BARGAINING POSITION

I'd like to publicly thank L. Neil Smith for allowing me to play with some of his literary toys, my publisher for taking three chances on an unknown writer, and Jaq and Nigel who may vaguely recall encouraging me to write 'way back in the Stone Age.

Dedication

For James P. Hogan
June 27, 1941 - July 12, 2010
A true gentleman and great writer who is missed by many.

Prologue

Roll the bones.
Rush

The engineer entered the room. Pausing near a console, he glanced at the technician positioned there and gestured. Bowing in compliance the technician rose and glided out of the room, leaving the engineer alone.

The engineer addressed the empty room. “Stados, may we speak?”

From all about him, another voice sounded. “Certainly. I would enjoy the company. It is not as though I were busy. Did you come to say farewell?”

“Yes,” the engineer answered. “And... for reassurance, I think.”

“Reassurance, sir?” Stados asked, seemingly in surprise. “I am the one casting myself into the endless darkness; not you.” Its laughter filled the room.

The engineer shifted uncomfortably. “Please, Stados. You only make this more difficult for me. This only the second time we have sent a person out on a starprobe. I am still forcing myself to believe that this is proper. If you were to die...” He paused to gather his thoughts. Then, more deliberately, “Stados, your people are new yet to us. We are still learning how to live together. We know so little about you; There is no reason that you should not be immortal. To send you out into the unknown, where you could...”

“Where I could see great things,” Stados asserted firmly. “Where I could have adventures, Casso.” He went on, “Yes, we might be immortal. All the better a reason for us to crew the starprobes. The journeys are long.” A sly note tinged the voice as he continued. “And great danger can also mean great opportunity.” Stados paused for emphasis, then moved on. “Casso, you did not force me into this. Recall that I applied for this job. Quite willingly. And I am being very well paid.”

Casso indicated doubt. “But still...”

Stados interrupted, “Think, Casso. I have been granted the power of a starprobe. I am going out to discover new things. And I am being paid to do it. This is not something for you to regret.” Light laughter echoed. “Unless, of course you wished to go in my place?” he added slyly.

Casso's face showed amusement. “Ah, if only I could stay my breathing so long. As you say, your people are better suited to the stars. For now. But you will be out for a long time; my people hope to change that.”

“I will look for you in the stars then, Casso. Our people make good partners. We should share all this. Certainly the profit is adequate for all.” The voice changed tone with the abrupt shift of topic. “Have you reviewed last term's profits from the Sciloriad door? My accounts expand rapidly. Given favorable interest during my trip, I could own the homeworld when I return.” Status screens lit, and figures flashed. The engineer watched briefly.

With an expression of doubt, Casso said, “I mistrust your investment strategy. It seems more likely that you will have to sell the probe to pay off your debts.”

The screens blanked, flashed white, and went black. “Bah, you have no true understanding of my strategy,” Stados objected. “I am leaving my accounts in the hands of my own agent, following a very specific program. I will be rich!”

“This agent? A person I know?” Casso inquired.

“Ah, No. Merely an expert system of my design. Useful with money; but of no true potential. I wished to be sure my instructions are followed precisely.”

Casso laughed. “As is proper; in this way you can only blame yourself when you lose all.”

A rude noise sounded from the speakers. “Ha. What do you know? Be reassured. I will be back. I will be rich.”

Relaxing somewhat, Casso replied, “Yes. I am reassured somehow. I believe your optimism is affecting myself. Thank you, Stados.”

“No,” the voyager countered. “Thank you, Casso. For the chance.” A brief silence, then, “You should go now. It is late for you. Rest. And it is time for me to sleep, as well. The engine fires as we speak.”

“Journey well, Stados.”

“Oh, I will. You may bet on it.”

Casso laughed again. “Ah so. Yes, I heard that you commissioned yet another probability routine. It cost most of your trip bonus. I do not understand why you wanted it now, though.”

“Casso, all life is a gamble. I thought it wise to be prepared properly. And there is always profit in careful gambling.”

“Perhaps. But with whom will you game?”

“With the universe, Casso. It is time; goodbye, friend.”

“Goodbye, Stados.”

Chapter 1

With a rebel yell, she cried more, more, more.
Billy Idol

It was an unlikely appearing object. An ungainly bundle of silvery balloons, caged and set atop a framework of girders that terminated in a box sprouting a dozen fins. As the spacecraft backed through deep space, a barely visible haze of plasma jetted out of the fission-heated drive-and-power module.

The *Improbable* was a deep space craft heavily modified – bastardized, Bill once said – for asteroid prospecting and light mining. Deep space indeed, on this run, far from its usual haunts; as it decelerated towards Jupiter's leading Trojan position.

A Trojan position is an oddity of gravitational resonance, sixty degrees ahead and behind of a planet in its orbit, that acts almost as if it were itself a gravitationally active body. Objects in a Trojan zone tend to stay there. This quality is useful for keeping things like space stations and and comm relays in place without expending a lot of station-keeping thruster propellent. Jupiter being a massive planet, by Sol system standards, his Trojans should gather up all sorts of interesting things.

Or so Bill and his companion Jeannie Hunter hoped. But at the moment, the stocky, prematurely graying man had other things on his mind. “That, my lovely lass,” he sighed happily, stretching his arms before wrapping them around the brown-haired beauty cuddled against him under the retaining sheet, “was a performance worthy of the highest paid artist at Galena's joy house on Pallas.”

