. The war passed them by. Their life support capacities remained crippled.

The Black War years only intensified this problem—Lucan's forces were known for striking at the life support equipment of vulnerable enemy worlds, particularly those at the fringes of his enemies' protective spheres.

Doomed Worlds vs. Failing Worlds: Predictions of Severity

Some worlds may show signs of population decrease and marginal life support maintenance, yet not be Doomed. These borderline cases are known as Failing worlds. This name reflects the ambiguity of their future—it is still unclear whether they have managed to stabilize at a viable life support level or whether they will ultimately decline into total uninhabitability.

Whether a world is Doomed or Failing can be predicted with considerable accuracy simply by considering the nature of the world's environment and its practical tech level.

Below TL3: Tech levels prior to TL3 are extremely vulnerable to any kind of life support shortage. An absolute lack of a needed resource (e.g., no water) is almost certain to doom the world.

TL3: At TL3, two important changes take place. Electricity becomes possible, as does limited construction with metals. The importance of these factors in helping a world maintain life support cannot be overstated.

With electricity, it becomes possible to liberate oxygen and hydrogen from common water. Consequently, it becomes possible to replenish tired air supplies and to secure an (admittedly dangerous) source of power—gaseous hydrogen. However, worlds with fluid hydrospheres still have a strong negative effect on life support capacity, even with primitive electricity available. The ability to acquire any water (and, thereby, free oxygen and hydrogen) from most non-water hydrospheres is very limited indeed. In effect, making water in a fluid hydrosphere usually requires the maker be able to isolate and contain the molecular components of whatever compound(s) the fluid is comprised of. Societies barely generating electricity are going to find this nearly impossible in most cases. In certain instances, it may be completely impossible.

Another major advantage conferred by TL3 is the ability to manufacture metal hulls and containers with reliable seals. This allows for the construction of tanks to retain the molecular by-products of water. It also makes various distillation processes much easier and less wasteful. Even a world without any water at all has some available to it when this technology is produced—the moisture contained in every living cell on the world. This has led to some admittedly gruesome "cremation" practices on desperate worlds, but it makes survival—at some level—possible.

Also important—crude filter masks can be produced at this tech level, which serves to reduce the effects of tainted atmospheres.

TL4: TL4 introduces a number of important additions. Internal combustion engines are perfected, as are more sophisticated metal-working techniques. The ability to compress very thin atmospheres increases, as does the ability to seal out

those which are contaminated. Filtration improves, and chemical manipulation advances to the point where extensive hydroponics are quite possible. Electricity is now an easy-to-produce and easy-to-operate power source energizing lights and heating units.

TL5: By TL5, almost all adverse environmental conditions can be handled with only minor long-term reduction of life support capacities.

TL7: By TL7, only insidious atmospheres have any effect on a population's ability to provide for its own long-term life support.

THE IMPERIUM AS OF 001-1128: DETERMINING THE EFFECTS OF STAGE 8

Referees should now institute changes to UWP population values as determined in Chapter 3, or by comparing 1124 Khavie and Pasdaruu data to 1128 figures.

Doomed Trade: Traders looking for passengers on Doomed worlds can find double the number of low passengers and mid passengers at 130% of the normal rate (if they hold out for this amount).

Environmental Infractions and Law Levels: Due to the critical balance of life support characterizing both Doomed and Failing worlds, illegal activities (or even minor infractions) that involve the transgression of environmental laws are dealt with in a much more severe manner than other forms of wrongdoing.

- On a Doomed world, the practical UWP law level when resolving environmental transgressions is +6.

- On a Failing world, the practical UWP law level when resolving environmental transgressions is +3.

ADVENTURE 8: STAYING ALIVE

This is not a single adventure. Rather, it is a group of adventure concepts similar to a group of "patron tickets." In each case, the concern of a Doomed or Failing world is the driving force behind the adventure.



**Mission of Mercy:
Clarkesphere (2519 Pasdaru/Diaspora X324200-3)**

While stopping over at this airless world to get fuel from its small icecap, the group is approached by two locals who plead for the PCs to help them and their world. Not only is the planet's air-recycling equipment failing, but the food is running out.

Early in the history of spaceflight, hydroponics experts perfected several species of algae that were excellent air-producers and high-protein food sources, but this is only a legend. The two individuals wish to depart with the PCs to search for some of this algae (if it still exists), and the instructions for how to grow and tend it. They are willing to work at various jobs for the PCs in order to pay for their transportation.

**Life by the Lungful:
Khedas (3112 Pasdaru/Diaspora E7A4232-2)**

When the PCs enter this system, they find signs of battle damage where the starport used to be. When they land at the new facility, they find an imperfectly sealed airlock barring their entrance to the community. Upon forcing their way in, they are surprised to find the upper floors of the small settlement deserted. Only upon descending to the bottom floor do they find the 212 survivors of what was once a colony of 653 people.

The locals will recount how the attack damaged their air-processing system and their environmental seals. The lethal exotic atmosphere is fairly warm and, therefore, hasn't been sinking into the lower levels of the community very quickly, but it is only a matter of time. They might be able to survive if the broken seals were repaired, but it would be a two month welding job with the materials on hand.

The locals have a different answer. Several asteroids in their system's belt have a high concentration of aluminum. If a few hundred kilograms of aluminum could be mined and brought to them, they could combine it with iron oxide to make thermite. Then they could use the thermite to weld the breaks in their seals and attend to their other many problems (like how to maintain a water supply, a food supply, etc.)

**Charlots of the Gods:
146-685 (3004 Khavie/Diaspora X794423-0)**

When landing for refueling, the PCs observe a large signal fire in the shape of a distress signal, just a few hundred kilometers north of their intended refueling spot. Flying to that location, they find the local population in great distress, with the leaders eager to talk to the captain of the ship (which is the first one stopping by this community in two years).

After an attack by pirates from Massilia a year ago, the people of 146-685 lost the ability to maintain any significant technological base—the damage to their single major settlement was too severe for rebuilding. As a result, they can no longer produce the filter masks allowing them to live on their otherwise pleasant world. The atmospheric taint is not immediately lethal, but it is already starting to produce various illnesses that will eventually be terminal.

The taint is comprised of heavy atmospheric elements, so its effects are lessened (although not eliminated) at higher altitudes. The natives' request is to shuttle their population (all 60,000 of them!) to the top of a large extinct volcano crater located on an island some 400 kilometers out to sea. The freshwater lake in the caldera is large enough for their needs, and the increased altitude should allow them to survive (although with shortened life spans). They realize this will be a huge undertaking and are willing to pay handsomely for it—Cr350,000 in gold, silver and gems (mined locally).

Special Note

All of these scenarios qualify for the optional bad karma rule (see page 95).

Using This Set of Adventures

These small adventure outlines can be used at almost any point within the *Hard Times* campaign, or they can be used as stand-alone adventures. If used within the framework of the campaign, they can be inserted between major events of the story line, almost as distractions or interludes.



Slow Slide to Oblivion

13

Looking back, everything we went through after the Rebellion was the result of technology. Technology allowed us to live in just about any environment we wanted to. Now there was less of that technology to go around, lots of people who went to live in the less-friendly environments found it a struggle just to survive.

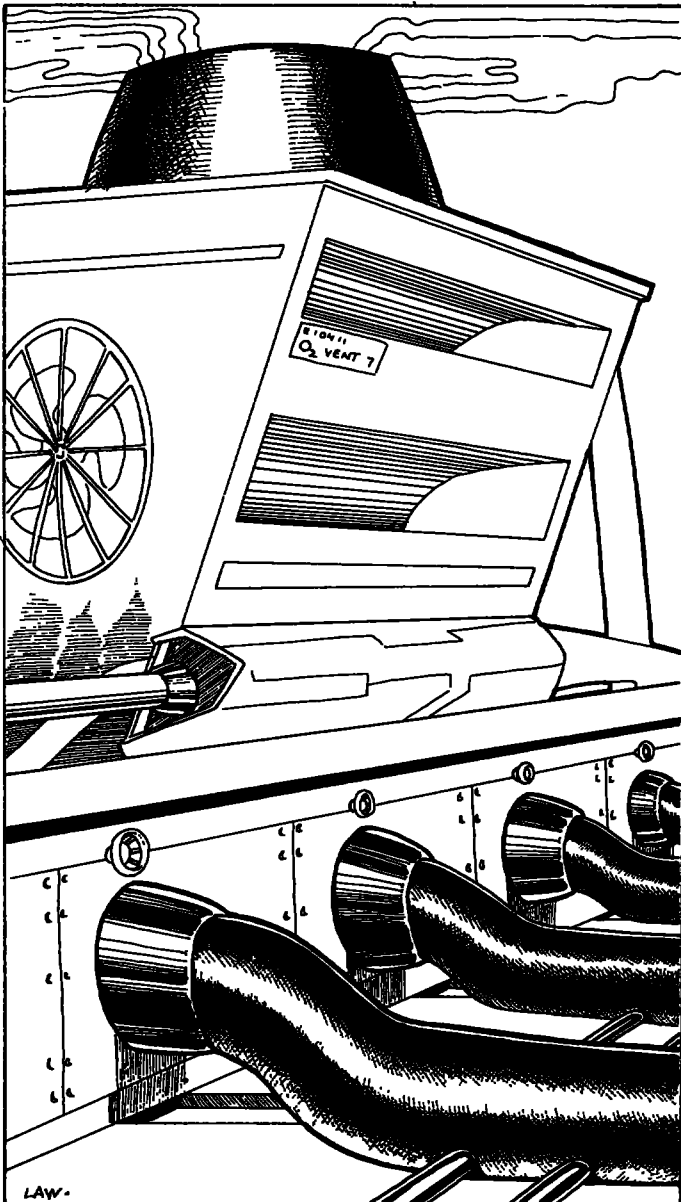
I always thought it strange that any world with water and a breathable atmosphere should be called "poor." I just couldn't ever get the concept into my head—I guess it's the same reason I almost failed economics at the academy.

Or maybe I was just ahead of my time—because now, a lot more people are starting to see it my way.

STAGE 9: FAILING WORLDS AND A FAILING IMPERIUM

Date: 180-1128

Although better off than Doomed worlds, many backwater planets just manage to struggle by. They have enough resources to ensure survival, but lack sufficient materials or development to prevent a headlong slide down the scale of



civilization and technology—sometimes crashing to a halt below the level of industrialization. Such planets usually have some environmental handicaps—and it is usually the relationship between those handicaps and the local tech level which cause the world to fail.

Some of these worlds may possess hazards making them seem more like candidates for Doomed status, but for some reason, the hazard is not as severe in this particular case. For example, certain Failing worlds have tainted atmospheres that are not immediately fatal but cause early death or chronic respiratory ailments instead.

How the Failing Worlds Contribute to the Doom Trade

The doom trade (the transport of refugees away from crippled worlds to safer ones in the Frontier and Safe) actually owes more of its existence to the Failing worlds than to the Doomed worlds. This is largely due to many more of the worlds in Imperial space are Failing than Doomed. Also, the populations of Failing worlds tend to be larger.

However, individuals on Failing worlds are nowhere near as desperate to escape as the people on Doomed planets. Most individuals on Failing worlds still believe long-term survival in the environment is possible, and they are not so quick to cut their losses and their roots. Most of the doom trade passengers from Failing worlds are emigrés who do not have strong personal ties, or people who have been economically ruined and will have to start anew anyhow. A few are those wise individuals who realize it is better to be safe than sorry and things may slide further—which could mean further decreases in technology and a change in status from Failing world to Doomed world.

Life on a Failing World

By 1128, Failing worlds are beginning to go through a number of significant changes. Communities shrink back into tighter proximity as long-range, high-speed travel becomes more expensive. Alternate energy sources are reexplored, if only to provide backup systems in the event of main power plant failures. On those worlds where space travel already exists and is still technically sustainable (TL6+), many of the new insystem industries will be underway. For example, those worlds without petroleum reserves of any type will be wildcatting propane from gas giant atmospheres for fuel, lubricants and—via torturous polymerization methods—plastics.

Life support strategies employed by many Failing worlds include:
Recycling: Recycling—everything from paper to metals to

plastics to petroleum—becomes a major concern. Many high-tech factories that are no longer being used for production are converted to this purpose. In many of the more desperate and water-poor environments, bodies are dehydrated to add to the total water supply.

Bloproducts: In order to create more air, flora and fauna, many Failing world governments subsidize industries which meet needs by developing biological resources, rather than nonbiological resources. For instance, rubber, wood and animal hides are all preferred over plastic. Methanol and ethanol distillation is encouraged.

Nonexhaustible Resources: Solar, wind, hydroelectric and tidal energy sources are all encouraged and exploited to the degree permitted by local funding. Stone and cement construction is emphasized over metals or composites.

Useful Bioforms: The Imperium's tremendous diversity was not just social, but biological. As a result, many creatures offer Failing worlds major advantages. One example hails from the Ley Sector—silicate-based organisms which excrete complex polymers as gastric waste products. Such creatures can be fed their standard meal with a little excess carbon and water—and out comes strands of plastic. Organisms with this kind of unusual property are highly desirable in 1128. Unfortunately, the widespread largesse of the Imperial standard of living prior to the Rebellion made these creatures more notable as oddities rather than assets. Consequently, they are rare beyond their homeworlds and hard to locate for purchase.

