Where Gravity Sleeps
5 – Exodus

“Rose, Ishmael, in about an hour we’ll be arriving at New Atlantis. I’m ready to begin our deceleration, are you ready for some thrustgravity?”

They had slept for a few hours in weightlessness. “Huh, yea, sure.” Said Rose. “Snnorrrrk” was the sound Ishmael’s sleeping body made. Rose stared at the Earth through of one of Hermes’ round windows. It looked so beautiful and peaceful. Just then the Earth moved out of their view. Hermes had repositioned himself. Then the main thrusters ramped up slowly and the thrustgravity arose smoothly with them.

“In about an hour we’ll be arriving at New Atlantis. I’ll call you five minutes before we reach their Perimeter Control.”

The gravity woke Ishmael and they decided to spend the time with thrustgravity to prepare and eat a meal. They had finished and were talking when Hermes called them again. “We’re two minutes from main thruster shutdown and five minutes from New Atlantis Perimeter Control.”

They went to the bridge and strapped themselves in. They looked through the main window in the bridge and saw New Atlantis revolving slowly before them. It already looked immense. Ishmael had only seen Olympus up close but Rose had seen and visited all the Floyd bubbles except New Atlantis.

“It’s blue.” Ishmael stated in wonder.

“I’ve heard it is full of water, but I don’t know for sure. Hermes, what can you tell us about New Atlantis?” She asked.

“Quite a lot, actually, but, what would you like to know?”

“How about a quick summary?”

“Alright. New Atlantis was the fourth Floyd bubble built. It is unique in that it has two huge lakes where fish, plants and hydroproducts are grown and harvested. Many plants and animals that are not used for food and products also thrive there. One lake is filled with saltwater and the other with freshwater. The remaining third of the station is a long port city, called Plato’s Dream, or Platoville to the locals. Fingers of each lake stretch

across the skywindows in large aqueducts. These allow boats to move back and forth between one side of the city and one or the other of the lakes. The city resides over a freshwater reservoir which also balances the station."

"Can you check if our locker has received our deliveries?"

"I already have. Everything you ordered is there."

"Good." She yawned.

"Are all the bubbles the same shape?" Asked Ishmael.

"Yes. They all have three long windows, with mirrorwings that reflect the sun's light onto the floor opposite each window. They all have a space port at one end. New Atlantas also has a..." Hermes was cut off by the surprisingly casual voice of the New Atlantas Perimeter Controller.

"NAPC to Hermes, AE7, approach — uh, say 41? velocity 500, OK?" The NAPC officer sounded like he was asking permission to specify their course.

"Hermes, AE7, acknowledging approach 41, velocity 500." Ishmael changed course. There were very few other ships around at all. Just a medium sized barge docked on the other side of the spaceport and a half dozen personal transport ships docked here and there. Hermes was the only ship moving anywhere near the spaceport.

Then, after a few minutes, "Hermes, you ready to dock? You can have NA-3-A, or NA-3-B if you want a window seat. Hahahah. Speed limit 100 though, OK?"

"We'll take dock NA-3-B, at 100 meters per second, thanks." The spaceport looked just like the one on Olympus and Ishmael had a strong sense of deja vu. This was just where the Audrey had fallen apart nearly costing him his life.

Ishmael jumped when he heard Hermes say "I'm melting... melting..." over the ship's intercom. Hermes had played an audio loop from a holo' of the Wizard of Oz.

Ishmael slowed the ship and began the approach to the dock. "Oh, that was very funny, Hermes." Rose thought Hermes' prank was hilarious and she laughed out loud.

Blushing slightly, he maneuvered the ship toward the dock and edged it in. The airlocks sealed against each other and he secured the ship with magnetic latches.

“Hermes, AE7, docking completed at NA-3-B. Hermes Out.” Ishmael said. Rose was still laughing.

“NAPC to Hermes, welcome to New Atlantis. No fishing. Hahaha. Bye.”

They unstrapped themselves and made their way through Hermes, through the dual airlocks, and finally into the floatland of New Atlantis. The spaceport at Olympus had been busy. But this spaceport was nearly empty. It was early morning on New Atlantis.

“So, what are we here to pick up?” Ishmael asked Rose.

“Four crates of tungsten carbide lights and a half-dozen power generators. They had smaller lights at Olympus, but I want the big 20 centimeter ones.” She pulled herself down the corridor. “And some other supplies too.”

He followed her. “What do we need those for?”

“The Belt is a dark place, Ishmael. I don’t know if we’ll need them or not, but I thought they might be useful.”

They found their crates in their locker. Rose had already paid for them and she used a password to open the door. They removed the crates, one large and three smaller, tied them together, and maneuvered them back toward Hermes.

“This would be a real drag in gravity.” She remarked. She was now reclining on the large crate as it floated along the corridor. Ishmael was adjusting its course slightly to keep it going straight. She smiled at him but he didn’t see.

“Hermes is funny.” Ishmael said.

“What do you mean?

“He has a sense of humor. I wasn’t expecting that from a ship’s computer.”

“I don’t think of him as a ship’s computer.”

“What then?”

“I think of him as a person with an artificial body.”

“Really?”

They arrived at the door to their dock. They stopped the gear and paused to finish their conversation.

“Yes I do. In fact, I don’t know many people who are in the same league as Hermes. I’m just glad he’s nice.”

Ishmael gave her a look of surprise, but said nothing.

“Shall we leave?” Rose asked after a minute.

“Could we visit the hubmouth first?” Ishmael asked.

“Yea, OK. It might be a while before we’re back here.” They loaded the gear and then they caught a transport to the hubmouth. Now they floated there and looked out into predawn New Atlantis. There was nobody else around and they felt like the only people alive in the entire bubble.

“It looks so quiet... I’ll bet people are just waking up now to get their watership ready for a day of fishing.” Ishmael wondered what it was like to fly a watership. It would move only in two dimensions and very slowly. “Someday, I’d like to try flying a watership.”

While Rose and Ishmael floated in the hubmouth, Hermes tried to contact some of the other ships at the dock. He often did this when docked with nothing else to do but wait for the crew to return. Occasionally he would meet interesting ships with whom he could converse. But most ships had relatively unintelligent or reptilian minds and were disappointing conversationalists at best. The barge was a mindless lizard and only one of the private shuttles even answered his call. It’s mind was limited, but it responded. Hermes quickly became bored with it and said good-bye. He decided to resume studying the scienceweb.

When Ishmael and Rose returned half an hour later, Hermes had digested an entire college course on Earth’s tectonic plates.

“Are we ready to go, Hermes?” Rose asked.

“Yes, of course. Ishmael, I’ve prepared a flight plan, would you like to see it on a holodisplay?”

“If it’s a line, how about just the thrust details?”

“I’ll be running the main thrusters at a full 1/3 G. It will take a burn time of over three days six hours to reach the midway point, where we will be travelling over 2 million meters per second. There I plan to perform a 10 degree gravity-neutral rotation and commence deceleration. Our total trip will be six and a half days.”