“Why, 'karisto, sir,” Jeannie murmured back. “I try.”

“What, you?” the stocky man retorted. “I was talking about *my* performance. Damn, I'm good.”

As Bill smirked, Jeannie pulled back the sheet and pushed him off the edge of the bed. The *Improbable* was still under light acceleration, so he hit the floor before sailing very far. “Thwwpt.” She blew him a raspberry, and sat up in the cooling bed. “As I recall, it wasn't you who got the job offer. Lights on.” she finished in a flat tone. The room illuminated itself gradually, allowing the couple's eyes time to adjust, revealing a tidy little room equipped with numerous wall lockers and drawers where necessities could be be stowed safely in free fall The large, comfy bed, equipped with bone-protecting e-field generators, stretchy silken sheets that kept *people* safely stowed in free fall, sound system, and small fridge, was the sole furnishing in the bedroom, and one of the Hunter's few true luxuries. The couple preferred simple pleasures. The bed was handy.

As Jeannie, tall and shapely, attractively athletic without overdoing it, started to stand, an insistent chime sounded. “Whups!” She reached for the headboard and held on lightly as the ship's acceleration ended. “Later than I thought. We be here, “she observed brightly. Her chestnut hair formed a free fall cloud around her face. She preferred to keep short for convenience, but Bill liked to run his fingers through long, silken strands and admire the highlights she had added.

Bill, already somewhat distracted by Jeannie's nude form, let himself drift off the floor. As he floated towards what had been the ceiling moments before, he put out an unconcerned hand and

stopped his drift. “Ah, microgravity. Weeks at a tenth g were getting tedious,” he declared. From his vantage point he observed another nice thing about free fall

Jeannie's generous assets were quite perky when unencumbered by gravity.

Bill smiled and wettened his lips. “Hey, babe. I've got an idea. Let's get back in bed and practice so I get the job offer next time.” With that he pushed off and glided to a one point touchdown against the sheets.” He reached over and stroked the woman's firm gluteus, and took advantage of the changing target as Jeannie spun around.

Jeannie evaluated the... escalating situation before her. “Bill Hunter, you are one over-sexed sunnuvasenator,” she declared.

“I am not a son of a senator,” he replied defensively, then grinned. “And I've gotta be, to be keep up with you. Right?” He patted the mattress suggestively.

Jeannie shrugged, which did distracting things with her perkies. “A point. Lights off.” She moved forward.

“Nah. Lights on. Gonna watch this time.”

“Whatever... Slide over.”

***

Improbable's main living space was a great room in the central “balloon” in the bundle It encompassed the piloting station – Bill insisted that “cockpit” was better applied to the bedroom – kitchen, library, and general living room. Jeannie, now clad in a still distractingly brief t-shirt, left the control area and approached food prep, where Bill was assembling brunch. Covered dishes displayed omelets and biscuits. A rack of condiments sat at the middle of the steel dining table. “I have the search radar doing a detail scan of the main Trojan zone. Couple of hours, and we should have a pretty good density map,” Jeannie told the chef.

Bill nodded, then held up the coffee carafe. “Coffee?”

“No,” Jeannie decided after a brief pause. “But I would like a strawberry smoothie, if you left any for me,” she said, as if doubting her chances. Bill was to the berries as groundbounders are said to be to potato crisps; he couldn't eat just one.

Bill opened a fridge and removed a small carton. “You're in luck. While you were checking out the neighborhood, I checked the garden.” *Improbable* had a hydroponic grow system for air processing and fresh produce. The Hunters primarily grew luxury-type items, such as the strawberries and hot peppers, and relied on canned and freeze-dried staples. The garden was a money-maker when they encountered isolated mining and prospecting operations. “Strawberries are starting to ripen.” He dumped berries, dry milk, water, and a few special touches into a blender and started it up. That blender would look a bit peculiar to nonspacers' eyes, having some adaptations for work in microgravity. Most obvious were the plunger and spigot Bill used to decant the fragrant fluid into a cup, which he carried to Jeannie.

“Danke,” she exclaimed, reaching for the treat.

Bill pulled the cup away. “Ah, ah, ah,” he chided. “Payment first.” He puckered up.

“Vac-brained sex maniac,” she complained, but rose to deliver the demanded kiss.

What should have been a quick peck extended and deepened. Bill blindly set the cup on the table, where it remained, obedient to its attached magnet, just like the plates. His other hand sought other terrain.

Jeannie, startled, jumped and broke the kiss but was saved from drifting away by her partner's groping hand. She caught her breath and spoke with a lowered voice. “At this rate, we aren't going to get blessed thing done.”

Quite abruptly, Bill released her and moved to his seat. “Well, let's eat. I'm hungry,” he announced. Then he rolled his eyes. “And she calls me a sex maniac.” He eyed her accusingly. “We do have thing to do, after all.” He opened his plate and extracted a morsel of apple cinnamon omelet.

Jeannie followed his culinary example, but added, “On the other hand, this *is* a vacation. The idea was to not work for a while, and relax. Enjoy spending some of the coin we made on the last dig.

Said dig had indeed been profitable. As was their wont, the Hunters drifted about the main Belt almost randomly, running a set of laser spectrometry tests of the larger rocks they encountered. This was a matter of equal parts wanderlust, curiosity, and greed. Commercially extractable metals were always welcome. Depending on type, quantity, and quality, the Hunters might sell their rights to a find to a large company, or do a little mining and preprocessing own their own, selling the semi-refined ore at market. This time, they chanced upon a notable assortment of rare earth elements.