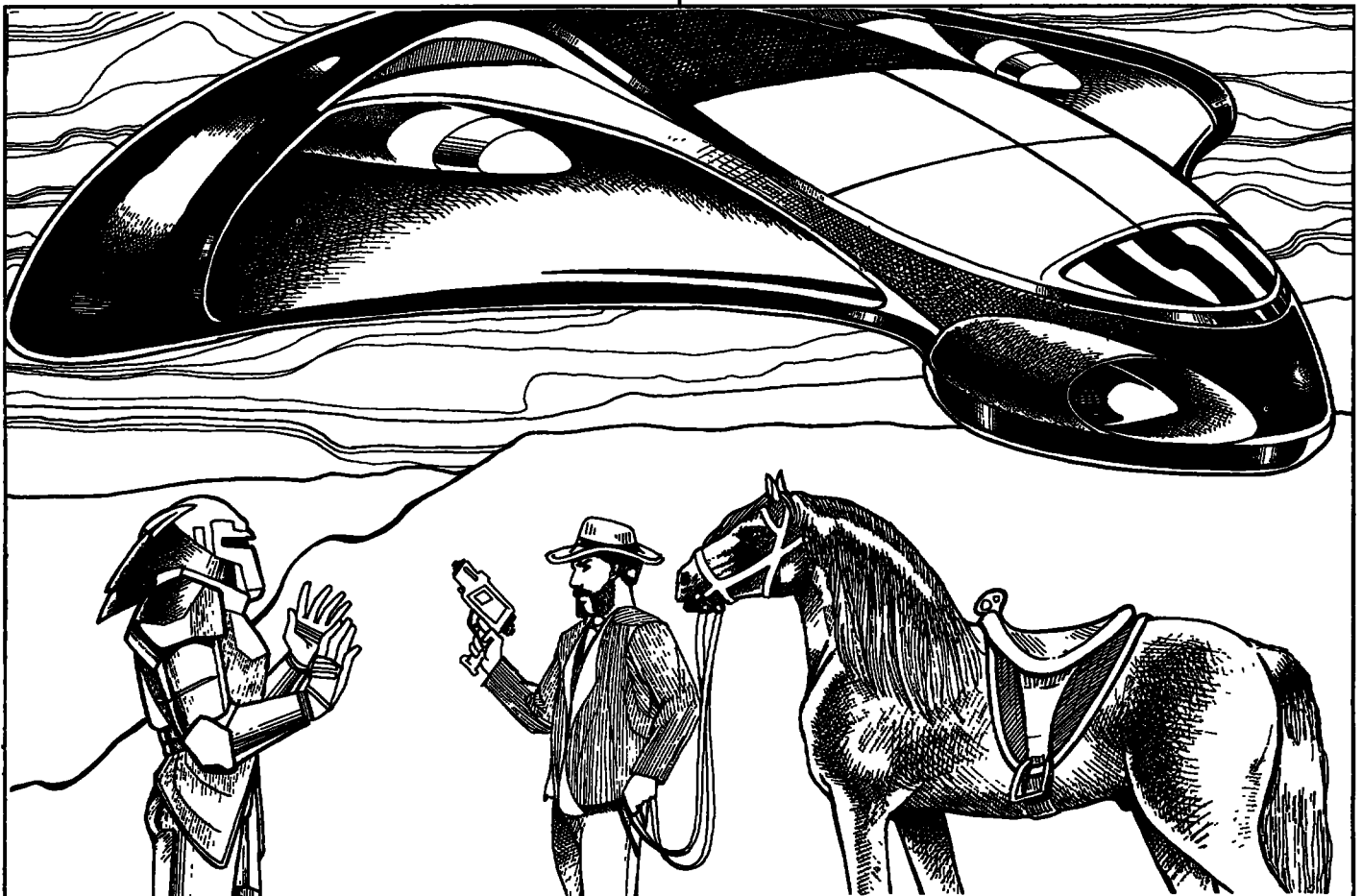
Law and More Order on Most Worlds

The changes all worlds experience during the first three

years of Hard Times often create changes in government as well. The population of any world which has experienced significant economic disruption or loss of life is likely to experience a decrease in personal freedoms and a corresponding increase in centralized, autocratic government. This is usually caused by the need to control the dangers to the civilian population in the most efficient manner, and to assure that crucial services and tasks are carried out when needed.

In many cases, however, the heightened efficiency is overshadowed by the increased intrusion and oppression these governments entail. This can create a mood of civil unrest, which leads to a more autocratic governmental form, which leads to more unrest. This cycle can often end in violent revolts—leaving things worse than before.

By 1128, those worlds that are going to experience government changes have done so. This represents a majority of the worlds due to the widespread decreases in tech level. When governments change due to Hard Times, the net effect is usually a loss in pluralism, not simply an increase in the world's governmental UWP. For instance, a Representative Democracy (UWP value 4) is more pluralistic than a Charismatic Oligarchy (UWP value 3), yet the Representative Democracy has the higher UWP. The basic **MegaTraveller** governmental progression tends to reflect a compromise between increasing levels of centrism and the governmental evolution accompanying the growth in population. Hard Times establishes an alternate progression based on decreasing levels of pluralism and increasing levels of oppression to resolve changes in government. This alternate progression is presented in the following section.



Passing of an Age

The year 1128 sees an Imperium populated by increasing numbers of Frontier folk. Strangely, however, they are Frontier folk in reverse chronological order. Rather than opening up a new frontier, they are the rear guard of a collapsing civilization. These hardy, self-reliant people are the survivors of a terrible, pervasive war. They were born into the largest, most advanced and (supposedly) most secure interstellar state in existence.

And now it is gone and will not be back in their lifetimes.

In particular, the small worlds of the Outlands and the Wilds are beginning to realize the greatest hardships are ahead. Unable to maintain the infrastructure that produces doctors, educators and other essential specialists, they must now try to attract offworlders from the Frontier or the Safes to fill those posts. But offworlders are fewer and further between in 1128, and the numbers continue to decrease.

A typical planet in the Outlands—say, population 4, tech level 7—is at the mercy of many possible aggressors, the most prominent of which are bands of organized pirates. It is not a safe, and therefore probably not a stable, environment. Yet, somehow, this planet must maintain an adequate number of competent, professional medical personnel. At population level 4, it is almost certain this world will not have a college, much less a medical school. And since there are no longer formal avenues of educational exchange, attending a suitable college on another planet may be all but impossible. Even if the inhabitants of this world know of a suitable institution somewhere, the distance may be too great; the institution might not take offworlders; or the planet might be unable to afford it. Indeed, its own secondary and post-secondary educational system may be so limited as to be unable to produce candidates with sufficient qualifications. In order for such small planets to ensure themselves adequate medical care, they must either place a tremendous investment in one or two of their best and brightest, or they must hire offworld help. That offworld help is getting more scarce and less willing to take long-term employment in the Outlands and the Wilds.

Similar areas of personnel shortages would be in education, technical maintenance, security/military and science. Lawyers will be rare as well, but smaller societies have less need for elaborate legal structures, so this lack will hardly be felt.

This situation creates communities with a quaint "Old West" feel, where each citizen is solicitous toward, and proud and protective of, "our school marm" or "our doc."

THE IMPERIUM AS OF 180-1128: DETERMINING THE EFFECTS OF STAGE 9

Referees should now institute UWP changes resulting from Chapter 3 procedures.

Doom Trade Continues: As of Stage 9, traders looking for passengers on Failing worlds may roll an extra die when determining the number of middle and low passengers available. Prices are standard (minor bribes of a few hundred credits are the extent of extra revenue passengers might offer).

Interpreting Governmental Changes: Some of the governmental changes dictated by Hard Times might seem somewhat unusual. For instance, what has really happened when a captive government (UWP rating 6) changes? In the case of captive governments, most changes indicate that the old captor aban-

doned control over the world. This is quite likely, given the transport and economic difficulties of Hard Times. It is equally likely the captors have sided with the locals, and the new government represents a new common-cause union between the occupiers and occupied. Another possibility is the final squadron through the system during the Rebellion, as an act of spontaneous generosity or even as one last perverse exercise of power, ousted the old government and left the inhabitants free to set up their own system.

Another unusual situation is where a relatively high-tech world has experienced a governmental breakdown and is now sporting a UWP government rating of 0 (No Government, Anarchy). Can such a society exist and yet maintain a high technological rating? Certainly. Anarchy simply defines the level and nature of social interactions and affiliations. Anarchies are not societies in which there are no multi-person groupings at all. They are simply societies in which none of these groups recognize a controlling body set up over *them*. Most anarchies are comprised of a collection of small, informal, "tribal" societies—and tribal ties do not impute technological backwardness. For instance, several families could ally to keep a TL13 power plant operational, while others do the same with an arms factory. In their interactions, they would not recognize any group above them that could dictate the form or content of their relations, but self-interest and *quid pro quos* could make a productive relationship not only possible, but reasonable.

Certainly anarchy can descriptively refer to mob rule and rioting, but as a temporary stage lying between an old form of government and either a new form of government or the complete dissolution of society. This is an event, rather than a permanent condition. Thus, a government level of 0 should normally be taken to mean a sustainable (insofar as any government is eternally sustainable) state of social interaction. Referees will have to rule whether a government code of 0 is one which has reached equilibrium or is only a snapshot of a world taking the final plunge.

In effect, anarchy is the ultimate balkanization, and for adventure purposes, such a world is enticing. The PCs will have to discover the meaning of the UWP and deal with the question of who's in charge. The answer is, "It depends." Are they looking for fuel, food or weapons? And would that be blue or green ones?

ADVENTURE 9: AMBUSHING THE AMBUSHERS

Upon returning to the Khavle Main via Feme (with Minara Sydow on-board), the PCs receive a communique from none other than Jarag Karsubaqa, forwarded from Shareduu, just over the border in the Khavle Subsector. It seems the Khavle Accordment has received word that Indro the Lightless is already on the move. Inside sources suggest he'll be attempting to set up his advance base in the Shareduu System, from which he will launch his campaign of terrorism and destruction along the Khavle Main. In response, the accordment has sent Skerit Adan and two other starmerc units toward that system. Due to refit and equipment requirements, those units will not arrive there for another two weeks. Therefore, in order to have a warm welcome waiting for Indro when he arrives, it is necessary the PCs delay his advance for at least two weeks. This will also include the PCs' help for the Femers in setting up their orbital defense system.

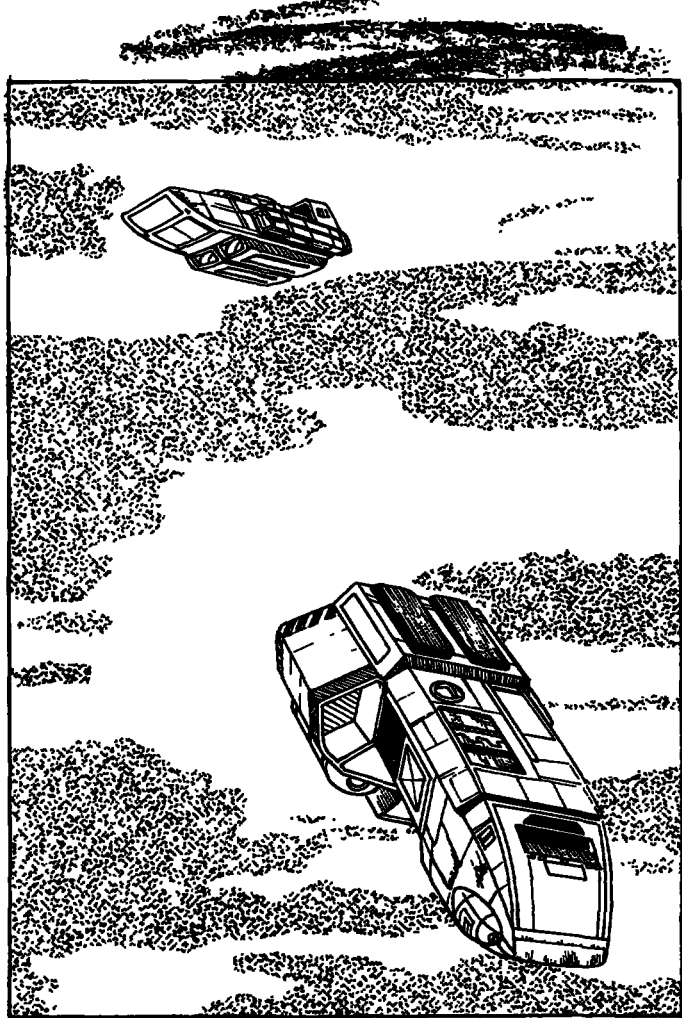
The pay for this, in addition to whatever part they might play in an engagement near Shareduu, is to be Cr80,000 per person, plus all expenses (including damage to, or complete loss of, their ship). This time, even the xenophobes of Feme are ready and willing to help—they know if they don't have some defenses ready to dissuade Indro and his raiders, the corsairs are likely to come planetside and pillage the main settlement at the capital (Betel).

World: See Chapter 10 for details of Feme. However, since the PCs were last here, the once democratic government has balkanized (UWP rating of 7) into a number of rival camps, sharply divided over issues of xenophobia and isolationism. The law level has increased to 5 (7 is the double standard norm for offworlders).

Referee's Information

A large pirate flotilla usually doesn't enter a system without a little advance reconnaissance. Indro knows if he doesn't retain the initiative during his advance, Khavie's hired guns are going to be waiting for him. So in all probability, he will send a single ship—maybe two—ahead to check out the lay of the land as he prepares to advance his forces. And once he arrives insystem, he is sure to use any tactic necessary to make sure no starships get out to warn the accordment forces.

Unknown to the PCs, Indro's latest ally is none other than Jugisaal Lakidgussar and his Killer Sharps (see page 28).



Indro decided to woo this band of rippers to work as a covering/recon force. Since it is a "known fact" corsairs and rippers never work together, no one who encounters the Sharps and lives to tell the tale would ever suspect that this band is an advance unit for a major corsair thrust.

Meanwhile, the population of Feme has been putting the finishing touches on three large missile battery satellites. Each is TL7 with a battery rating of 5, and each is a single-shot affair. In addition, the Femers have prepared 30 identical looking decoys. The characters are to lift these satellites into low planetary orbit (LPO) to provide constant cover for the capital in preparation for Indro's arrival.

Adventure

The are 33 satellites (both armed and decoy) to be lifted into LPO. By properly spacing the three real satellites, the Femers can have constant coverage of the orbital and atmospheric entry space over their capital. This also allows them to play a role in helping the PCs defeat the Killer Sharps. But by contract, the burden of launching all 33 satellites is going to fall upon the PCs. For maximum detail, PCs can use the pregravitic spacecraft rules for deploying the satellites.

Engaging Lakidgussar: Three days after the PCs begin placing the satellites in orbit, Lakidgussar and the Killer Sharps arrive insystem.

Depending upon roleplaying and appropriately timed guilt trips, they PCs may convince the Femers to allow them to have control over the missiles. Otherwise, the missiles will be fired from the ground, with attendant deleterious effects on their proper use. The Femers will not want to discharge more than one of their satellite batteries in support of this combat; they still have to live through Indro's inevitable advance.

Lakidgussar is no fool. As soon as his sensors pick up the unexpected satellites in orbit around Feme, he is going to approach cautiously. If the PCs' ship is clearly stronger than his, he will attempt to head out to a gas giant to refuel and return to warn Indro.

If he has identified the PCs as the same individuals he dealt with on Sutter, he will certainly warn Indro the PCs are double agents, and Indro will understand he is being led into a trap. The PCs should have a clear opportunity to recognize him and prevent this.

Ending the Adventure

This should be a classic ship-to-ship combat. Ideally, boarding actions might take place, or Lakidgussar's ship might be lured into range of the Femers' defense satellites for a *coup de grace*. If the PCs emerge victorious, they should have the opportunity to learn the Sharps were Indro's advance guard. They have thus accomplished their delaying action and may jump outsystem to join the gathering forces in the Shareduu System for the final showdown with Indro the Lightless and his brotherhood of corsairs.

If the Adventure Is Used Alone

The Femers will be simply trying to ensure their defense against the rumored approach of Lakidgussar's Killer Sharps and another band of rippers. The larger, strategic issues of delaying Indro and his horde will not exist. It will simply be a starship-to-starship fight to the finish. The locals will be willing to use all three of their missile satellites.