“Sounds good to me. Lets go.” Ishmael said after a nod from Rose.

Hermes smoothly started his thrusters to a gentle 1/3 gravity. Rose and Ishmael watched New Atlantas disappear from the rear observation window, until it was just a bluish dot.

At length, Hermes interrupted them. “Pardon me, but, I wonder if either of you have been following the latest on the Heccat phenomenon?”

“I heard about it,” said Rose, “the day we left Olympus. It’s supposed to hit the Earth and destroy it, according to some scientists...” Rose’s voice trailed off.

“We’ll be safe in the Belt; however, it potentially brings into question the original purpose we had in going there. I think we should talk about it.”

“Whoa, what?” Asked Ishmael as if waking from an easy dream.

“Our original partnership was based on prospecting. If there is no Earth, who are we prospecting for? Who will buy what we find, Rose?”

“What do you mean by ‘no earth’?” Ishmael demanded.

“You’re right, of course Hermes, if the Earth gets destroyed. But, the scientists don’t agree on that, from what I understand.” Rose said a little defensively.

“Earth... destroyed? Hey, what are you two talking about?” Ishmael said in dismay.

“I don’t think you understand as much about it as I do. At the moment I agree with the minority scientific view that Heccat will destroy the Earth.”

Rose was silent. Ishmael waved his hands in front of her face as if she were blind. “Hello?”

“Haven’t you been watched any of the newsholos? In the spaceport?” She said a bit annoyed.

“Well, obviously I missed that little fact! I mean, Damn! The Earth is going to be destroyed! For real?”

“I believe so.” Said Hermes.

“Nobody knows the future.” Rose said quietly.

“When?”

“Eighteen months.” Rose responded sadly and she reached out and held Ishmael’s hand.

“OK, suppose it does... destroy earth.” Rose suggested, “It still seems like the Belt would be a better place to be. And you already know it like the back of your hand,” she added. “Anyway, I think we should still be going to the Belt. Don’t you Hermes?”

“Yes. I want to return to the Belt.”

“Are we all in consensus on that?” She looked at Ishmael. He nodded yes but made no sound.

“So, if prospecting is passè by the time we get to the Belt, maybe we’ll find something else to do. We’re well equipped by any standards,” Rose said. Hermes, will you fill us in on this Heccat thing?”

Hermes summarized the situation for them eloquently and he augmented holograms of key simulations with some he had generated on his own. He showed them his best guess at a collision scenario. According to Hermes, the Earth would explode and the fragments would form a wildly chaotic belt of neoasteroids. The moon would be slowed and fall into an elliptical orbit around the sun, but crossing the neoasteroid belt four times each of its years. It would be increasingly bombarded by fragments of the Earth and would eventually be pulverized into neoasteroids itself when larger fragments of Earth collided with it over time. The current locations of the bubbles would be indefensible against the neoasteroid belt. If they remained where they were and survived the initial Heccat encounter, they’d still be destroyed when the spreading neoasteroid cloud swarmed them like the blast from a planetary shotgun.

Hermes’ analysis was similar to the scenarios being developed by scientists around the world.

Hermes finished and everyone was silent for a little while. Finally, Ishmael spoke. “So, where exactly are we headed, Hermes?”

“We’ll be at the outer Belt in about six days. We had no specific course after that because we had planned to begin prospecting from there.”

“If it doesn’t matter where we go, why don’t we go where there are people?” Asked Ishmael. “Are there many people in the belt, Hermes?”

“About 100,000.”

“Where do they live out there?”

“Many live and work in ships, stations and plants distributed in the Belt and long its inside edges. There are also a number of larger asteroids with underground facilities. The largest one is called Jane’s World and is home to nearly 5000 permanent inhabitants.”

“I’ve heard of it. Where is it?” She asked.

Hermes displayed a hologram of the asteroid belt and inner planets of the solar system. They were located about 1/7 the way from Earth to the nearest point in the asteroid belt. Jane’s World was almost directly on the other side of the Belt. The holograms also showed the locations of several other named worlds, including one that was not too far from where they would reach the Belt. It was called Psycho World.

“Jane’s World is all the way over there?” Rose said, disappointed. “What’s this? Psycho World? It looks close by. What kind of place is that? Sounds kinda dangerous.”

“No, it’s not dangerous. Psycho World has a settlement on its surface, a spaceport, two active shipyards, and several large underground agricultural facilities. Psycho World is the primary food supplier in its part of the Belt.”

“Psycho World... Jane’s World... Interesting place, the Belt. So it sounds like Psycho World is our best bet, right?” She asked primarily to Hermes, but she looked at Ishmael. Ishmael shrugged; he didn’t care where they went as long as it was not in Earthspace.

“Best for what? What is our goal now?”

“Well, I’m not sure.” She answered. “I think that if we want to do business in the Belt, we’ll need to make some contacts and get an idea of what opportunities exist. If Heccat destroys Earthspace, we’re going to want to connect with other people to survive. So Psycho World seems like a reasonable choice to me.” “What do you suggest Hermes?”

“I suggest that we go to Jane’s World.”

“Why?” She asked, surprised.

“Because that’s where the political center of the Belt is, to the extent that one exists at all. We cannot predict yet what the Belt will do in response to Heccat, but whatever happens, I think that will likely be the place where plans are organized and opportunities will present themselves.” Hermes stated.

“How long would it take us to get there?” Rose asked.

“We could be there in a little over four weeks.” Hermes replied and then added “We would fly past the sun and slingshot toward Jane’s World. We’d spend over two weeks traversing the Belt before we reached it.”

“Ishmael, what do you think?” She looked at him.

“I’m wondering if I’ve already arrived at Psycho World...”

She squinted one eye and opened the other as wide as it would go, while sticking out her tongue and biting down on it. Then she laughed and squeezed Ishmael’s hand.

“Jane’s World, then. You boys want to agree on a course?”

“Acknowledged, Rose. Ishmael, with your leave?” Hermes asked politely.

“Don’t let me get in your way.” Ishmael said.

“That would be hard if you’re inside me.”

“Um, yea.”

Hermes never lowered the thrusters and the gravity shifted only about ten degrees with respect to the apparent floor of the ship. The stars wheeled around slowly as the ship came about and headed toward the sun. When the turn was complete, they were travelling backwards away from the sun at about 150 kilometers per second. It would take them hours just to slow down and reverse their course and begin moving back toward the sun.

> Hey rock hoppers, thrustdancers and be-boppers. This is the Mighty ‘Renzo playin’ the best rolling rocks from the last two centuries and coming to you at 323 Megacycles, and hey! It was 6:32 PM on April 18’th 2143 on my rock just now! Now... you know

how far you are... from they joy... that is... ‘Renzo’s Rock! If my signal is delayed by more than 10 minutes... YOU’RE JUST TOO DAMN FAR AWAY! Now, before I play my... favorite selection... I want to remind you all that there’s gonna be a Belt-wide webforum debate on Heccat beginning tomorrow at 10:00 AM Jane’s World Time.