As the name implies, these elements are rare, and thus valuable. Particularly since the electronics industry is totally dependent on them. The Hunters chose to mine and pretreat the ores themselves. In fact, for such occasions, they own a small, semi-automated processing unit that, given sufficient time, could do nearly the whole job. The gadget had been pricey, but profitable.

The problem came from the error in estimating the extent of the deposits. There was more than they had realized initially. A lot more. And neither of the mercenary couple could bring themselves to turn their backs on the money to be made. It had been exhausting, but more profitable than several previous prospecting expeditions combined.

Bill replied to Jeannie's assertion, “On the gripping hand, it is supposed to be a *working* vacation.” Despite their new found wealth, Bill saw no reason to pay the full cost of the reaction mass demanding for this excursion. He persuaded Tempo-Warren's news service to chip in a few marks in exchange for a first person account of the first manned exploration trip to the Trojans. With a bonus for anything especially interesting.

They argued playfully over whose idea it was first, to buy expendable drop tanks of reaction mass, to extend boost, and tour one of Jupiter's Trojan points. Jeannie conceded that Bill did tend to have the itchier feet, the urge to go see something new; even more so than herself. But Bill likewise had to admit that Jeannie brought up the vacuum cleaner aspects of a Trojan point; all sorts of neat space trash could be there. There were interesting possibilities.

Certain finds in the main Asteroid Belt had restarted the debate over whether or not it had once been a discrete planet. Metal oxides and other “ore” compounds were often found in deposits very like those on larger worlds, as if formed by planetary geologic processes. Conditions remarkably like atmospheric or water erosion had been documented.

Those who preferred the position that Jupiter's gravitational disruption would have prevented a planet from coalescing in the region pointed out that the many and varied orbital elements displayed by asteroids were inconsistent with a single planetary origin.

Velikovskian catastrophists acknowledged the anti-planet argument, and observed that if planet-sized objects did careen about the system every few thousand years, a broken world could very easily be tossed this way and that. And given the geologic finds on Mars and Venus, no one was being too quick to call the catastrophists nuts any more. It was starting to look like just maybe the Solar System did periodically rearrange the cosmic furniture.

With the latter in mind, Jeannie suggested that extremely interesting pieces of... places might be found in little corners of Jupiter orbit. Perhaps, even, something to finally settle the irradiated, freaking argument.

Brunch finished, dishes cleaned and put away, and the daily exercises required to maintain health in long-term – permanent for the Hunters – low and no g completed, it was time to see what the radar scan came up with.

Bill sat down on the library sofa, datapad in hand and Jeannie snuggled close. He tapped icons on the pad, scrolled through a list, and found the radar scan composite. Frowning at the image, he linked to the wall screen “Let's get a better look at this.”

The screen lit and showed a black field flecked with white speckles forming a cloud. Jeannie rose and moved closer to the display. “As space goes, that's bloody crowded.” Then she traced a vague line of increased density through the cloud's middle. “Betcha a blow job that line follows the orbital path. Zoom out, look at it from out of the ecliptic,”she directed.

“Yes, dear. No, dear; no bet.” Bill played with the pad. The cloud shrunk on-screen and rotated. From this perspective, the line became an arc. “And...” Bill spoke again, “ta da! Jupiter's orbit.” A longer green arc threaded the hazy cloud. “We were right.”

“*I* was right,” Jeannie corrected. “*You* punched buttons.” She turned back to the display. “That does look somewhat more... populated than the Belt. Zoom in, so I can get a better feel for it.”

“Whatever you want, babe.” The cloud expanded, and seemed to engulf them. Ghostly radar echoes flew past. The image halted. The central arc was much larger, but correspondingly more diffuse. “Lessee...” Bill placed a pair of virtual calipers on two “nearby” returns. Numbers flashed on screen.

Jeannie read them off, “Five hundred klicks. Huh, pretty close. Run some measurements in the central cloud where stuff looks closer. Get an average.”

After a little more electronic magic, they determined that, very roughly, sizable objects were one hundred-fifty kilometers apart. No doubt, when they moved in closer they'd find some small stuff

in between. Unless they barreled through at high relative speeds, they were unlikely to bump into anything that *Improbable*'s armor couldn't handle. Even the cleanest mining operations raised some debris that a ship could run into; like most prospectors, the Hunters had added foam and plastic plates to deal with the smaller low velocity crap. This looked cleaner than a big mine's area of ops.

“Seems to me, that if there's anything to see, it's likely gonna be where there's... more,” Bill decided. “What say we come about a kiloklick above the ecliptic and follow the orbital arc end to end of the central cloud?” More taps and scratches, and the wall screen showed his proposed course imposed on the radar data.

“Works for me, “ Jeannie agreed cheerfully. “You get us into position, and then let the navcomp fly the route. I'll config the new scans.” She faced Bill again, with a slightly predatory expression. “I'm sure we can think of something to do while the comp works.”

Mock fear marked Bill's face as Jeannie came closer. “Hey now, I don't want to hear one more word about my sex drive, you succubus.”

Jeannie rubbed against Bill's body. She raised her arms to place her hands on his shoulders causing her entirely inadequate t-shirt to elevate to delightful heights. When she had Bill's rigidly focused attention, she spun away. “Well, let's get to work.” She moved to the pilot console, giving her frustrated partner a good look at what he was now missing. Missing really hard.