Light a Candle 'Gainst the Coming Night

14

Few of the fledgling polities that attempted to band together against the onset of the Short Dusk (Hard Times) lasted more than a few years. Only a dozen or so survived long enough to be absorbed when the Safes of the post-Rebellion factions began to reexpand. However, the fact that so many interstellar polities did strive to link themselves in common cause against the threat of social and technological recidivism offers insight into why the Short Dusk will not become another Long Night.

The breakup of the Third Imperium was not caused by decay and decrepitude, which is what killed the First Imperium. Nor was it the result of the overextension and loss of control, creating the fragmentation of the Second Imperium. Instead, the Third Imperium was like a collection of spokes suddenly losing their hub. When the core (the emperor) was removed, large chunks of the society spun off on their own stilted trajectories, revealing what many had said for centuries—the dynamic equilibrium of the Third Imperium was too fragile to survive the stress of a true crisis.

The pieces that flew away from the Imperium's hub were not the agents of chaos, despite the powerful and often conflicting centrifugal forces predetermining their fates. Instead, the factions, Frontiers, even the worlds of the Outlands longed for the benefits they had known when the Third Imperium cloaked them all. That longing pushed them to resurrect some semblance of the Imperium, whether with a few neighboring worlds or as part of a multifaction effort to restore the peace and prosperity through compromise and cooperation.

What many see as the death throes of the Imperium will soon be known as the growth pains heralding the approach of a newer, more mature scheme of interstellar governance. The Imperium is not dying of old age—it is experiencing childhood's end.

From the unfinished manuscript discovered, along with the pistol used to take his own life, beside the body of Tredek Jurisor, Dulinor Astrin Ilethian chair and head of the Department of Imperial History, Dian Univeristy, Dian/Ilelish.

STAGE 10: EMERGENT AUTONOMOUS POLITIES

Date: 1125-1128 and beyond

In addition to the Safe regions, stable interstellar governments can arise in Frontier and Outland areas, particularly after 1128. These groupings, conceptually akin to ancient city-states, are referred to as independent, autonomous or stellar polities. Areas conducive to such regional consolidation have generally not been heavily mauled by the clashes of the Rebellion: If an area's tech level and industrial base are largely undamaged, so are its potentials to emerge as a new political nexus. It is also important the area contains a suitable mix of resources—usually at least one high-population planet for industry and economy, one or more agricultural planets, and perhaps a wealthy planet. Class-A and class-B starports are crucial to the maintenance of intersystem trade within the polity.

Local governments must have the vision to rapidly and efficiently reorganize along humbler lines. Bureaucracies and pure democracies are unlikely to do so in time; their processes are too full of inertia. Dictatorships and oligarchies are too unwilling to concede their power. Technocracies, corporate-owned systems, republics and military administrations have the best chances of enacting the changes in time.

Finally, the formation of an interstellar government is more likely if the area has some form of speciate, ethnic, linguistic or cultural homogeneity—something creating an easily perceived line that divides a regional "us" from the hordes of "them" beyond the local borders.

Polities and Survival

Unfortunately, the majority of the interstellar polities formed will not endure for more than a few years. Some Frontier polities are actually absorbed by the local Safe, but Outland polities too often find out the member planets still have not

stabilized their economies or achieved acceptable levels of security. Arguments over inequities of expenses and resource allocation often lead to feelings of suspicion and resentment, leading to dissolution of the group.

Even if these potential obstacles are overcome, the very success of the polity increases its attractiveness as a target for raiders. Prosperity means higher technology, fresh ships, worthwhile opportunities for a daring band of corsairs, vikings or rippers. However, if an Outland polity can survive these combined threats to its unity, it can provide a safe haven in the midst of increasingly dangerous regions of space.

After 1128

Many of the changes, which become evident from 1125-1128, require another decade before they are fully resolved, although many of these resolutions are already obvious by the end of 1128. For instance, Doomed worlds are still slowly dying. The long-term results are ordained—compliance with the harsh reality is all that remains.

Not all worlds face immediately bleak futures, however. Some may have the resources to take up with an independent polity, while some Frontier worlds may benefit from gradual firming up of defensive lines. Some stellar polities survive in the Outlands by stabilizing their technology and their ports, and they become, for a time, beacons in the growing darkness around them.

However, the astrographic lines dividing entropy from order will become sharper in the years ahead. Areas with the benefit of industry and commerce may stabilize, recover, flourish and formulate plans for reexpansion. Areas that have fallen by the wayside will sink deeper into the mire of depression and decay.

To a large degree, it is up to the PCs to determine how deep this depression—and how dark that decay—will be.

**THE IMPERIUM UP TO AND BEYOND 1128:
DETERMINING THE EFFECTS OF STAGE 10**

The referee should now institute any desired polities established within the guidelines of Chapter 3. The referee may wish to ignore the emergence of these groupings or simply design them without rolling—basing them on common sense and the guidelines listed above and in Chapter 3.

ADVENTURE 10: SHOWDOWN AT SHAREDUU

Arriving at Shareduu, the PCs will find many familiar faces insystem. Kursubaqa is there, as is Hsudliggar. Adan commands the starmerc force sent here, and one of his attached units is Abrex Justinian (from Chapter 6). This collection of starmercs receives the PCs' report of the action at Feme with sober nods and congratulations on a job well done. The PCs' current task is to help defeat Indro's approaching forces out near the system's most distant planetoid belt, which is where informants have said the raiders intend to establish their secret base. The promise of Cr80,000 per person plus expenses is nearly a reality—if only they can live to collect it.

World: Shareduu (2609 Khavle/Diaspora E231585-6) is

one of the two gateway worlds (Feme being the other) providing the most direct access between the Khavle Main and the Jedell Cluster in the Pasdaruu Subsector. The world is an arid wasteland of very thin air. Communities are clustered around the large saline lakes and small seas at its poles. The planet's flora and fauna are all imported species, some having been seeded during the First Imperium.

Referee's Information

The plan of the accordment forces is quite simple—to hide in the asteroid belt at the point offering the easiest access to a gas giant. This is where Adan is fairly sure Indro's flotilla will show up—the raiders will want to refuel before conducting any operations so they can jump outsystem on short notice, should an emergency arise.

As the pirates approach the belt, they will keep their velocity low in anticipation of maneuvering in the tight quarters of the asteroid field. This will allow the accordment forces to spring upon them and accelerate freely into combat—or slow for boarding actions in the case of crippled raider vessels. Indro still believes he has a large supply of nuclear missiles to fire at his adversaries, but they will all be useless because of the damper hidden in the hull of Indro's jump-carried munitions barge (*Happy Roger*).

Adventure

PCs and referees do not have to control all the ships during the ensuing battle. The most important aspect of this final adventure is to keep the focus on the PCs and their ship, and expand beyond that as enthusiasm and time allow.

Broadside for Broadside: Despite the overwhelming numerical superiority of Indro's force, the qualitative and performance edge is with the accordment forces. Also, once the corsairs realize their surprise is no surprise at all, they will only stick around if they are clearly winning the fight. If their side is suffering heavy losses, the raiders will begin to jump outsystem (they did indeed refuel at the gas giant before proceeding to the asteroid belt).

The PCs will find themselves outnumbered two to one. And they should find themselves facing none other than Prateria Honshu aboard the *Blue Moon*. Furious, she will tell the PCs she knows who they are and assure them, pirates never forget a debt of vengeance owed to traitors—and the PCs have earned the fullest measure of that debt.

Should the PCs find themselves in a bit of a pickle, one of the other accordment units can be called for help. Ships such as Adan's *Shadowfax* and Justinian's *Exeter* will cut wide swaths through Indro's flotilla and have some time to spare.

At about this time, the *Black Hole* will attempt to intervene, captained by Astallig

Accordment Vessels

Name	Type	Master	Crew Skills
PCs' vessel	Unknown	PCs	As indicated
<i>Shadowfax</i>	1000-ton <i>Fer-de-Lance</i>	Adan	3-4
<i>Sleipner</i>	440-ton patrol cruiser	Adan	2-3
<i>Exeter</i>	880-ton merc cruiser	Justinian	2-3
Ex. 1 & 2	2x8-ton fighters	Justinian	2-3
<i>Nine Lives</i>	330-ton <i>Gazelle</i>	Halleck, starmerc	2-3
<i>Savage Victory</i>	400-ton TL12 SDB	Khavle Accordment	1-2

Shadowfax is the flagship (UCP statistics for the *Fer-de-Lance* are included at the end of this section).

Savage Victory is one of Khavle's few remaining SDBs, which was carried to this system by jump-frame (a converted expressboat tender).

Indro's Vessels

Name	Type	Master	Crew Skills
<i>Dark Star</i>	440-ton corsair	Indro	3-4
<i>Black Hole</i>	440-ton corsair	Indro	2-3
<i>Blue Moon</i>	200-ton far trader	Honshu	2-3
<i>Shanry's Ditty</i>	200-ton far trader		2-3
<i>Glower</i>	200-ton far trader		1-2
<i>Sirka Atru</i>	100-ton seeker		1-2
<i>Jago's Grin</i>	440-ton corsair		1-2
<i>Bloodletter</i>	200-ton far trader		0-1
<i>Scythe Shade</i>	200-ton far trader		2-3
<i>Hell Hybrid</i>	200-ton far trader		2-3
<i>Dancer's Ghost</i>	200-ton free trader		1-2
<i>Nessie's Maw</i>	1000-ton X-boat tender		0-1
<i>Fang, Claw, Nail, Tooth</i>	10-ton fighters		1-2
<i>Ishkiggur</i>	440-ton corsair		1-2
<i>Fast and Free</i>	1000-ton X-boat tender		0-1
<i>Happy Roger</i>	200-ton <i>Far Rebel</i> STL		0-1

See rules for Crew Skills in Chapter 16.

Dancer's Ghost has been modified for two jump-1s.

Fast and Free and *Happy Roger* are being held in the rear and are not intended as combatants.

Statistics for X-boat tenders are listed below.

Sumelor, who is trying to save his father's lover (Honshu). He will engage the PCs in a to-the-death, broadside-for-broadside struggle.

If possible, the *Black Hole* will attempt to conduct boarding operations against the PCs' ship. Astallig, in a berserk rage, will not allow himself to be taken alive.

What happens to Astallig and Honshu depends upon the course of play, but Indro the Lightless and whatever of his flotilla is able to do will jump away to fight another day—and seek revenge against the PCs.

Ending the Adventure and the Campaign

The PCs will have the opportunity to rest and recuperate/recover on Shareduu. If they need repairs, Hsudliggar will make arrangements for them at Wake.

Of course, further employ with Hortalez is available, should the PCs express interest. The grateful Khavle Accordment wishes to honor the PCs along with the starmercs and is likely to pass more work along their way after the public honors are completed.

However—somewhere in the Pasdaruu Subsector, Indro the Lightless broods. He has a score to settle, and rumors suggest he's already putting out feelers to find out where the PCs are heading next. The *Hard Times* campaign does not need to end here.

If the Adventure Is Used Alone

Simply allow the player characters to join a locally gathered force planning to ambush a raider horde. Shoot 'em up. Have a blast.

Purcell-Class Express Boat Tender

CraftID: *Purcell-Class Express Boat Tender*, Type XT, TL 15, MCr 203.9

Hull: 900/2250, Disp=1000, Config=4UL, Armor=40G, Unloaded=28300, Loaded=28515 (carried craft not included since load may vary)

Power: 18/36, Fusion=4770 MW, Duration=30/90

Loco: 18/36, Maneuver=1, Thr=36, Jump=1, Top=1200, Cruise=900 kph

Commo: SysRadiox3, SysLsr3, SysMsr3

Sensors: AdvEMS=FarOrb(x2), PssvEMS=IntSill(x2), Densfcm=HIPer/km, Neumnc=silkr(x2), AdvObjSen=Routine, AdvObjPin=Routine, PssvObjSen=Routine, PssvObjPin=Routine, PssvEngSen=Simple, PssvEngPin=Routine

Off: BLaser=004, Batt=xx3, Bear=xx3

Def: None

Control: Computer=3 (x4), Panel=Holodynamic linkx750, Special=4 HdsUpHolo, Environ=BscEnv, Ls, ELs, grav plates, inertial comp

Accom: Crew=6 (Command), Bridge=2, Englx3, SmStateroom=10, Bay/Berth=20, Subcraft Bay=7690KI (570 tons, allowing 510 displacement tons for craft to be stored on board)

Other: Cargo=860KI, Fuel=3067KI (1 jump-1), ObjSiz=Avg, EmLvl=Moderate

Additional weapons are possible, but cargo tonnage must be reduced to provide hardpoints, just as the power plant will be need to be increased to support energy weapons and the CPU increases needed to support control requirements. Four computers are provided because in the jump drive is stowed along with everything else, one computer is insufficient to handle the data load.

Fer-de-Lance-Class Destroyer Escort

CraftID: *Fer-de-Lance-Class Destroyer Escort*, Type DE, TL 15, MCr673.808

Hull: 60/2250, Disp=1000, Config=4SL, Armor=40G, Unloaded=9237.09, Loaded=10669.2 (includes auxiliary craft with full load)

Power: 45/90, Fusion=13,716Mw, Duration=30/90

Loco: 99/198, Maneuver=4, Thr=99, Jump=4, NOE=100, Cruise=750, Top=1000, Agility=0

Commo: 3xMeson=Pintry, 3xRadio=System, 3xMW=System, Laser=FarOrb

Sensors: 1EMW=bad,ega, Densfcm=5xHIPer(km), Neumnc=3x10kly, PssvEMS=3xIntSill, AdvEMS=3xFarOrb, AdvObjSen=Routine, AdvObjPin=Routine, PssvObjSen=Routine, PssvObjPin=Routine, PssvEngSen=Simple, PssvEngPin=Routine

Off: Beam Laser=005, Missiles=004, Batt 3, Batt 2, Bear 3, Bear 2

Def: DM=19

Control: Computer=3x9fb, Panel=Holodynamic linkx393, Environ=BscEnv, BscLS, ExtLS, GrvPlts, InrtComp, 4xAirlock

Accom: Crew=14 (Bridge=2, Englx1, Gunnerx6, Flightx2, Commandx2, Medx4), Staterooms=2, SmStaterooms=5, Subcraft=Outer

Other: Cargo=8, Fuel=8313, Fuel Purification (10 days), Fuel Scoops, ObjSz=Avg, EmLvl=Faint, BttyRnds=30

A common starmerc configuration is to replace collapsible bunks in the field of the subordinate craft (outer), allowing for a standard complement of 15 troops and 200 KI/liters for special gear. (The outer is used for fueling (bunks are removed and collapsed bunks emplaced), this material must be stowed in the vehicle bay or carriers.