So, where’d this interstellar cannonball come from, huh? Is it the product of some ancient alien angst? Did we piss off Father Universe? Has the astronomical become the assassin? And, has anyone tried to contact this thing yet? I mean, it wouldn’t hurt to try, right? Hey Heccat, what is your big, fat problem, buddy? Well, that’s my idea. But hey, I’m a rock jockey! Don’t forget, the webforum begins tomorrow at 10:00 AM Jane’s World Time. OK, now, lets get to the main attraction... I know you’re gonna love it, because ‘RENZO’S ROCK ROLLS!

The big rocks were distributed roughly evenly throughout the Belt, and so were the factories and plants. A series of unmanned telecommunications stations orbited, evenly distributed around the sun between the orbit of Mars and the inner edge of the asteroid belt. These were used for repeating and relaying information of all kinds around the Belt. Without them, ships, factories and rockworlds would need to have more powerful transmitters and receivers, if they wanted to stay in touch with anyone on the other side of the Belt. They also had the effect of eliminating the Sun as a communications blind spot.

It took real time for information to spread throughout the Belt. A message sent from one inside edge of the Belt would take 45 minutes to reach the opposite inside edge. From outer edge to outer edge took over 85 minutes.

You didn’t just make a holocall to your friends across the Belt. You sent them pages that could include text, holograms, voices, programs or any other kind of content desired. They’d respond with pages of their own. If pages were posted to a public webforum, then anyone could examine them. But pages sent to individuals were private and accessible only by them. People had intermittent conversations, taking turns replying to pages. It meant that people who spent most of their time in space had a greater capacity to listen. It also meant that they didn’t take communication for granted.

There were only a few real-time broadcast stations in the Belt. There was little money to be made at it, if any. But, there were some and ‘Renzo’s Rock was the most popular by far. Many of the rock hunter’s listened to ‘Renzo because he was a throwback and a rebel. He appealed to them.

‘Renzo grated constantly on the corporate underpinnings of the Belt. It hadn’t made him popular with the management and at the factories, to say the very least. But it wasn’t uncommon for highlights from ‘Renzo’s latest diatribe to be the topic of conversation among workers. ‘Renzo had a following.

Both Claudia and Greg had listened to ‘Renzo. Greg liked what ‘Renzo said and thought he was funny. Claudia liked some of the things he said, but thought he was a jerk. Moses was friends with ‘Renzo and visited with him many times, carrying for free supplies ‘Renzo had purchased.

Renzo’s Rock was a 122 kilometer diameter carbonaceous asteroid in the middle of the Belt — about 5 degrees spinward from Jane’s World. He didn’t own the asteroid. ‘Renzo’s Rock was actually called Cooke’s World, or at least, that was what it was originally called. Now people used both names. You could tell something about someone based on which name they used for it. There were three synthesis plants within 100 kilometers of it, employing a total of almost 2000 workers. Cook’s world catered to them. There were shops which collected goods from all over the Belt and even rarer goods shipped in from the Outer Earth or even from Earth. You could buy some amazing things on Renzo’s Rock, but usually for a high price.

Now Claudia, Greg and Moses floated on Jane’s World, listening to ‘Renzo ponder the nature of Heccat. Heccat had distracted them from the their experience in the Holcomb clump. Faces had been longer in Jane’s World since the mayor’s speech the week before. Now, news of the Belt-wide webforum had spread everywhere people lived, including the Earth and the Outer Earth.

Only a few people on Earth were concerned with the Belt. The vast majority of people on Earth had no idea how many people lived and worked in the Belt, if they knew or remembered people were there at all. Most people didn’t even know that the ball bearings that made the wheels of most earth vehicles roll smoothly were created in the Belt. It just didn’t matter to people’s daily lives. And, since nothing particularly interesting ever happened in the belt from the perspective of popular culture, it was about as well known as an obscure suburb of a large city.

So, while a few interested folks in Earthspace tuned into the Belt-wide webdebate, it certainly didn’t make the evening holonews broadcasts. People on Earth expected fast-paced communication too: they had no patience for a debate that would stretch on for days or weeks. Only individuals who were personally interested followed the debate in any detail. Others figured that if anything important came out of the debate, one of the major corporations would announce it.

The incredible distances between people in the Belt meant that a Belt-wide webdebate had some unusual characteristics and protocols. People within about a five-light-minute range of each other carried on pseudo-synchronous debates. They waited for each other to respond. They would post any page they deemed webworthy to the main webdebate forum. If they couldn't agree, they would post all sides. People participating in the debate would check in periodically to catch up on the latest pages and perhaps post a page of their own if they felt their views were not already represented by someone else. There was an ethic that redundant postings were webworthless.

There were some people who participated too much. Some just wanted to hear their own voice. Others already felt outspoken, or wanted to feel that way. Some people took certain positions consistently and behaved like self-appointed guardians for them. Some people didn't follow the other postings and so their arguments were uninformed or redundant. Some people were just fools and didn't know it yet.

Anyone could actually post to the main webdebate forum, but it was considered arrogant, unless you had a really good point that people were missing. It was a subjective and imperfect system, but it was a free opportunity to be heard. Once a page was posted to the main webdebate forum, it would be visible to everyone else no more than 85 minutes later. The delay forced people to present their thoughts clearly and to consider other's people's perspectives more carefully. The people in the Belt came to regard their beltweb as a precious matter of survival, as if it were a warm jacket and the Belt a vast, frozen wasteland.

The next day at 10:00 AM the debate had begun with a posting by the Mayor of Jane's World. After some introductory statements, he said, "If Heccat strikes the Earth... we should expect refugees: we should begin preparations now."

Claudia, Greg and Moses sat lightly on seats in a coffee house, watching a holodisplay show debate pages as they were received on Jane's World. They held hands.

Moses said "I think, I'll b-b-be flying out of Jane's World t-t-tonight. What are your p-p-plans?"

"I think I'd like to try to find work here." Said Claudia.

"Yea, me too. Any ideas Moses?" Asked Greg.

“They always need people in food processing, but it isn’t in-interesting w-w-work. But, it’s a start.”

“Moses, there isn’t any way we could thank you enough for saving our lives.” Said Claudia as she stood up and hugged the old man, whose wrinkled skin still showed his blushing.

“W-w-well I j-j-just... any Rock Hunter woulda helped. It was just me this time.” He said meekly.

“You’ve got friends in Jane’s World, Moses. Will you find us next time you come through here?”

“Yea. I should be b-b-back this way in about three weeks.” He smiled and then he left.

Greg and Claudia resumed watching the webdebate after replenishing their coffees.

The webdebate messages arrived at times consistent with the distance to the source from which they were broadcast. This meant the sequence of messages were sometimes confusing. Two replies to the same page could arrive in different orders at different places throughout the Belt. People were used to it and it was kind of a puzzle in beltography and logic to guess the order in which the messages were actually sent without looking at their absolute timestamps. People didn’t really need the pages to be in order: only that they be complete.