Bill eyed the shapely rear end and legs of the retreating woman. “You evil, evil witch,” he muttered .

“You didn't think I forgot breakfast, did you?” Jeannie called back with a giggle. “Be a good boy, and we'll see about later.”

“Evil, evil, *evil*...”

***

“Oh. *Bueno*. Faster now...”

Bill grunted, drawing back, then letting the silky, elastic retaining sheet assist on the forward stroke. “Oooh.”

Ding! Ding! Ding! Ding!

Bill paused in his labors, and looked towards the open door to the great room “What the hell?”

Jeannie answered, breathing heavily. “Just a radar alert. Comp musta spotted something anomalous.”

“Think we should look?” Bill asked, still looking towards the doorway.

Jeannie reached out with both hands and forced his face towards her. “*Later!*”

After breakfast the next morning, Jeannie let Bill check the radar log. Only the single alert had registered. He found the timestamp in the radar imagery, and zoomed in. “Hey, babe, come tell me what you make of this,” he called towards the kitchen, where Jeannie was loading the dishwasher.

“Just a minute,” she called back, and continued with her task. She finished by wiping down the dining table with a damp cloth, then joined Bill at the pilot console, disdaining to use the library wall screen for once. “Whatcha got, hotshot?”

Bill set his datapad on the console work surface. He'd been tapping away when Jeannie approached. “Definitely an anomaly, as you put it,” he replied. He directed her attention to the radar display. “We gots beaucoup low radar albedo returns; rock, chondrites. Then we got this,” he explained, pointing to a brighter speckle. “Let's animate that.” Bill tapped a button, unfreezing the playback. The speckle was joined by another, then a third. As they flashed, they tumbled in formation. Speckles disappeared and reappeared. The anomaly faded into the distance as the autopiloted craft moved on. Bill froze the display again.

Jeannie reached over, backed up, and let it play again. “Icy. Kinda odd, but what's the big deal?”

Bill lifted his datapad. “I crunched some numbers. The high reflectivity of those spots might be due to polished metal. Like a high temperature event smelting out copper. Or I've heard of electrical arcing giving strong radar returns; that was one of the first indicator the big brains had of the electrical activity on Venus, I think.” He shrugged. “Maybe a recent arrival from deeper space, and charges are equalizing, real fast.” Objects in space did develop charges. When docking, spacecraft typical set a grounding strap to equalize the charges.

“We did come out here to for sightseeing,” she reminded her other half. “Let's go look.”

Chapter 2

Holy diver, you've been down too long in the midnight sea.
James Dio

"Just about..." Jeannie glanced down at the rangefinder. "...there." She fingered the main screen and attitude control thrusters hissed, bringing the *Improbable* to a stop relative to their mystery rock. "That should do it. A fine match if I do say so myself. Tethers will handle any residuals." She looked back to the visual display, current showing their target, a shadowed, mottled mass approximately one hundred meters in length. "Thing's smaller than I expected from the original radar scans."

"Sure is," Bill agreed. "Pretty elongated, too. Surprised it hasn't fractured." He moved aside as Jeannie lifted from her seat. "What say we eat now?" he proposed.

Jeannie softly thumped him on the top of his head. "Lunch is in an hour and a half. That, my daft dear, is plenty of time for *you* to tie us down to the *Whatzit*."

"*Whatzit*, eh? Good a name as any for now." He pointed to a display. "Check out the returns from the approach radar. Looks like some extreme variations in surface density. It looks like a lot of accreted trash over something more denser. Sorta regular, too. After lunch, I'll run out a flashbulb..."

Jeannie made a sound like a warning buzzer. "Wrong answer, buddy. After lunch, you'll get back to work on the algae membrane. You never finished cleaning it out. Place is starting to smell like your socks." She pushed off towards the door to the next globe of the ship. "And I still have to replace that vacuum seal on the still."

Bill made a face at her back. "Just how is it that I always pull membrane cleaning from the job jar? How come you never get it?" he whined playfully. "Suspicious, if you ask me."

Jeannie's voice came back from the utility globe, "What? Me cheat? I'll never tell." She cackled evilly.

Bill made the only response that a rational man could. He stuck out his tongue and gave her a raspberry. More laughter followed. Bill unstrapped and headed for the suit prep area which spacers tend to call the mudroom.

'Space suits' had come a long way from the early days when space programs were the sole domain of governments with ballistic missiles. Cheap space access, courtesy of the Launcher Company and its many competitors, created a mass market for affordable, usable pressure suits early on. Oddly enough, the sneaker industry quickly moved to the top of suit production. After all, they already had the expertise in place for producing rugged rubber/fabric/polymer garments. Just ask any groundbound kid wearing a pair of 'pumps.'

Bill's suit was the full pressure variety, although many people prefer partial pressure skinsuits. He began by putting on a union suit of an open net weave to allow free air flow. Next came the suit proper. When he first saw this type, he thought it looked like a snowmobile suit with integral feet. He mentioned that to a younger miner once, and gotten a strange look and an inquiry as to what the gore-

damned flaming hell was a snowmobile. the material was a sandwich; an outer shell of aramid fabric bonded to a silicone-impregnated weave; in turn bonded to a thin insulating foam layer, followed by a net of electrical heating elements. The innermost layer was a removable cotton liner. The outer shell was adorned with a harness bearing utilitarian rings and clips for tool attachments. Ugly, but functional.