This design sequence supplement for pregravitic spacecraft makes it possible for referees—and players—to determine the components and performance of spacecraft built with pregravitic technologies. In addition to the *Referee's Manual*, discussions draw heavily on, and add to, design concepts presented in *COACC*, which is an essential part of the overall *MegaTraveller* vehicle design concept. These rules update similar concepts originally presented in "One Small Step" in **Challenge 45**.

SLOW AND STEADY

The most important addition made by this chapter is new propulsion systems for spacecraft. In the period before gravitic drives were introduced, a number of systems were used, often for very different purposes.

Resistojet: The earliest and simplest form of propulsion for space vehicles. They are akin to huge teakettles heating quantities of water into high-pressure vapor—which is then released to create thrust. Although simple and inexpensive, they are very inefficient. Miniature resistojets are often used for station keeping and attitude change by much more advanced craft.

Solid Rocket: Usually associated with the propulsion of unmanned missiles. Solid rockets play an important role in the early stages of spaceflight. They can be dangerous to use since, once ignited, they cannot be turned off. As a result, any failures within solid rocket systems have a high probability of catastrophic results. However, the solid rocket retains the advantage of a very high power-to-weight ratio.

Rocket: The basic start-up technology most civilizations use to get off their planet and into space. The high power of these engines makes them good "bootstraps," but also makes them voracious fuel eaters. While some energy can be gained from rockets, this is usually ignored or used to charge batteries since rocket operation is usually very short. The rockets most frequently encountered in known space (98% of the time) are cryogenically fueled (liquid hydrogen and liquid oxygen). Others use hydrocarbons, although the costs and environmental disadvantages of using that fuel type generally outweigh any conceivable advantages.

Ion Drive: Becomes practical for manned vehicles at TL7. The thrust in this system is created by electronically reducing the fuel to a stream of charged particles (ions) which creates a very low thrust. The ion engine indicated on the chart is actually comprised of more than 100 separate 50-centimeter thrusters. The primary advantage of this system is its endurance, low power requirements and reliability. However, the low velocities generally relegate vessels of this type to short-range runs taking weeks or even months.

The fuels used for this system are known as "ionizates." This one term includes mercury, cesium and a variety of liquefied noble gases (argon, neon, krypton, etc.). The values given for this fuel represent an average since some of these substances would be heavier than indicated and others lighter. Ionizates are found as trace elements in most Earth-like atmospheres, but are more frequently gathered from certain gas giants and their moons, which occasionally boast large concentrations of noble gases.

Mass Driver: MDs use electromagnetic repulsion (the principle used by the weapons of the same name) to generate thrust. Basically, just as firing a gun will impart acceleration to the firer in Zero-G, so will the electronic firing of rocks—which in this case are

propelled in (and discharged from) an endless treadmill of steel containers. The primary drawback to such systems is that they require a tremendous amount of raw mass as propellant. Poor prospectors find this vice to be a virtue—they can put a pressure dome on a small asteroid (very small), emplace one or two mass drivers and begin firing pieces of the rock for propulsion. Another major use of this system is to propel promising asteroids out of a belt and toward mining vessels which can then reduce the asteroids to usable ores.

Nuclear Thermal Rockets: These need a dedicated, on-board nuclear power plant in order to function. They use the heat from the reactor to excite liquified gases for a high-pressure release. This gives them the nickname "nuclear teakettles." Nuclear thermal rockets are very efficient, but very expensive, systems—they require the addition of a separate power plant. They are most effective when using liquified hydrogen, although most nonoxidizing atmospheric gases will do in a pinch. This gives the vehicle an excellent self-refueling capability—which is handy since it is still a fairly voracious consumer of fuel.

MPD: Magnetoplasmadynamic drives utilize hydrogen plasma to create thrust. This is, in effect, a crude, very low-temperature plasma gun. With this technology, true insystem commerce can begin to flourish freely and easily.

Fusion Rockets: Identical to those in *COACC*, but given the importance of space exploration and utilization, this technology is pressed into intrastellar use long before it becomes common in *COACC* military craft. Generally, after first being used as an energy source, fusion technology is next employed in spacecraft because of its excellent power-to-thrust ratio and because it produces considerable power to run the ship's other systems. Even after gravitic drives arrive on the scene, many designers prefer fusion because these drives—unlike gravitics—do not experience decreased performance when they venture more than 100 diameters from a significant gravity source. Of course, this limitation to gravitic drives disappears at TL11, when fusion drives lose their last tangible advantage.

Experimental fusion rockets (more properly called plasma rockets) are used at the very end of TL8. With fusion moving just past the break-even stage, they represent the first application of this immature technology in a spaceflight role.

SUPPLEMENT TO THE CRAFT DESIGN AND EVALUATION RULES

If not otherwise stated, designing craft with "One Small Step" proceeds exactly in the same manner as does craft design in the *Referee's Manual*. All new tables and/or additions are identified by the section of the basic design and evaluation sequence they supplement. The sequence of presentation follows what was established in the *Referee's Manual*.

UCP Design Sequence: Additions and Expansions

1. BASIC HULL DESIGN

Step 5: Craft Configuration and Streamlining

Modular-Frame Hulls: A new configuration designation may be included as a subcategory of configuration 0, open frame. This designation is the modular frame. The notation for this subtype of open frame hull in the UCP format is 0M (open frame, modular). All the hull volume of such a craft is effectively wasted space, dedicated to the booms, pylons, struts, connectors and rotational armatures used to join other craft or modules to the modular-frame hull.

A modular-frame hull can interconnect/mate with other craft whose gross UCP tonnage is up to 19 times the UCP displacement tonnage of the modular-frame hull. Therefore, a modular-frame ship with a displacement of five tons could join together 95 displacement tons of other craft, giving the entire modular hull a total displacement of 100 tons.

Many special modules are built for use exclusively with modular-frame hulls, the most common being propulsion modules which are all thrusters, power plant and fuel. Other modules—such as command modules, passenger modules and cargo modules—may be attached to make a whole ship. Note that each section should have the necessary amount of CPs on board (no section should not have to depend upon another module for it).

Multistage Hulls: Another option allowing a designer to create a craft comprised of discrete hulls is the multistage design option. A multistage vehicle is not modular. Each hull fits only with the other hulls included in the overall multistage design. As an example, the ancient multistage rockets of Terra's late-20th century push to space were not at all flexible in terms of swapping a stage out of one design and into another. Multistage vehicles may be configured to use fewer of their hulls in reduced configurations.

Multistage vehicles do not require a framework, however. The complete interdependency of the parts allows them to be designed in such a way that the components offer structural support to each other. This serves to create a stable, multipart whole without recourse to an additional framework (a framework is the distinctive feature of a modular-frame vessel).

Any of the hulls of a multistage vehicle operating within an atmosphere *must* be streamlined. The one exception to this is a cylindrical, in-line, multistage design (i.e., a number of configuration 3 hulls stacked end to end). In such a design, only the first or lead hull needs to be streamlined. The others may be designed as basic cylinders.

Lift-Assisted Launch Vehicles: A lift-assisted launch vehicle (LALV) is any vehicle which depends upon aerodynamic lift to achieve orbit. Any vehicle with a streamlined or airframed hull may qualify as an LALV.

Determining if a vehicle is an LALV involves consulting the rule section of this supplement entitled "Rules for Pregravitic Spacecraft." To learn more about advisable design strategies for LALVs, consult this same rules section.

Two separate design sequences may be used to create LALVs: COACC and the **Mega Traveller** universal craft design rules. If atmospheric operations are integral to the craft's intended mission, use the COACC design sequence. Other-

wise, use the UCP design sequence. Use the COACC Engines Table (in the fixed-wing aircraft design section) to provide additional locomotion options, if desired. Should referees need to approximate the relationships between UCP hulls and COACC airframes (e.g., one such use might involve calculating the vehicles' minimum airspeed), use the following table to determine which ratings are congruent.

UCP Hull	COACC Airframe	Min. Airspeed*	Max. Airspeed
Unstreamlined	Simple	150/75	300
Streamlined	Transonic	175/88	800
Airframe	Hypersonic	350/175	5000

*Minimum airspeed for standard/STOL hulls respectively. VTOL hulls have no minimum airspeed.

UCP hulls may also incorporate VTOL or STOL features into their design. Most of the performance advantages of VTOL/STOL designs can be found by consulting COACC. VTOL hulls add 10% to the weight and 50% to the cost of the hull. They become available at TL7.

STOL hulls add 5% to the weight and 30% to the cost of the hull. They become available at TL6.

Step 8: Minimum Armor

Certain vehicles designed in this sequence may be disposables—they are not expected to be reclaimed and used again. One example would be any rockets which provide initial liftoff thrust and are then jettisoned to burn up in the atmosphere.

A disposable component that is not intended to leave the atmosphere must have a hull armor rating of 4 or more. A disposable component leaving the atmosphere must have a hull armor rating of 8 or more.

Step 12: Vehicle Cupola or Turret?

Most of the vessels constructed at the tech levels addressed in "One Small Step" do not have enough power output to charge even a single battery-sized laser. Most of the relatively small energy output will be dedicated to locomotion and life support. Therefore, designers may want to consider including tactical-level weapons as part of their shipside ordnance (revised values for in-vacuum use are included in the evaluation section).

Tactical weapons *must* be placed in specially built turrets. Use UCP Design Step 12 to design these turrets. They are not the same as the battery-sized turrets of UCP Design Step 6.

Individual nonbattery turrets on a spacecraft may not have more than 1% of the hull's volume. The total additional volume a hull can acquire by adding any number of additional turrets may not exceed 5% of the hull's total volume. All other rules for constructing turrets are stipulated in the Referee's Manual, Part 1, Step 12 (page 63) of the UCP design sequence.

2. POWER SUPPLY

Step 1: Power Supply

As will be noted from Subtable 5a: Engines, some of the nongravitic thrust engines produce a power output. Those engines which do produce power have an output of 2% of the *current* engine thrust (TT ratings). The listed power output ratings on Subtable 5a: Engines (see following) assume the engines are engaged at maximum thrust.

3. LOCOMOTION

Step 5: Maneuver Drive

Unless noted, these engines can be built in larger units (i.e., a fusion rocket engine could be built with double the ratings listed and still be a single engine.)

A solid rocket is simply a fuel core; it requires no mechanical engine to speak of, only a hull in which to encase it. However, this rocket burns so fast that it would take 600 of these fuel-cores to last one hour (a single one-kiloliter fuel core lasts only six seconds).

Consequently, most uses of solid rockets employ several larger versions simultaneously or in stages. It is necessary to note both the number of solid rocket engines and the number of fuel cores per engine.

For example, a double-sized engine would have two times the listed ratings, 100 tons of thrust, two times mass, etc. If it was comprised of three such double-sized fuel cores, it would burn at 100 TT for 18 seconds (three double-sized cores at six seconds each).

8. BRIDGE

Step 3: Computers

A computer's computing power is defined as:

$$(Maximum\ CP\ Input) \times (CP\ multiplier)$$

This value is used in determining remote-control requirements (see following).

Step 4: Control Panel Units

A craft may now be designated as being remote controlled. Remote-controlled craft do not require control panel units. Remote-controlled craft must have one (or more, if redundancy is desired) communicator (page 67 *Referee's Manual*) dedicated to command input from, and data relay back to, the remote controller. This communicator may not be used for any other purpose.

9. ACCOMMODATIONS:

In truly cramped vessels, a more basic type of extended accommodation is available—the half bunk. The half bunk is usually a light frame, double bunk with just enough space for the individual's gear and provisions. Such accommodations are found on many tightly designed, low-tech spacecraft.

Half Bunk

Pwr	Vol	Wt	Cr
—	6	.25	25

10. FUEL

Step 2: Cost and Weight of Fuel

There are four new fuel types.

Type	Mass	Cr
Solid rocket	0.1	50,000*
Cryogenic	0.35	70
Ionizates	1.5	100
Rock	1.0	None

*Solid rocket fuel is the solid rocket itself. The rocket as listed in the Engine Table ignites and consumes itself completely.

Step 4: Special Fuel Tankage

Solid rockets and radioactives may not use special tankage options. Pregravitic vehicles not capable of lift-assisted launches must design any drop tanks as separate hulls, according to the UCP design rules. Remember, such tankage may be designed as a disposable unit. Tankage hulls require no control panels.

DESIGN EVALUATION (AND SUGGESTIONS)

The design evaluation sequence proceeds in exactly the same order as stipulated in the *Referee's Manual*. A few calculations having to do with thrust and speed are different.

Subtable 5a: Engines

TL	Type	TT	Mass	Vol	Fuel	FType	PWRqd	PWOP	MCr
4	Resistojet	0.01	2	2	20.0	Water	0.2	None	0.1
5	Solid rocket	30	0.1	1	600/HR	Solid Rocket	None	None	0.05
6	Rocket	30	1	1	19.2	Cryot	None	0.6	0.25
6	High-performance rocket	39	1	1	24.0	Cryot	None	0.78	0.3
7	Ion drive	0.05	15	15	0.0001	Ionizates	0.5	None	0.20
7	Mass driver	10	0.05	0.1	3.6	Rock	10	None	0.16
7	Nuclear thermal rocket	75	16	4 ‡	7.0	Hydrogen	10.0	None	0.75
8	Compact MD	0.2	0.2	0.2	3.6	Rock	1.0	None	0.12
8	MPD	0.2	10	10 ‡	0.005	Hydrogen	0.5	None	0.75
8	Experimental fusion rocket	150	1-20	5 ‡	0.005	Hydrogen	None	0.5	2.0
9	Fusion rocket	195	4	1 ‡	0.005	Hydrogen	None	3.9	0.35

*Solid rocket fuel is the solid rocket itself. The rocket as listed in the Engine Table ignites and consumes itself completely. A single kiloliter of it lasts only six seconds. Therefore, it takes 600 kiloliters to last one hour.

†A variant of this rocket may be constructed to burn hydrocarbons instead.

‡This is the minimum size these engines may be constructed. Larger models are permitted.

Abbreviations: TL: Tech level; Type: type of propulsion system; TT: tons of thrust; Mass: Mass in tons; Volume: Vol. in kiloliters; Fuel: Fuel consumption in kiloliters/hour; FType: Fuel type (see Fuel, Step 2); PWRqd: Power required—(if the listing is "none," the engine powers itself and may produce excess power as well); PWOP: Power output—(if the listing here is "none," the engine does not produce excess energy (and probably requires power input to operate)); MCr: Price in MegaCredits.

Hulls

Modular-Frame Hulls: Remember to note if a hull is specifically designed for use on a modular frame. The nomenclature of these hulls should end with the word "module" (e.g., unpowered passenger module).