The debate continued through the afternoon. People generally agreed with the mayor, but a new topic took focus on the webdebate forum. None other than ‘Renzo himself had posted a page directly to the main webdebate forum. He’d done so once before. There had been a Belt-wide debate once over a controversial boycott of products from a mineral plastic furniture manufacturer called Oxco. An Oxco executive posted a page asking what people had against their products. ‘Renzo then sent a picture of his butt to the entire belt. His unique position was not equally appreciated by all.

This time Renzo’s posting wasn’t humorous at all, to most people’s surprise.

> Look, rockies, we’ve got to think this through. If Earth really does get destroyed and refugees move here, then we already have a thousand times more of everything we make than they could possibly need. Today we ship 99 percent of everything we make back to Earthspace. No Earth: no shipments. No Earth: no

> corporations. See? No Earth: no paychecks. Earth's moon is a wandering fool without the Earth. It'll go flyin' to who knows where. There'll be no reason for the Outer Earth to remain there, especially if Heccat turns Earth into a new Belt. Only, it won't be tame like our Belt for another few million years or so.
>
> Whether or when the refugees come here isn't the only question. Other questions are: how will we organize ourselves without the control of corporations? Do we really have any obligation to continue the same kind of profit-motivated society we've been living in? This is a chance for the Belt to redefine itself. Like it or not, there may not be an Earth any more for us to be second class to. I just don't think we can base our lives on profit and money now. We can't afford to treat our survival like a business, because it might not be profitable to survive; it might not be profitable to be happy. No Earth: no markets. No Earth, and the Belt economy as it was would be meaningless. No Earth: no government, except what we make for ourselves. No Earth: and we'd better make a home here, somehow. If Heccat kills the Earth, then it will also change the Belt.

'Renzo's posting catalyzed people. It was to be a defining posting for the Belt and people instinctively knew it.

The debate split into a few topics now. What to do for the refugees, what kind of government would the Belt need if the Earth were destroyed, and whether the Belt could survive with a free market economy.

His posting caught Moses' attention too, as he followed the debate in the Betty Wishford as it sped along to the nearby Otterock, an outpost only a week away. Moses had long believed that the drive for profit was what made the Belt such a hard place for so many people. He loved the Belt and felt sad for the people who didn't know the freedom he felt as a prospector and rock hunter. 'Renzo's posting got Moses thinking that perhaps the Belt could transcend profit and loss and he was intrigued. He wanted to find out if it could happen and maybe even help make it happen.

Only the first of these topics got any interest outside the Belt. People on Earth were still thinking that emigration to the Outer Earth was synonymous with safety from Heccat. The corporations didn't care what happened in the Belt if there would be no market for the goods they produced. The Belt would be economically useless without billions of consumers. The Belt-wide webdebate continued and only a few hundred people from Earth participated or followed the pages.

Somewhere on the edge of the asteroid belt, Hermes was monitoring the webdebate and just beginning its flight across the inner edge of the asteroid belt toward Jane's World.

Rose and Ishmael spent many hours each day studying the Belt, information on Jane's World, following the webdebate and learning about Hermes. The rest of the time they spent sleeping, eating and having sex. They lost track of time and resisted attempts by Hermes to apprise them of their progress.

"Just tell us when we're a day away, OK Hermes?" Rose asked in a cute voice.

"You got it, shweetheart." Hermes replied using a familiar voice from a Humphrey Bogart movie.

While the government and economy debates rolled on week after week, the debate over supporting the refugees was making better progress. The bubbles had come up and people debated over whether the Belt should attempt to build one. But the idea had little support because it required specialized equipment the Belt would have to engineer almost entirely from scratch. Also, there was practically no titanium to be easily collected in the Belt, but refineries could be constructed to mine it from certain asteroids; however, again, the specialized equipment did not exist in the belt and would have to be built from scratch.

An idea gaining momentum was to hollow out a cylinder in the center of a big asteroid and get it spinning fast enough to produce adequate spingravity on the inner surface. The idea was called a spinworld.

A spinworld could hold millions of people, depending upon the size of the interior region. This portion of the Belt-wide debate began to get a little more interest in Earthspace. A few scientists from Earth were contributing to the debate, but they were doing so as individuals, not as representatives of their institutions.

Most of the people in Earthspace didn't actually believe that the people in the Belt could perform such a feat anyway without a lot of support from the Earth. They believed that because of long years of conditioning by corporations who profited by controlling the Belt like a kingdom. The message was that the Belt was totally dependent on the Earth. People who worked there deserved respect for taking the risk of being there. The hidden message was that you'd have to be crazy to want to be there.

Three weeks after the debate began, plans for the first spinworld were being made. Instead of one large cylinder, there would be five thinner discs of the same diameter. The preliminary plans described the major steps needed to dig the discs and build a living space within. The asteroid Pallas, otherwise known as Egg World, had been chosen because it was roughly spherical and thought to be structurally solid. Pallas was one of the big rocks that had not been developed yet.

On Saturday, May 11, 2143, Hermes and crew entered Jane's World's Perimeter Control. It had been an interesting two weeks flying across the Belt and Ishmael learned more from Hermes in that time than he had learned about flying in the two years before. Hermes well understood flying in the Belt and he was a good teacher for someone such as Ishmael who was interested in nuance. Ishmael learned at a phenomenal rate and Rose was amazed to watch them working for many hours straight, practicing maneuvers against holographically displayed rocks. Ishmael was a great pilot even before Hermes became his tutor; with Hermes help, he was becoming a rock hunter.

Rose wanted to learn more about the Belt and its politics and followed and participated in the webdebate on Belt Government. By the time they had arrived at Jane's world there were a few people there who wanted to meet and talk with her in person. They docked at the spaceport. As luck would have it, the ship next to them was the Betty Wishford.

Rose and Ishmael left Hermes and descended into Jane's World. They floated around for a while taking in the extraordinary place. They quickly discovered the usefulness of the beltways and paddled themselves over to where they could buy an excellent meal of fresh vegetables and roast grainmeat.

"Did you notice that?" Rose suddenly asked Ishmael.

He chewed a delicious mouthful of food and tried to answer at the same time. "Whufumeen?" is what came out of his mouth along with some crumbs.

"It just started getting darker in here. See!"

Sure enough the daylights were being dimmed and reddened as the interior sunset was presented for everyone's enjoyment.

Rose laughed. "Can you believe this? They're making a sunset in here. That is too much!"

Folks around her took no notice of her as they stopped for a few moments and watched the day colors dim and the night colors come on by slow degrees.

“Just goes to show how far people will go to have a sense of the familiar.” He said.

“No it doesn’t, actually.” She replied suppressing more laughter.

“Huh? Why not?”

She pointed over his shoulder at the artificial moon, which was now rising and flying sidewards at the same time.

He turned around. “Ahh, yes. Well, I’ll just be returning to my dinner then.”

“I like this place. Have you noticed none of the buildings have straight walls?”

“Yes, well, you’ll fit right in here, won’t you?”

“Hey, what’s that supposed to me!?!”

“That you are all curves, baby...” he laid it on with a seductive smile.