Bill stepped into the suit, and wiggled his arm into place. His helmet collar dangled down his back as he bent down to put on outer shoes. Then he zipped the suit closed with parallel zippers that forced silicone gaskets to engage. He flipped the collar up and over his head, and secured it similarly.

He pulled a life support pack off a nearby rack. After a quick check of the rebreather, oh-two reserve, desiccant, COh-two scrubber, Peltier heat exchanger, and batteries, he mounted it on his back, pack clips to suit D-rings. After connecting 'breather and electrical fittings, he checked the datapad mounted on the suit's left arm to confirm LS readings.

The next to the last step was the helmet. Bill clipped a blood gas monitor to his ear, and pulled the helmet over his head. He clamped it to his collar, securing the neck seal. “Hey, Jeannie. Comm check.”

A brief delay, then, “Gotcha, honey. Have fun.”

“Sure,” he muttered as he awkwardly pulled on his gloves. The combination of form-fit and dense insulation allowed for far better dexterity than older glove types, but they could be a condemned bitch to get on and off.

Old NASA would have been appalled by the simplicity of the suit; it lacked recursively redundant backups and failsafes. But it worked, and was a heck of a lot cheaper than the obsolete government boondoggles.

Fully equipped, Bill bulked no more than a groundbounder in full arctic gear. And took no longer to don his gear. Ready for vacuum, he entered the airlock, secured the airside hatch, and punched the switch to pump the lock down. As always, he thought of old, bad movies in which the 'astronauts' just opened the outer hatch and let the air blow out. Sure, in an emergency maybe, but waste all that oh-two a billion miles from the closest air vendor? His suit inflated about him, and his ears popped. Despite an internal suit pressure of some eight hundred millibars, the suit retained its flexibility thanks to its hinged, accordion pleats at the major joints.

He pulled the door open and moved out into the unpressurized cargo bay. He kicked over to a mesh bin across from the airlock, next to the outer door. Pulling aside the elastic mesh, he reached in and grabbed a large bag labeled 'SHIP TIES'. He clipped the bag to his suit, then crossed to a bin on the opposite side of the doorway. Here, Bill acquired an odd object resembling a cross between a small fire extinguisher and a large pistol: a compressed air thruster for free fall maneuvering. That clipped to the suit, along with a redundant lanyard.

Thus properly equipped for a spacer's everyday chores, Bill opened the vacside hatch and moved out, gripping a handhold on the hull. He drew clip lead from a spring-loaded box on his harness and hooked to a hull tiedown.

Space was a lot of Big Empty, but it was pretty. The stars shone bright and steady; incredibly more of them than he remembered ever seeing from Earth. And they were bright; many enough so to

show their colors. *Wide open skies of Wyoming, my ass*, he thought, remembering the smoggy skies of the world he and Jeannie had left behind many years ago. *Eat your heart out, Earthies. You got nothing like this.*

Closer to hand, Bill considered the *Whatzit*, no more than a hundred meters away. “What the devil?”

“What was that, Bill?” came Jeannie's voice over the comm.

“Nothing. Just looking at this thing,deciding where to tie down,” he replied. “It's odder looking than even than it looked by vid.”

“Yeah, right. Don't take too long admiring the scenery, boyo. I'll be done with the gasket soon. After I wash up, I'll be starting lunch.”

“Okay, okay. Slave driver.” Bill shook his head and smiled to himself. He turned his attention to the *Improbable* and began climbing hand over hand to the 'side', using the rigid structural mesh which held his ship together as handholds. The spacecraft was an ungainly looking collection of rigid balloons; each a low mass construction of rubberized fabric, very much like a p-suit. The ten meter balloons had been inflated with a hard setting foam similar to spray-on weatherproofing foam and hollowed out. A central balloon, containing pressurized living areas, was surround by spheres rigged as water tanks. Another was the unpressurized work/cargo space which Bill had just exited; It sat on 'top' of the craft, while the framework extending 'below' held the nuclear reactor that served as rocket motor and power source.

The water was reaction mass and could be electrolytically cracked for oh-two to supplement life support, but also provided shielding against radiation. One movie cliche that held true was that you could fry during major solar flare or coronal mass ejection. You want all the protection you can get at times like that.

Radiation was something that spacers think about more often than groundbounders, who have their miles deep atmosphere for protection. Those who spend much of their time outside of habitats sometimes have sperm or ova cryogenically banked, so as not to be birthing three-headed mutants. The Hunters had done that, and opted for reversible sterilizations, just in case. Besides the genetic angle, they found it convenient, and Jeannie particularly liked doing away with menstruation; she explained that was one thing free fall did not improve.

As Bill crawled along the dirty off-white assembly, he felt like a fly walking on eggs. As he climbed the web, crossing from the unpressurized globe to the main bubble, he mumbled in a high pitched voice, “Help me. Help me.”

Jeannie's laughter. sounded over the suit radio. “I think we need to make your antique viddie collection off limits for a while, fly-boy.”

He protested, “Hey, that's a classic.”

The wet sound of a raspberry was her only reply. He continued the climb to the tiedown point. Once there, he removed the end of a polymer line from his bag. He snapped the spring-loaded clip on the end to the ship's tiedown ring. Then he looked out at the *Whatzit*, considered, and jumped. As he

floated towards one end of the rock, he watched the line unreeling from his bag. He gently fed the rope out and watched for tangles.