Each hull on a modular-frame vessel should have separate UCP ratings. All these modules should be combined to provide the values for the total modular hull. Where values do not combine easily, state the value in terms of maximum combined performance. However, if indicating duration, use the lowest (or shortest) value.

Multistage Hulls: All the hulls of a multistage vehicle should be of the same configuration. The purpose behind most multistage designs is to give the flight crew the option to jettison a stage (one of the hulls) once it has outlived its usefulness. Consequently, the hulls of multistage vehicles operate—and should be listed—in a sequential fashion. The first hull is the primary hull (the part that will never be jettisoned). The second hull is the last hull jettisoned, the third hull the next to last to be jettisoned, and so on.

It is important to note that as hull sections are jettisoned, the overall craft performance may change dramatically. Total vehicle weight and total thrust may be significantly altered. Vehicle performance should be calculated—and included in the UCP—for each sequential stage separation.

Any streamlined jettisoned stages may be reclaimed and reused if the planet's UWP atmosphere rating is 4+.

Lift-Assisted Launch Vehicles (LALVs): Lift-assisted vehicles use their aerodynamic lift to enable them to achieve orbit. They may employ any method of locomotion to reach the edge of the atmosphere. A non-air breathing locomotion method is required for pushing the vehicle into orbit. Definitions of orbits and the acceleration ratings required to meet them are listed on in the direct launch to LPO acceleration requirements, found on page 86.

It takes quite a while to reach the edge of the atmosphere by using conventional aerodynamic flight methods. Therefore, the propulsion system used within the atmosphere must be able to perform for 10 times the number of minutes required to put a launching spacecraft into LPO. For example, a rocket with 3.5G takes 5.5 minutes to achieve LPO on a size 8 world. A jet-propelled spaceplane would require 55 minutes of 3.5G boost to reach its orbital transfer point at the edge of the world's atmosphere.

This time increase represents the comparatively slow climb enabled by the design of aircraft. However, once at the orbital transfer point, the aircraft needs only 10% of the LPO acceleration rating indicated to achieve orbit. This acceleration must be provided by a nonair-breathing locomotion method. For example, the same spaceplane has used a ramjet to reach its orbital transfer point. It now prepares to use a 1.5G rocket to complete its journey to low planetary orbit. The rocket only needs to burn for 1.2 minutes (one-tenth of the 12 minutes indicated on the chart) in order to push the LALV into a low planetary orbit.

Air breathing aircraft engines are not listed in Subtable 5a: Engines. Instead, consult COACC for the details and ratings of such systems.

LALVs may make both controlled and frontier launches (see the launch rules in the following section).

Unmanned Hulls: Unmanned hulls (drones and remote-controlled craft) should be indicated with the code letter "X" as ship code qualifier.

Power

The output of any engines should be included in your power ratings. Frequently, lower-tech designs depend upon the engine as the main power plant, a backup power plant or a battery recharger—in which case, the ship is likely to run off of batteries while the engine is off.

Locomotion

The calculation of maneuver Gs for spacecraft using nongravitic drives is determined by using the following equation:

$$(Total\ thrust + Vehicle's\ loaded\ weight) = Maneuver\ Gs.$$

To find the vehicle's top vacuum speed G rating, simply subtract *one* from the maneuver G rating. (This -1 assumes the presence of 1G of planetary gravity, which must be overcome before any velocity is achieved.)

Note that many lower-tech spacecraft (particularly those employing ion engines) will have G-ratings which are significantly less than 1—on many (or all worlds) they may not be able to get off the ground under their own power. This is not an error. Not all space vehicles are launch capable. Many must be carried to orbit.

When listing your evaluation results in the craft's UCP format, be sure to include a tons of thrust (TT) rating just after the G (maneuver) rating. Also, instead of simply indicating "maneuver," use the name of the engine type here. For example, "ion=.001/1.3TT" would indicate that maneuver was being provided by ion engines at 0.001G. The ion engines are producing that acceleration via a 1.3 tons thrust output.

Some vehicles may have multiple thrust sources. For instance, a modular-frame ship might have one module with an ion main drive and another with a high-performance rocket. The designer must note maximum total thrust and how long it may be maintained. Likewise, it is conceivable a single-hull vessel would use an experimental fusion rocket for quick spurts of speed, plus ion drives for low-energy, low-signature cruising and/or station keeping tasks. The total G rating of each component, as well as the duration of that performance, must be noted along with the ship's total performance (all engines operating simultaneously).

Solid rockets have one additional, unique limitation: The amount of thrust they generate cannot be reduced. All other engines are governable (may be employed at thrust ratings lower than their listed maximum), resulting in less fuel consumption, energy output (if any), etc.

Since pregravitic spacecraft use propulsion systems which do not allow them to hover (unless they are VTOL hulls), it is important to discover whether or not the vehicle can stay airborne in an atmosphere.

To determine this, the designer must compare the maximum atmospheric speed of the vehicle to the hull's minimum airspeed. The hull's minimum airspeed can be found by consulting the Airframe Characteristics Chart in the hull design section (see page 83). If the vehicle's maximum airspeed is less than the hull's minimum airspeed, the vehicle cannot fly. Note this in the UCP format by listing the vehicle's cruise and top speeds as *zero*.

Offensive Systems

Large, multibattery battlewagons are extremely expensive at these lower tech levels. Consequently, the very nature of combat changes, with more emphasis on hit-and-run attritional combats rather than the toe-to-toe slugging matches characterizing the Stellar-level technologies and beyond.

Due to the expense of power generation, missiles are the main weapon type utilized aboard pregravitic spaceships, along with smaller, tactical-scale weapons such as the beam and pulse lasers covered in Weapons Steps 25-26.

If tactical scale weapons are included, you may group them into any number of batteries, as per the standard design procedures. The battery rating of such weapons is always "+" (less than 1 but greater than 0), no matter how many weapons are included in the battery. The designer must note the specific battery characteristics on the craft's UCP.

The listed values of tactical-scale weapons change when they are used in vacuum (their standard ratings assume atmospheric use). All such weapons have their penetration attenuation ratings increased considerably.

Lasers have their attenuation value increased by 6. Their maximum range in vacuum is Far Orbit.

Mass drivers, CPR guns and fusion/plasma weapons have their attenuation increased by 4. Fusion and plasma weapons have a maximum vacuum range of Planetary. Mass drivers and CPR guns have a maximum range of Continental.

Each type of "+" battery included in a design should have both its original (atmospheric) and new (in vacuum) "+" battery values listed in its UCP format.

All tactical weapons to be used as "-" battery weapons

must be stabilized and equipped with PDF fire controls. And "+" laser and fusion/plasma batteries fired in a defensive role do not receive any defense DM.

Control

List the remote-control devices used aboard a craft in this section, not in the communications section. Note the vehicle as being RemCon (remote controlled). This section should also include a notation of the type and number of computers needed by the controller of the vehicle (see page 89) communicators required by the controller are of the same type as installed aboard the RemCon vehicle, but are typically of greater power.

Other

At the end of the design sequence, the designer may opt to designate any craft which may be launched from a planet as a facility-dependent vehicle.

A facility-dependent vehicle requires a great deal of support from ground systems, such as a launch gantry, transporters, etc. Such a vehicle only costs 90% of its listed price. A facility-dependent vehicle may only be launched from a launch-support facility.

The cost (total investment in) a launch facility in MCr is also the maximum support capacity. Any vehicle costing that amount or less may use the facility to support its launch.

Launch facilities are in fact spaceports (Referee's Manual, UWP Tables, 2). The correlation between star/spaceport ratings and support capacity will be defined in the following rules.

RULES FOR PREGRAVITIC SPACECRAFT

Direct Launches to Orbit: At lower tech levels (8 and less), achieving orbit is the most difficult and dangerous of all tasks.

Direct Launch to LPO Acceleration Requirements

Planet Size (URP)	Local Grav	Maneuver Gs of Acceleration								
		1.5	2	2.5	3	3.5	4	4.5	5	5.5
1	.05 (1K)	4.7	3.2	2.6	2.3	2.0	1.8	1.7		
3	.25 (1K)	7.3	4.7	3.7	3.2	2.8	2.6	2.4		
5	.40 (1K)	11	6.0	4.7	4.0	3.5	3.3	2.9		
7	.55 (1K)	19	7.8	5.8	4.8	4.2	3.7	3.4		
9	.70 (1K)	14	8.3	6.5	5.5	4.9	4.4			
11	1.0 (1K)	21	9.9	7.5	6.2	5.5	4.9			
13	1.25 (1K)	12	8.5	7.0	6.0	5.5				
15	1.5 (1K)	18	11	8.1	6.9	6.1				
17	1.75 (1K)	14	10	7.8	6.8					

Local gravity represents an average for worlds of this type.

Outer system (Jovian core) worlds may have only half the indicated gravity.

The vehicle does not have enough maneuver Gs to launch under any conditions.

If the vehicle has more maneuver Gs than there is local gravity, a launch is possible. The (1K) listing indicates that the lower end value for Y (depending on the required thrust duration) from this bracket is 1000 minutes.

Note: the values in this chart indicate the minutes of Y thrust required in order to lift off from a world with the indicated diameter. In the case of acceleration values which do not conform precisely to the values included on the chart, interpolate the value.

Planet Size (URP)	Local Grav	Maneuver Gs of Acceleration								
		1.5	2	2.5	3	3.5	4	4.5	5	5.5
1	.05	1.6	1.5	1.4	1.4	1.3	1.2	1.2		
3	.25	2.7	2.5	2.4	2.3	2.2	2.1	2.0		
5	.40	3.2	3.0	2.8	2.7	2.5	2.4	2.3		
7	.55	3.6	3.4	3.2	3.0	2.9	2.8	2.7		
9	.70	4.0	3.8	3.6	3.4	3.2	3.1	3.0		
11	.85	4.5	4.2	3.9	3.7	3.5	3.4	3.2		
13	1.0	4.9	4.6	4.3	4.0	3.8	3.6	3.5		
15	1.25	5.5	5.0	4.7	4.4	4.2	4.0	3.8		
17	1.50	6.0	5.5	5.1	4.8	4.5	4.3	4.1		

The amount of power required to push a vehicle up and out of a planet's gravity well is extraordinary and represents the hardest design challenge for these early technologies.

Generally, the only early technologies capable of generating the necessary thrust-to-weight ratios are rockets (either solid or cryogenic). However, being voracious consumers of fuel, these engines usually have short operational periods, usually measured in minutes rather than days.

Therefore, achieving a transfer to orbit usually involves a brief high-G acceleration up and out of the gravity well. This is called a direct launch to orbit. (Another option is open to LALVs. Rules for this follow.) While a very high G rating is possible, more than 7G is not feasible for human operations. More than 4G is inadvisable to avoid crew blackout. (Note, however, that nonfragile/nonliving cargo's *may be launched at much higher Gs* without risk.)

The Direct Launch to LPO Acceleration Requirements Table indicates how long (in minutes) a vehicle must remain at a particular maneuver G-rating of acceleration in order to achieve low planetary orbit. An LPO will eventually decay into a reentry trajectory if not maintained with additional thrust—this may take from mere days to years.

The chart assumes a controlled, direct launch to orbit (see the following controlled launch rules) and an atmosphere rating of 6 or 7. If the atmosphere is not Standard, then use the following chart to modify the result:

Atmosphere Type	LPO multiplier
Vacuum/Trace	0.4
Very Thin	0.6
Thin	0.8
Dense	1.2

For multistage vehicles—and any others with varying acceleration rates—a constant acceleration value over the entire time of launch may not be available. In such cases, break the acceleration into steps and resolve these sequentially.

For example, a two-stage rocket is prepared for launch. The first stage has a maneuver rating of 3G that can be maintained for 4.2 minutes. The second stage (after the first stage is jettisoned) can produce 1.5G of thrust for 4.0 minutes. The rocket is on a size 8 world with a Standard atmosphere (unmodified chart values). Let's see if it can make it to LPO.

The first stage engines engage and burn to produce a 3G acceleration rating for 4.2 minutes. We consult the intersection of planet size 8 and 3G of acceleration, and discover that six minutes of constant 3G acceleration are required to achieve LPO. Our 4.2 minutes of 3G acceleration can only provide 70% of the needed boost. However, that boost has accomplished 70% of the job. We have finished the first step and jettison the spent first stage.

Our second stage engines kick in at 1.5G. We consult the table and find out on a size 8 world at 1.5G constant, it takes 12 minutes to attain LPO from the surface. However, we've already accomplished 70% of the job with our first 3G lift. So we only have 30% of the job left to do at 1.5G. Therefore, 30% of 12 is 3.6 minutes.

Since we have four minutes of 1.5G boost available, we'll use 3.6 minutes to reach LPO, leaving us with 0.4 minutes of 1.5G boost remaining.

LPO is located at an altitude equal to approximately 2% of the planet's diameter.

Stable Planetary Orbit: Stable planetary orbit (SPO) means an orbit that will not decay over time and requires no additional station-keeping. Use the LPO Table to determine the additional boost required to achieve SPO. Multiply the LPO value by 0.3. The result equals the number of minutes of boost to achieve permanent orbit from LPO. This second leg of a boost to SPO (ground to LPO, then LPO to SPO) is not subject to any of the atmosphere modifiers that can affect boosting to LPO (you're in vacuum now).

However, frontier launch modifiers (see the following launch rules) do still apply. Also, unlike the journey to LPO, lift-assisted craft do not attain SPO with one-tenth the normal nonatmospheric boost (see the preceding rule under lift-assisted vehicles). This advantage is only accrued during transfer to LPO.

SPO orbit is located at an altitude which is equal to approximately three times the planet's diameter.

Escape Velocity: Any boost beyond SPO indicates that the craft has achieved escape velocity (EV) and is heading out of orbit and away from the planet. If it means to return, such a craft must boost back or be retrieved. Otherwise, it will continue to drift along its last vector.

Disposable Hulls in Orbit: If fragile cargo (armor rating 30 or less) is carried aboard a spaceside (i.e., no longer within an atmosphere) disposable hull for more than half a day, the cargo may begin to take micrometeoroid damage. Each half day, there is a one-sixth chance of a micrometeoroid hitting the component. Roll on the Vehicle Hit Location Chart (**Players' Manual Combat Charts**) to determine the outcome of the hit. Micrometeoroids have a penetration of 8×1D and a damage rating of 2+1D.

Living cargos will begin to suffer from radiation exposure immediately. Depending upon the proximity of radiation sources and their intensity, this effect could be severe with a quick onset of symptoms or mild with a gradual onset. The referee may decide how severe the effects are—based on the astrographic realities of the environment.

Launch

Pregravitic spacecraft may make two types of launches: controlled launches and frontier launches. Lift-assisted vehicles may make either controlled or frontier launches (depending upon their design).