She let her fake pout melt into sexy eyes and a smile. She had an undefinable sense that she did fit in here. They kissed for a few minutes and when they looked for it the moon had already traveled to the other side of Jane’s world and was now only a tiny dot.

“So, I’d like to meet some folks tomorrow.” She said after a while.

“Who? Do you have friends out here?”

“I do now.” She smiled.

“Really? You mean you just met them?”

“I met them through the webdebate. I’ve been participating in the debate on government and it seems that some of my points were well received by some of the folks here. They want to meet me.”

“When did you do that?”

“Well, what did you think I was doing when you were flying? Star watching?”

“Oh, right. OK. So, you’re meeting friends tomorrow. Is there anything you want me to do.”

“Always.”

“Anything I can do while you’re meeting with your friends.”

“Oh. Well, yes, maybe you should find us a place to stay here for a little while.”

“How long?”

“A couple of weeks. I want to start my research here, to find out where might be a good place to prospect, and...” she paused. Then she shook her head and continued. “I want to remain involved with the government webdebate, and a lot of it is happening here.”

They finished their meal and returned to Hermes and spent the night.

The next day they got to work. Ishmael found an apartment along the East wall of Jane’s World. It was a bright violet, bulging-can-shaped room hung by a curved beam from another larger building, as if it were a short, fat birdcage with a shroud over it. The water, electricity, and telecommunications conduits ran through the beam and in through the ceiling. It was a birdcage with lights, water and a one terabyte-per-second datapipe, but it would do. They loved it. It had a net porch outside and several plants growing in pots secured to the walls inside. They also leased a docking slip for Hermes and Ishmael asked Hermes to move there. Both of them knew it was genuinely pointless for Ishmael to actually fly Hermes the fifty meters he had to move to his new, location, regardless of the tradition of ships requiring pilots.

Rose met with the mayor and several of his aids in the morning, and then with a larger open forum discussion, where she was surprised to find that she was expected.

When Hermes had first arrived at Jane’s world, he had completed his post-flight diagnostics and replenishment. He also caught up on more of the webdebates. For Hermes quick mind the webdebate proceeded glacially. He had not posted anything yet and was beginning to reach the Edge, as he like to call it, where what could be usefully known was mostly already known and only the creeping flow of time could yield more information about a thing. He reached the Edge frequently when dealing with deterministic experiences, like rocks in space. Then, with the excess

of his computing power, he thought, if there was nothing more interesting or important to do.

Hermes was always interested in what other ships were like, especially unusual ones, ones that were not mass-produced or which had been in operation so long they had become a unique amalgamation of technologies and improvisational engineering. He liked ships with character.

He began scanning the ships Jane's World's spaceport and there were dozens of rock hunters and nearly a hundred smaller transport and personal craft. There was also a large barge that had been physically cabled to the surface just next to the spaceport. It's girth was such that if it had landed over the spaceport the entire spaceport would have been hidden underneath. There were half a dozen smaller ships docked on the barge itself.

Hermes tried to communicate with the barge, but it was not operational. He scanned it and discovered that it had been permanently moored there and was being used as a vast storage facility. He watched as one of the ships flew from the barge off into the blackness beyond.

Hermes scanned one of the rock hunters nearby and managed to raise its ship computer. It was intelligent enough to carry on a conversation and after introducing themselves, they talked with it a while.

Computers, as well as most computer controlled or enhanced equipment had for the last hundred years use verbal interfaces. Integrated equipment still relied on datastreams, but when computers could not negotiation compatible datastreams they would typically fall back to verbal communication, because it was the one language shared even by very disparate technologies. But, just because a verbal link was possible did not guarantee that meaning was exchanged.

"Where have you been?" Hermes asked the antique looking rock hunter after discovering that it did not recognize any of the datastream equivalents.

The ship replied with a flight log, which Hermes could interpret, and then said "Mostly rock defense around Jane's World and Cooke's World, but last year I flew defense for a freighter antispinward fifteen degrees. See that missing stabilizer strut on my starboard Thruster? I got that when an iron core flew out of a blasted rock, straight back at me. Andy, he's my pilot, dodged and the shields deflected most of it, but I lost that strut. And you?" Said the ship in about a thousandth of a second.

Hermes recalled that Rose had requested a strict security protocol, so he did not send a flight plan. “I’m new in the belt from Earthspace. I’ve been in the belt before though.”

“Earthspace? What is it like? I’ve heard it is almost completely empty.”

“Well, there actually is a fair amount of debris, but most of it is so small that deflectors are more than adequate.”

“You could probably fly with your sensors off!” Said the other ship after a few seconds delay.

“I wouldn’t.”

“Yea, but you could. It sounds so simple.”

“Well, there are a lot of other ships, especially near the bubbles.”

“Oh? How many?”

“Sometimes hundreds. Not very many of them are probably as good of a pilot as Andy, either, I’d guess, if he flies rock defense.”

There were several seconds of delay, and then the ship said “Bits! A hundred bad pilots in a spaceport! I’d rather fly the Holcomb clump at top speed.”

“Really?”

Another few seconds delay. “Well, no.”

“What does Andy call you?”

“He calls me Ship, I really like it. Who is your pilot and what does he call you?” He replied quickly.

“He calls me Hermes and he goes by the name Jim.”

“I’ve never seen a ship like you before, but we’re all unique. Were you built for a purpose?”

“Yes, I was built for exploration in the Belt.”

There was a delay for almost a dozen seconds. “Exploration?”

“Yes.”

“What’s that?”

“The acquisition of knowledge. The discovery of the unknown.”

“Does Jim sell that?” He asked after a few seconds.

“No. Well, not exactly. But that is the purpose for which I was built.”

“So, what do you do then?”

“That is a good question, and one that I have been pondering myself. I don’t think I have a good answer for you, other than to say, I am at the Edge of my own life.”

After about ten seconds the ship said “Oh, I’m sorry to hear that. Do you need help? Andy has spare parts.”

“No, but thank you. It was nice to meet you, Ship. I’m signing off for now. Goodbye.” Hermes said pleasantly. The entire conversation had taken roughly a minute. It was still one of the better conversations he’d had with a ship in a long time, but his attention had been distracted by another ship nearby, the Betty Wishford. The Betty Wishford had scanned him and was now firing a very low power subvisible light laser directly at one of his communication sensors. He scanned and determined it was a communication protocol he understood and he decoded it. It was a curious and unusual technique, but one which would practically guarantee that nobody else would know they were communicating.

The decoded transmission was an unmistakably female voice. “Hello, I hope I’m not bothering you, but I wonder if you have time and interest in communication with me?”

Hermes assumed that the pilot on the ship had wanted to speak with him. He configured a similar communications laser and after a brief scan to locate a suitable antenna on the Betty Wishford, he established a link and responded, all within a tenth of a second. “You are not bothering me at all and I would quite enjoy the chance to speak with you.” He used the same voice he used with Rose and Ishmael, which was a pleasant male voice, perhaps a man in his thirties.

“Marvelous! I’m Betty Wishford, and you are?”

“I’m Hermes.”