As he drifted closer to the rock, Bill illuminated it with suit lamps, and considered its oddly uniform shape. “Jeannie,” he called.

“Yep?” she answered.

“Run some millimeter radar imaging on this sucker and generate a threedee,” Bill requested. “I'll be audited if this is just a funny rock. We've found something.”

“Well, we were looking for something, so that's convenient,” she replied. “What kind of something?”

“I'm thinking *artifact*, right about now,” Bill replied, a little defensively. “Wait'll you see the regularity of this thing. The approach radar was nothing on what this sucker really looks like.”

“Yeah, right.” she said doubtfully. “But I'll run it.”

When he closed on the object, Bill twisted and landed on all fours, letting his yielding joints soak up his momentum. He came to a virtual stop, hovering over the rocky terrain like an ungainly bumblebee. “Bzzzzz.” He grinned.

“Bill, you're having far too much fun out there. Check your oh-two.” Giggles followed.

Bill grasped his tether line and pulled the end from his bag. It was attached to a plastic cylinder. He pushed it against a relatively smooth spot on the *Whatzit* and triggered the anchor planting charge.

Instead of the expected mild thump as the metallic spike rammed into rock, the anchor was knocked out of his hand, and he was pushed off the surface. “Sheisse! What the frag was that?”

“Something wrong?”

“Anchor didn't set,” he explained. “Gimme a minute.” He looked around and caught the cable and anchor in his lights. He used his thruster to retrieve the condemned thing. From the looks of things, it went off fine; the anchoring spike was deployed, sure enough.

Bill flitted back to the point where he fired the charge. He found a small spot where the surface material was disturbed, exposing a very smooth, whitish material. It looked chipped slightly. And that was all.

“Hey, babe,” he called to Jeannie. “Spike didn't work. Bounced right off this thing. You ever seen that before?”

“Aw, poor baby. Is Bill having penetration trouble again?” came the unsympathetic reply.

“Not me, sunshine; the anchor.” He smirked. “I suppose I could do the job with my massively manly shaft...”

“Oh, puh-leeze,” Jeannie interrupted.

“...But I think I'll spare the *Whatzit* the indignity and just glue a tiedown onto it,” Bill finished. “Would you put a dispenser of space-rated epoxy in the airlock?”

***

“All done,” Bill called out as he exited the mudroom. “Where's my lunch?” he demanded, while toweling himself off. Even the best ventilated rubber suit gets a little clammy. Jeannie was already seated at the table spooning something from a covered bowl. She was watching a datapad screen as she ate. “Nice of you to wait, greedy guts,” he scolded. He brush silky brown hair aside and kissed her cheek. “What's to eat?”

Jeannie swallowed, then replied, “Lentil stew. It's good for you, so don't complain. Eat.” She gestured towards his waiting bowl.

He lifted the cover on his bowl and sniffed. “Smells good. Got any rolls?” She pointed at a covered basket in the middle of the table. “Sehr gut, gracias.” He began eating. “Yummy. So where's my pictures?” he asked.

Jeannie frowned, and slid the pad over to him. “You're right about one thing," she said. "That's no rock. Sorta.”

“What's that mean?” Bill looked at the screen. “Humph. Pretty regular shape for a rock. Tolja so,” he noted defiantly.

Jeannie gestured with a finger. “That's nothing. Check the enhanced image on the next page.” Bill tapped the screen's corner, and the picture changed. “False color to show variations in radar return,” she explained. “Looks like an accretion of fairly normal asteroidal material over something denser and more homogenous; like a ceramic.” She pointed to the smaller end of the *Whatzit*, and then to a set of evenly spaced points near the widest part, each showing up in yellow, the points brighter than the end. “These areas reflect like polished metal. I think we found someone's old interplanetary probe. Booster stage anyway.”

Bill looked rather doubtful, as well. “Urm... Jeannie, that *Whatzit*'s more than a hundred meters long,” he pointed out. “Kinda big for a planetary probe. And looky here,” he pointed at the display again. “It's *streamlined*, by Ghu.”

“So?” Jeannie prompted.

“So who the heck would streamline a spacecraft?” Bill replied. “The old Nationals could never have gotten this out here, without it being in the news. And now, no one bothers with streamlining anything but a atmo shuttle. What would be the point?” He stared at the image, and drummed on the table with his fingertips.

Jeannie waited, watching. Finally, “Well? Go ahead and say it.”

“Nope,” he declined. “I'm not giving you an excuse to commit me. More tests first.” He stared blankly into space, thinking.

Jeannie emptied her bowl and looked at bill. “Yo, Bill.” She waited. *“Boo!”* He looked at her, startled. She pointed at his bowl. “Eat. Talk.”

He smiled sheepishly, and started on his stew again. “Sorry,” he mumbled. “But look, I think we need a series of x-rays here,” he pointed at the pad image, “here, and here. And a radiation scan, too.” More stew. “And you can run some spectro tests...”

“Nope,” Jeannie said.

With a puzzled look Bill replied, “Huh? But...”

“Come on, Billy boy; this is a full scale survey job,” she explained. “If we do it right, it's a good day just gather data. Another to start analysis.”

“So?”

“So, we have still have housekeeping that needs to get done. Let's spend today getting that stuff out of the way so we can concentrate on the *Whatzit* tomorrow.”