Controlled Launch: The LPO acceleration requirements assume a controlled launch. Controlled launch conditions include the generation of a carefully plotted and computer-simulated launch window, access to an optimal launch site (usually within the tropical/equatorial zone) and perfect launch conditions (temperature, wind, weather, etc.). A controlled launch also assumes a large support staff, and a spacious staging area with enough assembly winches and subgantries. These are the resources connected with a launch-support facility (see the design sequence rules regarding facility-dependent vehicles, above).

Obviously, every launch-support facility is a spaceport (or starport). The size and support capacity of a facility is determined by the credits invested in its construction. The following table correlates the support capacity value of a facility with its corresponding UWP rating (and vice versa).

Support Capacity	Starport Type	Spaceport Type
MCr50,000+	A	—
MCr500+	D	F
MCr10+	E	H
None	X	—

Ensuring a controlled launch takes time. Any vehicle with access to a launch-support facility can be prepared for a controlled launch in a number of days equal to the following:
 $(100 - TL^2) \times (\text{Price of vehicle} + MCr100) = \text{Minimum days to prepare vessel for controlled launch.}$

(Tech level is equal to the lesser of the tech level of the launch facility or the tech level of the vehicle.)

Therefore, a TL7, MCr50 vehicle would take the following amount of time to prepare for a controlled launch:

$$51 \times 0.5 = 25.5 \text{ days.}$$

Note that at TL10, controlled launches require no preparation time. This is why downports can handle such a steady stream of traffic.

Controlled launches also require plenty of support personnel. The support staff requirement is two individuals for every day of launch preparations.

Vehicles using insufficient facilities may be able to prepare for controlled launch by using a greater amount of time. How much more time is decided by the referee. However, it is virtually impossible to achieve a controlled launch from Pre-industrial facilities, no matter how much time is spent.

Frontier Launch: A frontier launch is the type of launch described in the *Imperial Encyclopedia* (starship operations section). A frontier launch will result in a less optimized use of the vehicle and its environment since the launch is plotted and conducted quite quickly. Therefore, the time required to achieve LPO is greater. In most cases, multiply the time required by 1.3.

The LPO/SPO launch times listed in "One Small Step" are not intended to supersede the listed values in the *Imperial Encyclopedia* (Starship Operating Procedures, Step 4, Travel to Orbit). The values on that table reflect normal, gravitic-powered, commercial transfers to stable planetary orbit. These launches are assumed to be casual frontier launches, with the star/spaceport providing traffic control rather than launch support. However, if ships with gravitic drives have to get off of a planet quickly, the launch times reflected in the LPO Acceleration Requirements Table represent the minimum time required. Completing a launch in the indicated time is a Difficult task. Ship safety is not at risk, however, unless extraordinary conditions exist.

Spacecraft with VTOL and/or with fusion rockets may use the launch rules from the starship operating procedures (cited above) if they are capable of 1G airspeed in an atmosphere and can sustain it for one hour. In all major aspects, such vehicles are effectively the equivalent of gravitic craft.

SPECIAL COMBAT RULES

Damage to Modular or Multistage Vehicles

When a hit is scored on a modular or multistaged vehicle, the displacement tons of each module/stage must be ratioed.

These ratios determine the chance the hit has for affecting any of the given modules/stages.

For instance, if a three-module ship had two modules of 20 displacement tons and one module of 80 displacement tons, the ratioed value of the modules is as follows:

Module 1, 20t, 1.

Module 2, 20t, 1.

Module 3, 80t, 4.

In this example, there are a total of six chances (1+1+4), and the result can be determined by rolling 1D6. A roll of 1 would indicate a hit on module 1; a 2 would indicate a hit on module 2, and a 3-6 would indicate a hit on module 3.

Movement

The very low velocities of most pregravitic designs necessitate some special considerations when using the ship-to-ship conflict rules (page 90 of the *Referee's Manual*).

Determine the vector of a pregravitic ship at the time combat is joined since many of these early designs will not be able to alter their course significantly during combat. For every round in which a vehicle's acceleration is less than 1G, the fractional thrust should be recorded and tallied with any previously accumulated fractional Gs of thrust. When this incremental thrust from each successive combat round adds up to a whole 1G increment, the vessel can be awarded 1G of movement. For instance, if a ship were capable of 0.2G constant, it would take five combat rounds for the ship to effect the equivalent of a 1G change in its vector.

Another option (if all the ships involved are 2G or less maximum acceleration) is to reduce the per hex scale to 2500 kilometers (one-tenth the scale). Given this reduction, a vessel with 1G boost would therefore have a movement allowance of 10 hexes, and a ship with 0.1G would have a movement allowance of 1. Use any other scale to fit the needs of the situation.

A combination of the two methods—reduced scale and fractional thrust addition over time—can work very well and make it possible for a wide range of vessels to participate meaningfully in the same combat environment.

Tactical Lasers and

Other Nonbattery-Sized Weapons

Attacks by "+" category (tactical-scale) weapons do not receive any Weapon Table DM (regardless of how many weapons are actually grouped together). Resolve the attacks using the starship combat tasks in the *Referee's Manual*. Use the new values determined in the evaluation stage. If a "+" battery hits, roll standard penetration attacks for each weapon in that battery, according to the procedures outlined in the *Players' Manual*. Use the Vehicle Hit Location Chart in the *Players' Manual* to determine which components are hit.

Insystem Transfers by Pregravitic Ships

Every iota of velocity is precious to pregravitic spacecraft, particularly those about to engage in combat. It is important to be able to determine the speed of such vehicles at any point during a transfer. Therefore, the additional travel formulas are introduced:

$$\text{Time} = 2\sqrt{D/A}$$

$$\text{Distance} = (AT^2)/4$$

$$\text{Accel} = (4D)/T^2$$

$$\text{Velocity} = AT$$

In these equations, each variable has the following value: D:

Distance (in meters) *A*: Acceleration (10 meters/sec²=1G) *T*: Seconds *V*: Speed in meters/second.

With the exception of the velocity equation, all equations assume a standing start to standing stop journey with a midpoint turnaround (as indicated in the *Referee's Companion*, page 23).

Velocity is useful for determining the speed of a ship at the time it comes into contact with other vessels. However, the *V* value must be divided by 1200 (the number of seconds of acceleration per 20 minute combat round) in order to convert this value into the vessel's movement speed in hexes (*Referee's Manual*, starship combat).

When using these equations, remember that the units you're using to calculate with (meters, seconds) may not be what you wish to wind up with (kilometers, minutes or 20-minute combat rounds). Get your answers in the presented units first, then convert to the units you want.

PREGRAVITIC SPACECRAFT TASKS

Most of the tasks required to run pregravitic vessels are duplicates of (or can be extrapolated from) the tasks listed in the starship operations section of the *Imperial Encyclopedia*.

However, a few new tasks deserve to be detailed here.

Controlled Launches

The difficulty of this task is directly connected with the tech level of the vehicle and launch facility (if they are different, average the results).

The maximum computer model available at the given tech level must be available for launch plotting and simulation throughout the preparation and launch phases. If it is not, the referee should impose a -2 DM on the task roll.

Making a successful controlled launch:

Difficulty varies (see chart below), Navigator or Pilot, Computer, immediate (after preparations, see controlled conditions launch rule preceding), fateful, hazardous.

TL Task Difficulty Rating

5	Formidable
6	Impossible
7	Routine
8	Routine (but half of all Mishaps are reduced by one level of severity)
9	Not applicable, as per gravitic vehicle operations

Success indicates safe arrival in a desired orbit. Any work to be done there is a separate task.

Jettisoning Used Vehicle Stages

To jettison a reusable stage (for recovery) while within atmosphere:

Routine, Navigation, Computer, immediate (fateful).

Referee: Failure indicates destruction of the reusable stage.

To jettison a reusable stage for successful reentry (and recovery) from LPO:

Difficult, Navigation, Computer, immediate (fateful).

Referee: Failure indicates damage to both mother ship and stage.

Any mishaps involving a jettisoned stage are most likely to be trajectory errors resulting in bad reentry or descent angles.

If the planet of reentry has a hydrographic rating of 3 or less, there is a task DM of -2. If the hydrographic rating is 1, there is a task DM of -4. If the hydrographic rating is 0, the task is impossible.

Placing and Recovering Satellites

These tasks depend on the type of system used. Remote-controlled systems (see below) can only deploy, not recover, satellites. A manned system, once successfully launched to orbit, can do either. All three use the same task resolution, but with differing governing skills. Remote-controlled launches use Commo and Robot Ops or Education, while manned systems use Engineering and Dex.

Task difficulty is taken from the Controlled Launch Table above by tech level; time increment is 10 minutes; risk qualifier is fateful.

Remote-Controlled Launches and Operations

Remote-controlled launch and operations tasks are very similar to nonremote-controlled tasks of the same type. The only differences are that a remote-controlled task has an automatic DM of -1, and Robot Ops skill is used (and required) in place of Pilot and/or Ships Boat.

Remote controllers must be equipped with an appropriate communicator and a single computer (or a combination of computers) with the required computing power. The control points equation used to determine the remote-control requirements of a vehicle is:

$$CP = (Pr + 100,000) \times TL$$

If for any reason contact is lost between controller and vehicle (communicator failure, inclement weather, out of range), the vehicle is out of control. It is a Formidable task to recover control once it has been lost, even if contact is reestablished. For every attempt to recover control, an additional -1 DM is applied to the task roll. DMs are awarded for Commo and Robot Ops or Education.

NEW GEAR FOR HARD TIMES

The following is a small sampling of the types of gear and vehicles that are becoming more commonplace sights as Hard Times wears on.

Early-Tech Vacc Suits

Although the great majority of EVA suits in use within the Imperium are of Interstellar-level manufacture, more primitive versions are still in use. This trend is increasing. Isolated low-tech communities in hostile environments are turning to their own resources and abilities as they struggle to maintain a capacity for individual operations in the inhospitable environments they call home.

TL4: The TL4 vacc suit looks—and performs—like something out of a Jules Verne novel. Bulky, ponderous and alarmingly prone to pressure leaks, this suit has no integral valves for use with individual air tanks (although such valves could be retrofitted with some effort). Instead, the suit's heat and oxygen supply is piped in through a dedicated umbilical tube.

The umbilical tube has a variety of predictable drawbacks—it limits the user's range, is an impediment to movement and is

extremely vulnerable. However, as individual air tanks are not available until TL5, it is the best the manufacturers can do.

The TL4 suit is also noted for its inability to keep heat in and radiation out (in spite of the very heavy lead mesh).

All physical tasks are increased by two levels of difficulty for any character wearing a TL4 vacc suit.

Tech Level: 4 *Weight:* 18 kg
Armor: 2 *Price:* Cr22,500

TL5: TL5 vacc suits are more flexible than their TL4 predecessors, less prone to leaks, and equipped to accept either individual air tanks or improved umbilical connections. Heat comes from small electric warmers (powered by one hour batteries). Radiation protection, though better than the TL4 model, is still rather poor.

All physical tasks are increased by one level of difficulty for an individual wearing a TL5 vacc suit.

Tech Level: 5 *Weight:* 15 kg
Armor: 3 *Price:* Cr16,000

TL6: At TL6, vacc suits become lighter, more rugged and much more flexible. Descended from high-altitude flight suits, these garments offer better radiation protection and greatly improved heating and personal comfort. Unfortunately, they are no more puncture-resistant than their predecessors. They can accept both umbilical connections and air tanks.

Wearers of TL6 vacc suits modify their Dexterity by -2.

Tech Level: 6 *Weight:* 7 kg
Armor: 3 *Price:* Cr12,500

TL7: Although bulky, the TL7 vacc suit represents a vast improvement in terms of user protection. Radiation shielding and puncture resistance are both greatly increased. Extended comfort—including waste-processing systems and nourishment dispensers—is now available, thanks to the introduction of the basic PLSS (see below). However, the suits can also utilize personal air tanks and umbilicals.

All physical tasks conducted by individuals wearing TL7 vacc suits are one task level more difficult than normal.

Tech Level: 7 *Weight:* 18 kg
Armor: 5 *Price:* Cr16,500

TL7 Basic PLSS: The basic personal life support system (PLSS) is introduced at TL7, making extended vacuum operations feasible. Although designed for use with TL7 and TL8 vacc suits, it can be integrated with more advanced gear.

Although heavy, the basic PLSS is solid and reliable. It is powered by internal batteries.

Tech Level: 7 *Weight:* 13 kg
Duration: 6 hours *Price:* Cr5500

TL8: The TL8 vacc suit is a refined, less-bulky version of the TL7 model. Increased manual dexterity and radiation shielding are two important features. It is commonly used with a basic PLSS. Personal maneuver capabilities can be provided by the maneuver pack (also introduced at TL8 and fully integratable with the TL8 suit and basic PLSS combination).

Wearers of TL8 vacc suits modify their Dexterity by -1.

Tech Level: 8 *Weight:* 14 kg
Armor: 5 (as cloth) *Price:* Cr10,000

Maneuver Pack: This is a man-sized framework of 24 small, highly advanced, water resistojets. The entire thrust potential of the unit is 60 seconds of 0.04 tons of thrust. It is powered by internal batteries and is refueled by adding 2.5 liters of water.

Tech Level: 8 *Price:* Cr1250
Weight: 5 kg



The sections below are arranged in the order in which they are referred to in Chapters 5 to 14 of *Hard Times*. For rapid access to a particular section, consult the table of contents.

SECTION 1: NEW STARSHIP ENCOUNTER TABLE

When determining a starship encounter beyond the Safe areas, use the following table to produce the right mix of space traffic. (This table supplants Table 1 on page 91 of the *Imperial Encyclopedia*.)

Table 1: Ship Type

If in a Safe, use Table 1, page 91, *Imperial Encyclopedia*. DMs are -1 in Frontier, 0 in Outlands, +1 in Wilds.

Note that there is also a roll for raider presence (see Section 6 below) in addition to the standard roll on this table. (See page 39.)

Starship Encounters

Roll	Result
0	Merchant. Go to Table 2, page 91, <i>Imperial Encyclopedia</i> .
1	Civilian/Industrial. ¹ Go to Table 3, page 91, <i>Imperial Encyclopedia</i> .
2	Merchant. Go to Table 2, page 91, <i>Imperial Encyclopedia</i> .
3	Nonstarship. Go to Table 4, page 91, <i>Imperial Encyclopedia</i> .
4	Naval ² or starmerc. 1-3=Naval, 4-6=Starmerc Naval go to Table 7, page 91, <i>Imperial Encyclopedia</i> . If starmerc, consult Chapter 16, Section 3.
5	Raider. Consult Chapter 16, Section 6. ³
6	STL spaceship. Roll again for equivalent type, ignoring results of 3 & 6. Resolve as indicated, except that the encounter is with a non-gravitic vessel.
7	Raider. Consult Chapter 16, Section 6. ³

¹Industrial encounters include wildcatters, prospectors, ore freighters, mining vessels, etc. See Chapter 7 for discussion.