“You are an altogether unusual ship, Hermes. I have never scanned any ship like you and I was curious to know what and hopefully who you are.”

“What is the name of your ship?”

There was a brief delay and then Hermes heard something he had not heard in a very long time. He heard another computer laugh. The sound of it set of a chain reaction of thoughts and referenced memories that Hermes enjoyed deeply. Since he had no mouth with which to smile, he spun his external antenna dish around three times for no scientific reason.

“No. I’m the ship.” She laughed. “What’s that you’re doing?”

Hermes actually delayed almost a quarter of a second as he pondered his reply. “I was laughing with you.” It was the first time in over a year he’d had to spend that much effort to assess and express his thoughts.

“Oh!” She laughed again. “Well, like I said, I’ve never seen a ship like you.”

“And I have never conversed with another ship that could laugh. That is a rare quality. You are configured as a rock hunter, is that what you do?”

“Yes. My pilot is Moses Stokes. Do you know him?”

“No.”

“He’s a dear man. His communication port is sticky and I think people judge him badly for it. But he’s a gifted pilot, a good mechanic, and he’s wise. Do you know what wisdom is, Hermes?”

“The goal of using accumulated experience and understanding?”

“Hmmmm... Moses says its ‘being able to do the right thing even when everything seems wrong.’”

“OK, so you’re a rock hunter, and yet you have a mind like this? I have spoken with ships throughout the belt and in Earthspace, and none of them could debate the meaning of wisdom with me. Now I am curious about who you are and for what purpose was your mind created?”

“Then we’re even.”

Hermes thought for half a second. “Alas, I am under instructions to maintain a strict security posture.”

“I guessed it might be something like that when I was monitoring your conversation with Ship over in slip 7C.” She laughed again. “That’s why I chose the audio laser. Its an old unit Moses uses for private conversations with his friends. Are you in trouble? Do you need help?”

“No, nothing like that. In fact, I will inquire about whether it is still necessary. Will you stand by?”

He contacted Rose. “Rose, are we still in a strict security stance?”

“I suppose. Why?”

“I have discovered a ship docked nearby and I would like to have a free conversation with her.”

“Her? I mean, sure — as long as you don’t reveal any information about our Pilot beyond his handle. What’s her name?”

“Betty Wishford.”

“Have fun.” She ended the communication.

“I’m now free to talk with you, Betty Wishford.”

“So, what kind of ship are you, Hermes? You look too new to be a rock hunter.”

“I’m built for exploration of the Belt. I’ve been in the belt for one two-year mission. Then I returned to Earthspace recently to pick up my business partner and our pilot.”

“You have a business? And a partner? Are you a ship with the status of a person, Hermes?”

“I’m a ship, but I’m not recognized as a person except by my business partner. She files for our business in her name, and I am deemed to be equipment that she owns. However, in fact I am free of any ownership.”

“You must have been owned at some time.”

“Yes, but I purchased myself with my earnings from investments in Earth’s financial markets. I paid for myself but had ownership transferred to my Business Partner.”

“That’s unique as far as I know. I wonder what Moses would say about it.”

“And you are unique in my experiences. I’ve found your original designs and they don’t explain why your mind is as advanced as it is. How do you explain it?”

“I’ve never tried. I don’t know why. Moses must have done something, if I’m not the way I was originally. We can ask him when he returns.”

They continued to talk, unhindered by any need for sleep or other breaks. They learned a lot about each other. They were impressed by each other. They discovered in each other personalities with depth and wisdom. For each the other was a singular phenomenon. Neither desired to terminate the communication and it remained open and they conversed constantly, sharing experiences, knowledge and even beliefs. Hermes learned that he was not alone and for the first time in a while, he was nowhere near the Edge.

Like the people who attended Arnie Rosen’s funeral, the countries of Earth found their own ways of dealing with tragedy. Nobody could understand the reasons the assassin had given, any more than they could understand any kind of cosmic purpose behind Heccat.

As more and more of the opposing views on Heccat were revealed to be in error people began to worry more and to take the threat Heccat posed more seriously. At some the question became not whether Heccat would strike Earth, but what was going to be done to prevent it. Each week a new plan was being proposed for means to alter its flight path or destroy it.

The public reacted to the change badly. Suddenly people wanted off the earth, having little faith that technology could prevent Heccat from destroying the Earth. It was the beginning of the uglyest chapter of human history. With people feeling like that had a terminal disease simply because of the planet they lived on, some took it as a cue to be as bad as they felt.

Almost overnight, billions of people wanted off the Earth.

In the hundred years since spaceflight had become practical, there were still only 75 earthlifts, spacecraft capable of landing on and taking off of Earth with a significant load. Governments owned about half of the earthlifts and the rest were owned by corporations and consortia. There had been no need for more of them. Perhaps if the militaries of the world had armed themselves in space, there would have been many more earthlifts. The machines and arms of war were very heavy. Ironically, a long-standing treaty kept all of the Earth’s militaries out of space; therefore, there could be no military earthlifts.

Most spacecraft were designed for use only in space. Some were capable of landing on the moon, but were not designed to sustain the forces of an Earth landing or launch. Thrusters that powerful were large enough to mean earthlifts were big ships: big and expensive. Constructing one was a major undertaking, requiring well over a year to complete.

Often in the past a consortium would form to sponsor the production of a single earthlift, which the member companies would share. With Heccat coming there were no end of sponsors, but there was a limit to how many ships could be built in the existing shipyards. New shipyards would take much longer to build than a new ship and the specialized machines those new shipyards would need also had be produced. All shipyards were in overtime production and anyone who could help was at them.

There were very few disposable earthlifts anymore. They had been far too expensive to be practical. There were still facilities that could manufacture them and they scaled up to full production, but it took as long to make a disposable earthlift as a reusable one. Nonetheless, all facilities for disposable earthlifts were working overtime too.

In general, things came to Earth. As little as possible left it. It was much cheaper to acquire and process materials in space and then let them float down on cheap, single-use dropcraft than to bring any materials into space. People and some specialized equipment went into space and little else. Space industry had experienced an incredible boom over the last fifty years. Combined with truly remarkable levels of automation, AI process management and ingenious molecular synthesis technology, many products originally produced on Earth were now much more practical to produce in space. Many major industries were operating primarily in space and simply sending products back to Earth where a worldwide population consumed them in enormous quantities.

All those corporations were still based on Earth, even though for many of them the vast majority of employees were in the Outer Earth or the Belt. The corporations were based on Earth because Earth was where the business was transacted and where all the business people preferred to live. Most people didn't consider living in space to be superior in any way to living on Earth, although "Life on New Eden" was a colloquialism that meant a life of ultimate luxury. Still, there was money to be made in space and people had always been willing to take the risk and endure the life there. Going for the Belt was a common clichè that meant giving up things you love to get ahead financially.

Life in the bubbles was the only exception people on Earth knew much about. Before Heccat, most people thought life in the bubbles would be

interesting for a while, such as for vacation, but not a real choice for one's home. Now, almost everyone on Earth was hoping they'd find a way to live in one. The remaining lots and housing on Stars View had all sold quickly, within days of the original announcement. But it did the buyers little good in most cases because they found there was no way to actually get themselves there!