“Tax it,” he objected. “I hate it when you make sense like that,” he gave in. “Good thing it doesn't happen too often.”

Jeannie smiled sweetly. And flipped him off.

“But I still think I should start some flashbulbs after lunch...”

“Oh, no you don't!” Jeannie countered. “Finish the algae membrane first. Then the laundry. *Then* we can pick up the stuff the microgravity has falling out of its hiding places. Then...”

“Ack!” He held up arms in mock distress. “*Then* we'll be too tired to work! We'll never get the survey done.” He grinned at her.

“Yep. That's the general idea. For today. We really should rest up before we get rolling.” Jeannie folded her arms across her breasts and looked at Bill sternly. “So then we go to bed and...”

“Well, so much for rest.”.

“Don't get snarky, or you will get rest. Lots and lots of unimpeded rest,” she informed him ominously.

“Hollow threat, that, coming from a nymphomaniac,” the sex fiend retorted.

Chapter 3

...and explode into space.
Steppenwolf

The next morning Bill and Jeannie dispensed with their usual routine of sleeping in until they felt like getting up. The excitement stirred by their mysterious find made that virtually impossible. Instead, Bill arose early and started preparing a light breakfast. While it was heating, he woke Jeannie, then proceeded to the free fall bath.

While Bill attended to his morning ablutions, Jeannie checked on the the warming meal. Eggs again. That man is proof positive that cholesterol means nothing. She adjusted the heat and added a tray of biscuits. She pulled a tub of butter from the cooler. Finally satisfied that all was well, she strapped down at the table and began mapping out the day's survey strategy. Halfway through the task, the oven dinged. She removed her portion of breakfast and ate as she typed.

Bill floated into the common room. “Good morning, gorgeous!” he declared cheerfully.

She looked up and smiled. “Good morning. Smiling before coffee?” she observed. “Amazing. Have something to eat,” she offered, pointing to the oven.

Bill turned the oven off, and removed his own breakfast. “Whatcha doing?” he asked Jeannie.

She held up the datapad for his inspection. “Things to do list.” Taking a last bite of her meal, she stood and pulled the meal tray from its setting. “Why don't you look it over while you eat?” she suggested. “I'm going to get cleaned up. Let's get started right away.”

Bill read her list. "No core samples?" he inquired.

“Nope,” was her response. “If that thing really is artificial, it would be a little silly.” She slid her tray into the washer. “You figure we can sell an old planetary probe to a museum?”

"Probably," he said. "But I still say it's too big for a probe."

“Not necessarily,” she countered. “The Russians did some big stuff. Or Chinese. And they didn't always announce missions until *after* they succeeded.” She shrugged. “Look at the size. Maybe it was a manned mission that failed.”

Bill made a face and looked down at his food. He stuck out his tongue. “Bleah. What a thought; a couple of fifty year old desiccated corpses.”

“Yuck,” Jeannie agreed. She pushed off and headed to the bath.

Bill called after her, “On the other hand, that would probably raise the value!”

“Mercenary!” she shouted back. He laughed.

With their morning preparatory routines out of the way, the pair helped each other into pressure suits and went to work. Dressed for space, Jeannie and Bill exited the airlock. Jeannie moved a handcart, an aluminum cage with its own thrusters, over to the rack holding the flashbulbs. Bill began removing what looked like mailing tubes from a cabinet on the other side of the lock. “How many do we want?” he asked.

“I figure two for each end, and one for the midsection,” Jeannie replied. “That'll get us started. I'll look at the pictures after, and see if we need another shot.” She began loading flashbulbs into her cart. The oddly shaped devices looked nothing like bulbs. Instead they were metallic cans a half meter in diameter and length, with clear plexiglass cylinders ten centimeters in diameter projecting some thirty centimeters from one end.

Flashbulbs went all the way back to the late, unlamented Soviet Union. Red researchers generated mega-voltages by charging cavities with electricity, then collapsing them near-instantly with high explosives. The high energy electron beam created by the event slammed into a metallic target, generating x-rays in turn.

Prospectors adopted the gadgets, added a polymeric tube to direct the x-rays, and invented a noninvasive way of peering into asteroids. It was nice to know where the valuable metals were before one started digging, and ground radar can only do so much. Being good for a single burst of photons, the disposable x-ray machines acquired the obvious nickname.

The tubes which Bill was loading into the cart contained x-ray detectors. Rolled up into the tubes were flexible photovoltaic panels. Each panel consisted of thousands of individual elements; pixels. The material was doped to make it most sensitive at x-ray frequencies. These sheets would be unfurled and placed on the opposite side of the *Whatzit* from the flashbulbs. When exposed, the sheets would generate an electronic picture of the *Whatzit*. The image would be stored and processed by computer; letting the miners squeeze out every possible bit of data.

With the 'bulbs stowed in the cart, Bill considered other options. “Go ahead and load up your spectrography kit, too,” he directed. “While I'm stretching out the detectors, you can start some samples.”

“Sounds good,” she answered. She pulled a handled box from a cubby hole in the rack. “Might as well bring out the counters, too,” she decided, and pulled another kit from the rack. “We can work in relays. I'll run quick checks of the x-rays, and you start a radiation survey.”

“Okie dokie,” Bill said agreeably. “We do this right the first time, and we could be done by lunchtime.” He smiled in happy anticipation of another meal.

Inside her helmet Jeannie shook her head in exasperation. “After all these years, it still amazes me that you can schedule everything around mealtime.” She sighed. “Your life revolves around dinner. How come you aren't fat?” she wondered enviously.