²Two-thirds of naval encounters are with local (not Imperial) units if tech level supports space travel.

³When using Chapter 16, Section 6, simply to generate starship encounters, only tables 2, 6 and 7 need initially be consulted. Depending upon the degree of the encounter, the referee may later wish to use other tables to add detail.

SECTION 2: MERCHANTS

1. Getting Passengers

When rolling for available passengers:

- Consult the subsector (or sector) stellar map and determine the closest zone of greater civilization. (If in Outlands, look for the nearest Frontier area.)

- Find the shortest distance to a more civilized area.

- If the ship's next jump is carrying it *closer* to that area, the number of dice rolled for all classes of passengers will be doubled compared to the chart on Page 50, *Referee's Manual*.

If the ship's next jump is carrying it *away* from or *no closer* to that area, the number of dice is *halved*.

2. Getting Cargos, Freight and Mail

Safes and the Frontiers: Cargo and freight are unchanged.

Outland Worlds: The number of freight lots (all sizes) is half the final generated roll. The number of major cargo lots is halved as well. If the starport is E or less, the time required to find these lots is *two weeks* rather than one.

Worlds in the Wilds: Only incidental freight is available. No major cargo lots are available. If the starport is D or less, the time required to find these lots is *two weeks*.

Safe: Unchanged.

Frontier: One extra ton.

Outland: (UWP population digit-1D) tons of mail.

Wilds: No mail is *ever* available on these worlds.

Cargo Price Modifiers: Modify the tech level effects rule on page 53 of the *Referee's Manual* in the following fashion: In the Frontier, the tech level multiplier is 15%, and in the Outlands and Wilds, the multiplier is 25%.

SECTION 3: STARMERCS

1. Starmerc Availability

Most starmercs are found in Frontier areas, waiting to escort merchants into the less secure zones. Starmerc availability can be rolled once per week. Cross index population with starport to find the 2D roll needed for *one* starmerc vessel to be available. Every four points rolled above this number indicate *one* additional starmerc vessel available.

DMs are +2 on Frontier world, -4 in Wilds. Natural 12 always means success; natural 2 always means failure.

Pop	Starport			
	A	B	C	D, E, X
1-4	8+	10+	12+	15+
5-6	7+	9+	10+	14+
7-8	5+	7+	8+	12+
9-A	3+	5+	6+	10+

2. Starmerc Unit Size

This is the size of the unit as a whole. All vessels need not be present at any one world for hiring at one time. Similarly, not all vessels of a group need be hired for one job if they are all present.

Roll	Result
2-7	1 ship
8-9	2 ships
10-11	3 ships
12	Roll again. A result of 2-11 indicates 4 ships. A result of 12 indicates 1D+4 ships.

3. Starmerc Ship Types

Roll once per ship obtained on Unit Size Table above.

Roll	Result
2	1000-ton express boat tender (see Hard Times , Chapter 14)
3	880-ton mercenary cruiser
4	330-ton <i>Gazelle</i> -class close escort
5	100-ton <i>Fer-de-Lance</i> scout
6	440-ton patrol cruiser
7	240-ton patrol cruiser
8	440-ton corsair
9	440-ton corsair
10	330-ton <i>Gazelle</i> -class close escort
11	880-ton mercenary cruiser
12	1000-ton <i>Fer-de-Lance</i> -class destroyer escort (see Chapter 14)

4. Starmerc Crew Size

All starships will have a full crew complement for space functions. Roll 2D per ship for the ship's troops/ground element. The result is the percentage of excess berthing space (beyond full crew needs) occupied by troops.

Roll	Result
2-6	25%
7-9	50%
10-11	75%
12	100%

5. Starmerc Crew Skill Levels

Roll 2D per vessel in starmerc unit.

Roll	Crew Skill Levels
2-5	1-2
6-8	2-3
9-12	3-4

The result indicates the level of relevant skills in all given departments aboard the ship. The lower number is the skill level of Gunnery or Engineering for ship's gunners and engineers. Each department will have one chief member whose skill level will be the higher number. For example, one chief gunner and one chief engineer per ship will have skill level 2 on the 1-2 result. The ship's primary pilot and navigator (as well as communications officer, screens officer, etc., if present) also qualify for the higher skill levels. Once the rolls have been made, the skill "packages" should be assigned to individual ships, generally with the best package to the most capable ship. Ship's troops also use this skill system. The lower number indicates troops' skills in their primary weapon. Unit officers and crews of crew-served heavy weapons will also have the higher skill level.

6. Starmerc Prices

For one jump (starport to starport): Cr750 per starmerc crewmember+Cr30 per kiloliter of merchant hold escorted.

Starmercs are expensive for individual ships. However, as the per crewmember cost is only paid once and the per kiloliter rate is much lower, convoying is very attractive for merchants, who can thereby get each other's mutual support for free and spread the cost of the starmerc over several billfolds. Most merchants consider 100 tons of starmerc vessel per 400 tons of merchant vessel to be adequate.

7. Starmerc Reliability

Referee secretly rolls 2D for the reliability of a starmerc unit. (This is usually only one ship. For units with more than one ship, this single roll applies to all ships in the unit). This is only necessary for a new starmerc unit whose reliability has not been established.

Roll	Result
2-10	Reliable
11	Starmercs cut and run at first sign of trouble
12	Actually pirates—will attempt to capture convoy at first opportunity

8. Starmerc Background Check

Players may attempt to ask around to establish reliability before hiring.

To assess a starmerc's reliability:

Difficult, Streetwise, Interrogation, 3 hours (uncertain, unskilled OK).

Referee: Success varies. If starmercs are dishonest, Success indicates discovery of this; Failure indicates no discovery of pertinent information; Exceptional Failure indicates a glowing recommendation. If starmercs are honest, Success and Exceptional Success both indicate accurate recommendations; Failure indicates no data; Exceptional Failure indicates an incorrect finding that they are unreliable. Up to two characters can combine for this task.

9. Starmerc Character Generation

Starmerc personnel fall into one of three groups—dirtsiders, spacesiders and swings (qualified in both areas).

Enlistment from a Previous Career: Enlistment is automatic if the necessary skills are possessed.

Dirtsider: Any dirtside MOS skill at level 2 or greater, or if the individual has three or more level 1 skills from this MOS.

Spacesider: As above, but spaceside MOS.

Swing: Must fulfill both of the above.

Direct Enlistment (No Previous Career): On 11+.

DMs are +1 if Dex 10+, +2 if Int 12+.

Reenlistment: Once in starmerc service, reenlistment is not necessary. Also, starmerc service is committed to on a year-by-year basis, not in four-year terms.

Starmerc Rank	Title (Traveller Rank)
R1	Trooper/Crewman (if spaceside)
R2	Copart
R3	Sergeant
R4	Top Sergeant
R5	Lieutenant (1)
R6	Lieutenant commander (1)
R7	Commander (2)
R8	Major (2)
R9	Lieutenant colonel (3)
R10	Colonel (4)

*There can only be one R10 per starmerc unit. If there are more, then the most senior is the R10 and all others are "senior R9s." Ranks reflect no real distinction between enlisted and officer ranks, as the profession is based on merit. However, rank titles seem officer top-heavy—because most starmercs have extensive prior service and rate distinguished

titles, and starmercs often serve as cadres for indigenous forces. Having an impressive sounding rank ensures that these personnel receive appropriate respect and authority from the locals.

Determining Entry Rank: Previous service influences entry rank. For initial starmerc R rank, use previous career Traveller rank+terms served-1.

Combined Assignment and Resolution Table: Starmerc assignments are determined year by year, as with standard enhanced character generation. However, there is no DM for assignment. Roll 2D each year for assignment type, then read across for resolution rolls.

Roll	Starmerc Assignment	Survival	Skills	Promotion
2	Bounty hunting	6+	4+	7+
3	Wilds duty	5+	5+	9+
4	Outlands duty	4+	5+	10+
5	Outlands duty	4+	5+	10+
6	Frontier duty	3+	6+	11+
7	Frontier duty	3+	6+	11+
8	Outlands duty	4+	5+	10+
9	Outlands duty	4+	5+	10+
10	Wilds duty	5+	5+	9+
11	Wilds duty	5+	5+	9+
12	Special security	5+	4+	8+

Survival DMs: +1 if skill level 2 in any two MOS skills.

Skill DMs: +1 if swing.

Promotion DMs: +1 if swing, +1 if Int 12+ or Tactics-2.

Bounty Hunting: The starmerc unit has received a contract to hunt down raiders. This often involves a combination of spaceside and dirtside action and is always a combat-intensive—and lucrative—ticket.

Wilds Duty: Commerce escort/mercenary/cadre service in the Wilds.

Outlands Duty: Commerce escort/mercenary/cadre service in the Outlands.

Frontier Duty: Commerce escort/mercenary/cadre service in the Frontier.

Special Security: The transport of key individuals, goods or mail, but may involve a defensive ticket. Things defended by starmercs must usually be defended quite vigorously and quite often.

Skill Tables: Dirtside and spacesiders roll on their own MOS Tables. Swings may select from either MOS Table. All starmercs may roll on Starmerc Life Table.

Starmerc Life	Dirtside MOS	Spaceside MOS
1 Physical	Hand Combat	Special Combat
2 Hand Combat	Special Combat	Space Tech
3 Physical	Vehicle	Special Combat
4 Electronics	Gun Combat*	Space Combat
5 C-G En-101	Special Combat	Space
6 Mental	Recon	Space
7 Interpersonal	Inborn	Exploratory
8 Inborn	Tactics	Inborn

Skill DMs: +1 if R3+, +2 if R6+.

***Gun Combat:** Includes Combat Rifleman in addition to other categories indicated in MegaTraveller.

Mustering Out: Use the procedures for army characters as listed in the Players' Manual.

SECTION 4: AVAILABILITY OF PREWAR TECHNOLOGY

Many worlds in Hard Times have had their tech level reduced. This does not mean the higher-tech gear from earlier times is all gone, but it is harder to find. The following table shows the task difficulty of finding equipment of either the world's original tech level (first line), or one less than the original tech level. This varies with the world's current Hard Times starport rating. (See page 51.)

Task	Starport			
	A	B	C	D, E, X
To find prewar TL	Routine	Difficult	Formidable	Impossible
To find prewar TL-1	Routine	Routine	Difficult	Formidable

Task DMs: If the attempt is through government channels: Admin and Bribe.

If the attempt is via general market: Streetwise.

Referee: If an attempt via government channels (bribery) results in an Exceptional Failure, the attempt will be discovered, and the local authorities will attempt to arrest the PCs and bring them to trial.

The more severe the failure was, the more severe the penalties will be.

SECTION 5: SPECIE CURRENCY

Coin	Cr	Mass
Copper	0.2	50 grams
Silver	10	30 grams
Gold	300	30 grams

All these coins are available from Outlands customs currency counters and are supplied at a 2% exchange surcharge. They are recognized on all Frontier worlds and are available via exchange on half of them. These coins can be cashed in on Safe worlds, but are not usually recognized by merchants there. (See page 50.)

SECTION 6: RAIDER BANDS

If you are consulting this section to generate a raider resulting from the Starship Encounter Table or the first table below, merely consult tables 2, 6 and 7 for size and composition of ships encountered.

1. Raider Band Encounters

The PCs encounter a raider group on any roll of 11+.

DMs are as follows: *Safe:* Not possible *Frontier:* -1 *Outlands:* 0 *Wilds:* +1.

2. Raider Group Type

To determine the type of raider group, use the same DMs and apply them to a 2D roll.

The result indicates the type of raider group: *Viking:* 1-5 *Corsair:* 6-9 *Ripper:* 10-13.

These encounters are in addition to any resulting from the standard encounter checks upon entering a system.

3. Size of Raider Band

Type	Vikings	Corsairs	Rippers
Raiders	3Dx5	2Dx5	(1Dx3)+5
Dependents	Raidersx2	Raidersx1	1D

4. Typical Prior Career of Members of Raider Band

No resolution required—select as desired.

Vikings	Corsairs	Rippers
Navy*	Pirate	Rogue
Marines*	Rogue	Pirate
Commandos	Belter	Barbarian
Privateers	Navy*	Marines*
Army*	Army*	Army*
Starmercs	Marines	
	Barbarian	

*Imperial or colonial are both possible.

5. Minimum Skills Possessed by Leader of Raider Band

Vikings	Corsairs	Rippers
Leader-1	Leader-2	Leader-2
Tactics-2 or Ship Tactics-2	Carouse-1 Tactics-1 or Ship Tactics-1	Intelligence 10+

6. Starships Possessed by Raider Band

Each band rolls 2D—the result determines additional starships.

Starships	Vikings	Corsairs	Rippers
1	2-6	2-9	2-11
2	7-10	10-11	12
3	11-12	12	Not possible

7. Type of Starships Possessed by Raider Band

DMs are +1 for viking, 0 for corsair, -1 for rippers.

Roll	Ship (or Rough Equivalent)*
1-3	100-ton seeker (type S)
4-5	200-ton far trader
6-7	200-ton far trader
8-9	400-ton corsair
10	1000-ton express boat tender
11	400-ton patrol cruiser
12	Imperial warship (up to 600 tons)
13	Imperial warship (600-1250 tons)

*Referees should feel free to substitute other ship classes in where appropriate.

8. Crew Skill Levels

Roll 2D for each ship owned by the band. Check in the band column for result band that indicates skill package received in left-hand column.

Skill Package	Vikings	Corsairs	Rippers
0-1	—	2-3	2-6
2	2-4	4-7	7-11
2-3	5-10	8-10	12
3-4	11-12	11-12	—

For complete details of this rule, see Section 3 above, Table 5, starmerc crew skill Levels.

8. Typical Armament for Ship's Troops

Vikings	Corsairs	Rippers
ACRs	LAGs	Assault rifles
LAGs	Assault rifles	Automatic shotguns
Lasers	Machineguns	SMGs
RAM grenade launcher	Lasers	Shotguns
TAC missiles	Automatic shotguns	Melee weapons
VRF gauss guns	Grenade launchers	
Gatling machineguns	SMGs	
	Recoilless rifles	

Special/elite teams within a band may be equipped as the next most advanced kind of raider (e.g., corsair elites would be equipped as are viking regulars). Viking elites may be encountered with gauss rifles, early TL portable plasma weapons, advanced RAM GL systems or assault rocket launchers.

A poor raider band might be armed with systems of the next less advanced type of raider (e.g., vikings down on their luck might be equipped like most corsairs). In the case of destitute rippers, substitute semiautomatic weapons for the listed automatic versions. Melee weapons become more commonplace.