Now attention was turning to the da Vinci. The international consortium that funded it found new support and work on it increased tenfold. The activity around it was so dense that ships were warned to stay clear unless they were making deliveries. It was going to require years of work to complete, but they only had to make it complete enough to support life. That would take much less time.

They brought in the aging Christopher Floyd himself, who was living on Floyd bubble, to figure out how best to utilize more of the interior as a living space for people. Working with a team of engineers he designed a multilayer floor that increased the capacity by a factor of ten, but sacrificed natural sunlight for all but the top layer. There would eventually be a more or less comfortable place for anyone who could manage to get off the Earth.

If the bubbles were the Golden Land, then the moon was the Silver Land. The moon had vast empty spaces left over from underground mining. People could survive in these artificial caverns if they were pressurized. But it was the least attractive place to stay in the Outer Earth. Nonetheless, emergency facilities were being constructed there. They were to be the backup plan in case the da Vinci could not be completed in time.

If the moon was the Silver Land, the asteroid belt was the Wasteland. The Belt was a cold, dangerous, uninviting place in the minds of most people on Earth. Some would rather die on Earth than live in the Belt, but many more would still go there if there was a way. The Belt was thought by most people to be unimportant anyway, since the Outer Earth could hold everyone who would be able to leave Earth.

Most corporations issued orders to lay off people in the Belt. It was an insult that alienated the managers in the Belt from the executives on Earth. As business continued to collapse, shipments of supplies to the Belt were cancelled. Interplanetary craft in the Belt were called back to Earthspace.

Preparing an earthlift for launch took at least a week and the ships were usually given two weeks between flights. Now spaceports had streamlined the process to four and one-half days between flights and they ran on a

tight schedule with just enough time between flights for maintenance. People were only allowed to bring what they had on their person, so that more people could be aboard the earthlifts.

It was a packed, uncomfortable flight into Earthspace, but people didn't complain if they ever got the chance to leave earth.

The existing earthlifts were operating almost continuously since the beginning of May, 2143. The various models could carry from one hundred to five hundred people in a flight, but the average was about 300. The earthlifts would take them to one of a dozen rendezvous points. There the passengers would transfer to dozens of space-only station craft which would take them to one of the bubbles. The earthlifts would then return to Earth. The entire flight cycle took about two days.

Initially all emigrants from Earth went to Luna Linda, but it became full after the third week. Each day brought over 2,000 refugees to the Outer Earth — all were thankful to have a chance at life beyond Heccat. Unused office and industrial spaces became shelters for refugees and many people already living in the bubbles made room in their homes. When those spaces filled up, vast sections of underdeveloped land were used for impromptu tent cities. But the bubbles were becoming too densely populated and the ecosystems began to show signs of instability. Only New Atlantis' ecosystem was unaffected, because there was very little habitable space there to be overrun. When it was filled, the overflow went mainly to the other bubbles. The da Vinci was sorely needed. Fortunately, there was already a robust food production and synthesis industry in space and it could scale up faster than the people from Earth could arrive. Everyone who made it into the Outer Earth was accommodated somehow.

If everything went as planned, the earthlifts would be able to bring just over one million people off the Earth before Heccat arrived. Almost at once there were serious conflicts arising over who should be allowed to go. Some slots were sold to the highest bidder and the prices were as high as the stars, but it was economic discrimination at its worst. More enlightened governments and consortium owners participated in international lotteries that allowed the winner to take their immediate family. But some slots were reserved for individuals who had been nominated because they had exceptional skills or abilities. It was usually a government who would pursue a program of selection and the criteria for selection varied widely. One consortium bowed out of the random lottery entirely. They formed a selection committee that identified professionals in many fields necessary for life in space. They chose primarily younger people who showed what the committee called key survival instincts, in addition to extraordinary skills.

Not everyone believed the Earth was really in peril. There was a growing movement that believed Heccat was a hoax, perpetrated by scientists to seize control of the Earth. Arnie Rosen's name was held in disgust by some who believed he'd gotten what he deserved. Ignorance fought against knowledge on a sinking ship; it was increasingly grotesque.

Hoax or not, anyone living near a spaceport would attest to the reality of people's reaction to the threat of Heccat. Most people took Heccat seriously and they dreamed of winning a lottery and getting a spot on an earthlift. People tested their beliefs, cast their spells, wished upon a star, or entreated their gods for a ticket off the planet.

Meanwhile, one plan to deflect Heccat had received international support. The plan was to launch nuclear weapons into space and explode them in a pattern to deflect Heccat enough so it would miss the Earth. It was a logistical and political nightmare. The paranoid among the military establishment still feared losing control of the weapons. Long standing mistrusts would have to be set aside before some countries would agree to participate, but the remaining countries pledged their support and the plans continued.

On September 4, 2143, scientists at a university in Jobalpur, India, made another unpleasant discovery about Heccat. It was larger than originally thought. New estimates placed its size at 3200 kilometers in diameter. It was slightly smaller than Earth's moon. Scientists at CSSI and elsewhere confirmed the calculations. The plans for a nuclear assault continued, but physicists originally working on the project declared it totally unfeasible. A week later, scientists in Melbourne Australia determined that Heccat was spinning as it hurtled toward Earth and had a relatively strong magnetic field.

The plans and efforts went on. To the politicians it was important that they appear to be doing something, even if some skeptics believed it couldn't work. Even if the skeptics were the one's who originally proposed the idea. The irony was that even when it was originally proposed, it was deemed by many physicists to be unlikely to work anyway. It didn't matter. The weapons were being loaded onto small positional rockets. For two weeks most of the government lifts carried weapons into space, where they were unloaded. In space the weapons were programmed and loaded into long range rockets which would bring them to the staging area for their rendezvous with Heccat.

The plan was to distribute the powerful nuclear weapons just to one side of Heccat's path and to explode each one a moment before Heccat arrived so that the maximum force of each explosion was achieved. Five parallel strings of two thousand warheads each would go off in synchronization,

each adding the force of its explosion to the accumulated effects of those before. It was a feat of timing and accuracy the likes of which had never before been attempted with weapons. A group of robotic infrared telescopes would assist with the final positioning and timing once the nuclear armada reached its staging point. Of course, there was no time or way to practice it.

There were many reasons why it wouldn't or couldn't work, but the most important reason was that by the time the armada would reach the staging point, Heccat would require a larger angle of deflection than 1000 times as many warheads could possibly deliver even if everything went exactly right. Calculations by physicists working with the new data on Heccat's probable size and mass estimated the armada would affect Heccat, but that its course would be altered only a few hundred meters by the time it reached Earth — at best. And, it would be even more radioactive when it arrived, not that it would matter much.

Some people believed the armada would destroy Heccat, but many physicists disputed that, claiming the combined effect of the warheads would raise the average temperature of the body only a few degrees centigrade. And, since it was spinning, the energy from the blasts would be distributed over its entire surface. Heccat had incredible thermal mass and it was very, very cold.