9. Additional Raider Bands Allied with the Raider Band

A 2D roll determines the number of similar bands a group may count upon as allies. Allied bands are almost always of the same raider type.

Allied Bands	Vikings	Corsairs	Rippers
0	2-5	2-8	2-10
1	6-9	9-11	Not possible
2	10-11	12	Not possible
3	12	Not possible	Not possible

10. New Skill

Main Gauche Skill: Main Gauche (literally: left-hand) is the skill one must have in order to fight with a different hand-to-hand weapon in each hand simultaneously. The combined weight (in kilograms) of both weapons *cannot* exceed 30% of the character's Strength statistic. The "left-hand" or secondary weapon may be used either to conduct an attack or to block, but it cannot do both in the same round of combat. Therefore, at the *beginning* of the combat round, a character using the Main Gauche skill must declare whether he is attacking or blocking with the secondary weapon.

A character with the Main Gauche skill must have at least one skill level in both of the weapons being used. At Main Gauche 1, the character uses the primary weapon at his full skill level with that weapon. He uses the secondary weapon as though his skill level were zero. For every additional level of Main Gauche skill, the secondary weapon may be used one skill level higher.

Therefore, a character with Main Gauche skill level of 3 could use his main weapon at his full skill level with that weapon. He could use the secondary weapon at a maximum

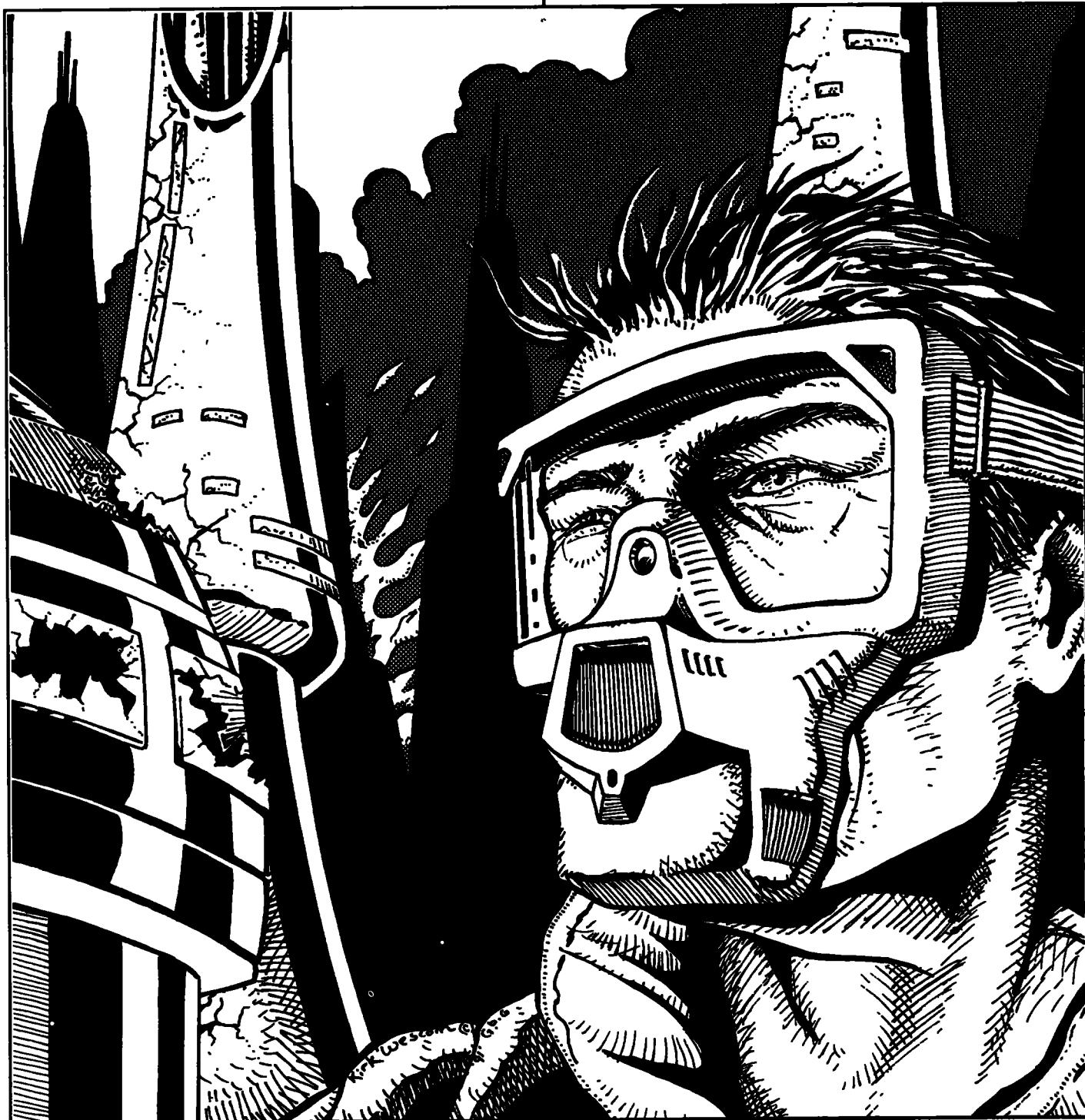
skill level of 2. The use of the secondary weapon may never exceed the skill level actually possessed by the character. So if, in the example above, the character only had a skill level of 1 in his secondary weapon, he could not take advantage of the maximum *allowed* skill level of 2.

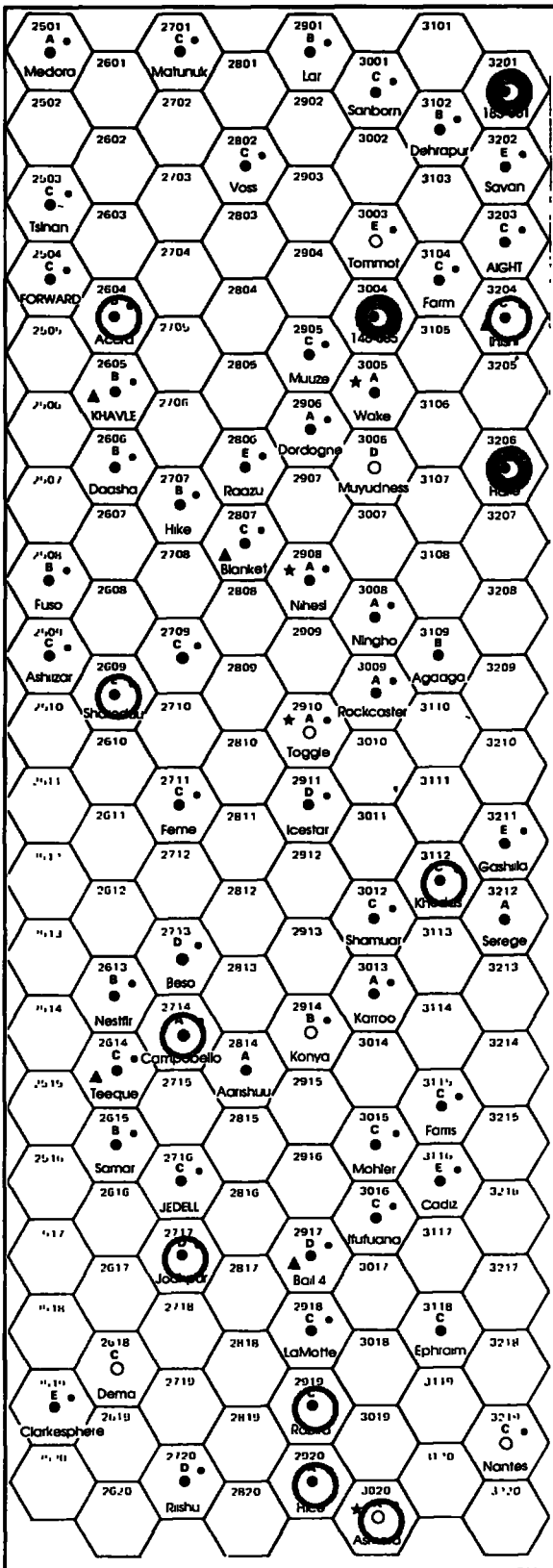
SECTION 7: OPTIONAL HARD TIMES BAD KARMA RULE

Due to the particularly poignant nature of the Hard Times era, the referee may wish to modify play for PC groups who have absolutely no feeling for the human tragedy surrounding them. Several adventures are designated to qualify them for this rule.

If the referee wishes to use this rule, any PC group which, through simple mean-spiritedness or hard-heartedness, refuses to assist a group of innocents in need of help will incur a +1 DM on all starship encounters and raider band encounters until the group has another opportunity to show some humanity. This DM effectively increases the likelihood of raider band encounters and reflects the bad karma the group has earned. If the PCs refuse again, the referee might optionally wish to double this effect.

This rule might engender some fellow-feeling for future unfortunates they might encounter. The rule is not intended to penalize groups who might want to offer assistance but are somehow unable to or prevented from doing so.





All columns as standard UWP (Referee's Manual, page 16) with addition of Zn (zones) column.

Zones: No Indicator: Safe Fr: Frontier Ou: Outland Wi: Wilds.

Khavle Subsector (D/Diaspora Sector) as of 300-1124

Name	Hex	UWP	Class	TPPG	Str	Zn
Medora	2501	A422553-F	Ni Po	403	K1 V	Ou
Tsinan	2503	C472676-C	Ni	904	M0 V	Ou
Forward	2504	C83899A-D	Hi	513	M2 VI M9 D	Ou
Fuso	2508	B783204-F	Ni Lo Fl	504	G1 V	Ou
Ashlizar	2509	C654868-A		711	K7 II M3 V	Ou
Accra	2604	B6877A5-D	Ag	A903	G0 V	Ou
Khavle	2605	B334995-F	W Hi Cp	705	M4 V	Ou
Daasha	2606	B62A445-F	Ni Wa	403	K4 V M0 D	Ou
Shareduu	2609	D231574-C	Ni Po	A121	M2 V	Ou
Matunuck	2701	C853724-9	Po	912	K8 IV	Ou
Hike	2707	B782432-E	Ni	525	F4 V	Ou
Gorakpur	2709	C000325-F	Ni As Lo	904	M4 V M0 D	Ou
Voss	2802	C867226-C	Ni Lo	903	M6 IV	Ou
Raazu	2806	D445575-B	Ni Ag	815	A2 V	Ou
Blanket	2807	C224578-E	S Ni	601	M3 V M1 D	Ou
Lar	2901	B331479-F	Ni Po	104	M2 V M8 D	Ou
Muuze	2905	C792033-B	Ni Lo	513	F5V M0D M4D	Ou
Dordogne	2906	A454578-F	Ni Ag	404	M3 V	Ou
Nihesi	2908	A7B1344-F	N Ni Lo Fl	804	M4 V	Ou
Toggle	2910	A100335-F	N Ni Va Lo	503	K1V M7D M5D	Ou
Sanborn	3001	C483141-C	Ni Lo	304	F7 V M8 D	Fr
Tommot	3003	E210101-B	Ni Lo	612	M1 V	Ou
146-685	3004	X794423-4	Ni	R600	M2 V	Ou
Wake	3005	A652532-F	N Ni Po	300	M4 V	Ou
Muyudness	3006	D100556-C	Ni Va	500	G2 V	Ou
Ningho	3008	A577110-F	Ni Lo	104	M5 V M3 D	Ou
Rockcaster	3009	A69A424-F	Ni Wa	603	M0 IV M6 D	Ou
Dehrapur	3102	B423474-F	Ni Po	901	G3 V M4 D	Fr
Farm	3104	C656622-B	Ni Ag	404	M4 V	Ou
Agaaga	3109	B557320-C	Ni Lo	620	M3 IV M6 D	Ou
183-361	3201	X694889-4		R312	G4 V	Fr
Savan	3202	D444637-9	Ni Ag	703	M4 V	Fr
Aight	3203	C752A99-D	Hi Po	701	G2 V	Ou
Ihishi	3204	C541335-A	S Ni Po Lo	A904	M7 V	Ou
Halle	3206	X626023-6	Ni	R402	G5 V	Ou

Pasdaruu Subsector (H/Diaspora sector) as of 365-1124

Name	Hex	UWP	Class	TPPG	Str	Zn
Clarkesphere	2519	D324300-B	Ni Lo	113	G9 V	Wi
Westfir	2613	B326841-D		701	M1 V	Ou
Teeque	2614	C545569-C	S Ni Ag	613	M3 V K3 D	Ou
Samar	2615	B476510-E	Ni Ag	803	M0 V M5 D	Ou
Dema	2618	C200431-E	Ni Va	300	M3 V	Wi
Feme	2711	C456300-E	Ni Lo	912	M8 VI	Ou
Beso	2713	D000301-D	Ni As Lo	321	K2 IV M9 D	Ou
Campobello	2714	A00046A-F	Ni As	A703	M1 V M2 D	Ou
Jeddel	2716	C4349BC-D	Hi Cp	915	M4 V	Wi
Jodhpur	2717	D332445-C	Ni Po	A304	M1 V	Wi
Riishu	2720	D225333-C	Ni Lo	914	M2 IV	Wi
Aarishuu	2814	A995544-F	Ni Ag	800	M1 V	Wi
Icestar	2911	D799000-A	Ni Ba Lo	114	K5 V	Ou
Konya	2914	B200205-F	Ni Va Lo	104	K4 VI	Wi
Bail 4	2917	D799755-A	S	505	G7 IV	Wi
La Motte	2918	C63A404-F	Ni Wa	604	M0 V	Wi
Raziira	2919	C866102-D	Ni Lo	A100	M0 V M6 VI	Wi
Hice	2920	A795222-E	Ni	A904	M1II M4V M8V	Wi
Shamaar	3012	C544335-C	Ni Lo	702	M1 V	Wi
Karoo	3013	A667357-F	Ni Lo	924	G5 V	Wi
Mohler	3015	C8A5588-B	Ni Fl	813	M0 V M1 D	Wi
Iluwana	3016	C59845A-D	Ni	414	G0 V	Wi
Asmera	3020	A110653-F	N Ni Na	A915	M2 D	Wi
Khedas	3112	C7A4232-C	Ni Lo Fl	A614	M6 VI	Wi
Farris	3115	C536125-C	Ni Lo	324	M7 V M2 D	Wi
Cadiz	3116	D799450-C	Ni	902	M4 V	Wi
Ephraim	3118	C78977B-C	Ri	710	G8 D M2 D	Wi
Gashilla	3211	D879457-B	Ni	614	G2 V	Ou
Serege	3212	AAD647A-F	Ni Fl	720	K4 V M0 D	Ou
Nantes	3219	C200442-C	Ni Va	602	M0 V M6 D	Ou

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"I don't exactly remember when it all started to change, when each starport looked a little more rundown than the last, when starships became fewer and further between. It was sometime after 1120.

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