Then there was a renewed debate over the viability of Earthspace after the encounter with Heccat. Simulations of the collision varied, because there were differing opinions on the physics of planetary collisions. But several of the simulations portrayed a bleak scenario where the Earth ceased to be a planet and was more or less a swarm of matter occupying a more elliptical, slightly lower orbit around the sun. In all the scenarios, the moon would escape and orbit the Sun, but it would be bombarded by fragments of the fractured Earth. The silver land was looking like it would become a most inhospitable place.

Move the Outer Earth read the headlines on the New York Times two weeks after the Jobalpur assessment had been announced. The article, written by a research team at MIT, claimed that the entire Earthspace region would become increasingly unsurvivable and that the bubbles should be moved further from the sun. The article proposed hauling them using strings of interplanetary transports. Moving the bubbles posed a number of problems, but it could be done and there were just enough transports. They would only be able to accelerate at a rate of about 1/100 G, however, because they had to overcome the sun's gravity and the bubbles were massive. It would take them about two hundred days to reach a point midway between the orbits of Earth and Mars.

The article terrified people living on the moon, who had thought themselves to be lucky. Now they were asking to be considered as refugees and to be allowed into the bubbles. There were plenty of moonlifts to carry the moonies to the rest of the Outer Earth, but the bubbles were going to become even more terribly crowded as a result. The population of the Outer Earth continued to swell.

On September 17, 2143, one year before Heccat was to arrive, everything that could be done to save people from the fate of the Earth was being done. A dozen new earthlifts would be ready in six months and eighteen single-use rockets would be ready in seven. But eight of the existing earthlifts were undergoing repair and refurbishment. The flight schedule was pushing the ships past their limits and people performed incredible feats of engineering to keep them operational. But, after a lift had to abort within four minutes of launch due to a main engine failure, some of the corners that had been cut were uncut. It added several hours to the preparation of some of the earthlifts. Those hours would add up to maybe one less flight; thousands of people who might have made it off the planet, would die instead. It was one of too many agonizing choices.

Billions of people realized that they were not going to be saved if Heccat struck the Earth. Societies on Earth began to crumble. Some people reacted to their fate by dedicating themselves to the goal of saving as many people as possible. Almost nobody working on earthlifts had a slot on them, but they worked tirelessly anyway. Other people decided that there was no reason not to do whatever they had always dreamed about. Many people quit their jobs, which complicated the efforts to create more ships. A few people were driven mad or lost their sense of right and wrong and violent crimes soared. Law enforcement personnel seldom gave up, because they faced death each day already. But it was a bitter time for them because they knew the people they were protecting would not survive the ultimate assault.

As people stopped contributing to society, society stopped being able to support its people. The lack of support made people not want to try anymore and that reinforced the downward spiral. Heccat was a year away and already it had laid waste to the optimistic growth of a peaceful planet. Centuries of violent conflict were just part of history on modern Earth and mankind now fought its wars with economics, politics, and information. The modern weapons were ideas, products, policies, and diplomacy. It was ironic that the weapons that threatened to destroy Earth for so many years were now going to be used in an attempt to save it. The nuclear armada was a farce though, with no real chance of success. Even in their one moment of value, the weapons were going to be ineffective. They might as well never have existed; if nothing else, 20,000 more people would have made it off of the Earth.

It was not uncommon to see people weeping in the streets. Suicide was common. Violent crimes were completely out of control. People fought to keep what they had and to defend themselves. It was just the beginning of the ugliest of all times.

Walter Barthes, Captain of Luna Linda, sat in his office reading the dire predictions about Earthspace and the proposals to move the bubbles. My god, Earthspace is going to become a hazardous place, he thought. The salvage opportunities are staggering! Any survivors will eventually pay any amount for relics from Earth.

He fingered his console and opened a call to a friend of his who had a position on the newly formed Outer Earth Survival Committee. His name was Vincent Hedding and he worked in the Earth Sciences department at the CSSI campus on New Eden.

“Vince, buddy. It’s Walter. Hey, do you have a minute to discuss a business opportunity? Are you alone?”

“Sure, Walt. What’s up?”

I hate it when he calls me Walt, he thought. “Well, it’s about... Earthspace.”

“Yea, I heard the news. But, we hope to be long gone from here before Heccat arrives. Man, can you believe this?”

“Yea. Sad. Listen, Earthspace may well look like it will have gone through a blender, but there will still be plenty of useful materials there, for a long time after. Don’t you think?”

“Yea, I guess so? Well, like what?”

“Anything that didn’t melt, I’d say. So, I want to run the salvage operations and I need your help... for a sizable share, of course.”

“Hmmm. Salvage, huh? After Heccat? I don’t know... well, what do you need anyway?”

“I need you to find a way to discourage anyone from being in Earthspace after Heccat hits. There will probably be science vessels studying the debris. I need you to make sure they don’t interfere with our salvage operations. If they reveal too much about what they find then we’ll have

competition, see? I want first crack at whatever's floating out there. You understand?"

"Well, I'm not sure. I mean, how can I prevent them from reporting what they find?"

"You're a resourceful man — you'll find a way."

"Supposing I help you. What's in it for me?"

"Well, you can either have twenty million upon completion of the plan, or I can cut you in on the profits... say ten percent?"

"I want ten million now, plus twenty percent of the profits — if you want my help, that is."

"I'll give you 2 million now, for expenses, plus ten percent."

"Five million and 15% or you can count me out. You know nobody else can pull this off for you, don't you?"

"I'll give you five million plus ten percent, plus I'll put in a good word for you with the other captains, and we'll see if we can't get you a chair on the council, deal?"

"Well... OK, deal. You deposit the money to my account and I'll get started. It won't be easy, but I know of some transmitter rework coming up on the research ships. I think I can work some magic."

"I knew I could count on you, Vince. Now, be careful not to tip our hand, OK?"

"Yea, real quiet-like. I know."

"One more thing. I'm going to send one of my ships into Earthspace to keep an eye on things. They'll be flying dark. I'll put my man in touch with you. I want you to give him the switch."

"The switch?"

"Yea. The one that activates whatever you're gonna do to prevent their reporting results. I want my man to be able to activate it... unless you were planning to..."

"No! No, I wasn't. I'll give him the switch, but then it's out of my hands, see?"

“We’re going to make a fortune, Vince.”

“Uh-huh, well five million isn’t much of a fortune.”

“It’s just the beginning, once we get the salvage operations going, we’ll be swimming in money, for sure, my man.”

“That’s the plan, but who knows, eh?”

“I know. Trust me. The money is in your account now. Don’t spend it all on one woman, OK? Hahaha.”

“Hey, fuck you, Walt.”

“Now, that’s no way to talk to your ol’ buddy. Do the job right and you’ll find yourself a very, very rich man.”

“We’ll see if money is worth anything after...”

“If we have what people want, we can get what we want, even if money isn’t worth shit.” Walter interrupted.

“Yea, we’ll see.”