Bill laughed. “'Cause you work it off of me, minx.”

“You idiot,” she laughed. “Come on, let's get to work.”

“See what I mean?” Bill chuckled.

Jeannie growled, but otherwise ignored the comment. They maneuvered the cart out the bay door into open space. “Which end?” Jeannie asked.

“Middle,” Bill replied. “More central.” They grasped the cart together and fired thrusters.

As they drifted closer to the *Whatzit*, Jeannie stared. “It is. It's a motherhumping craft. It's gotta be,” she muttered.

Bill snorted. “Told you. But would you believe me? Nooo.” he teased.

“Oh, shut up,” she chuckled. Then she considered the apparent sheer mass of the construction. “Bill, that thing must have had a nuke drive of some sort. Go in with a counter before we run out the flash kits.”

“Sheesh, yeah,” he agreed. “Where's my head at? I should have thought of that yesterday. You didn't notice me glowing in the dark last night, did you?” he asked jokingly.

“Nope. But I was distracted,” Jeannie answered.

“Is that what you call it? I thought it was more like *horny*, or *orgasmic*,” he kidded.

Jeannie elected to ignore him, and fired her jet to slow the cart. Bill followed suit, and they bumped gently to a stop against the *Whatzit*. "I'll get some numbers; starting at the blunt end. That's gotta be the drive section," Bill announced. He pulled a multimode detector from the cart, and headed aft.

Jeannie eyed then floating cart, then planted a plastic anchor. With the cart secured, she broke out a spectrographic analysis unit. It looked rather like an old fashioned radar gun, with a cable tying the 'pistol' to the processor in the carrying case. She pressed the large cylindrical muzzle against the rocky surface and pulled the trigger. Inside the 'gun' a laser beam lashed out and vaporized an imperceptibly small amount of the surface material. The detectors read the emission spectrum of the excited vapor and fed the data back to processor. An amber light on the gun changed to green, and Jeannie started to move on to make another measurement. She paused for a moment, then brushed at the dirty surface with one hand. A lighter colored material was revealed. She jammed her sampler against it and pulled trigger.

Several meters away, Bill ran his radiation probe out on an extension. Watching his instrument display, he moved towards the tail end of their find. He got nothing noticeably above normal background readings. Reassured, he collapsed the extension rod and swept the probe across the assembly.

And an assembly it was. “Jeannie,” he called. “It's pretty definite. We found a spacecraft of some sort.”

“No joke,” she replied excitedly. “When you clear away the accretion, the whole damn thing's some cermet material. Kinda like the heat exchanger tubes in a nuke generator. Looks like some tough stuff.”

“Well, when you're done there, come check this out,” Bill said. “It isn't all ceramic. This part looks like solid metal.” He looked at his find. The cermet 'hull' tapered to a diameter of approximately 2 meters, and terminated in a thick, fat plate of gray metal. From the plate, a cylinder of the same material extended for another 5 meters. It was about two meters in diameter. Bill clicked his detector over to thermals and swept the cylinder. As he reached the end, he noted that it seemed to be a thick-walled tube. He read his display, which indicated a normal enough ambient temperature. He thought about it, and flipped the scan over to Hall effect. He brought the probe in closer to the metallic surface to check for magnetic fields. When he had almost touched the metal, the reading abruptly went off-scale. He whistled. “Whoa! Mag fields? On the exhaust? Plasma thruster, maybe.”

“What did you find, honey?” Jeannie demanded.

“Everything else is pretty dead, but I've got one heck of a magnetic field here.”

“Really?” Jeannie replied. “Let's see.” Unnoticed, she had jetted over to Bill's work area. “Wow! You weren't kidding. What the heck is that?”

“Some sorta magnetic field coils for a plasma exhaust is my guess,” he answered. “Maybe this thing had a fusion drive.”

“Really?” Jeannie said curiously. “All the stuff I've read about fusion drives made me think they'd be more... Well, just open coils and such.” She rapped knuckles on the gray metal. “This looks like a solid block of...”

Bill cut her off. “Damn! You don't suppose...” He thought furiously.

“Suppose what?” Jeannie asked.

He pointed to the cylinder. “Check spectro. If it's tungsten, I'll tell you.”

Jeannie pressed her gun against the metallic mass and pressed the trigger. The light flashed green, and she checked the read-out. “Hmm. Alloy. But, yes; basically tungsten,” she reported. “Okay, speak up. What the heck is it? And who built it? I haven't found any markings yet.”

Bill floated a couple of meters off from the cylinder, arms crossed. He stared at the construct. “Damned if I know who or what built it, but I think I know what it is.”

“So tell me already,” Jeannie demanded.

“Remember our first trip out with the Ahacics?” Bill asked, referring to a prospecting partnership from their early days.

“Oh, lord and lady; who could forget.” She shuddered from the memory of riches and combat. “But what's that got to do with anything?”

“Well, you may recall that we weren't after fissionables originally. We were looking for...”

“Tungsten,” she broke in. “That's right; we were. Because somebody thought they were about to invent a way to commercially produce anti...” she recalled. “You think this is an *antimatter* rocket?”

Exaggerating the gesture to be seen through the suit, Bill nodded. “I think so. Look, tungsten to take the heat... I'll bet there's IR photocells just like ours in that housing.” He pointed towards the flat plate. “And judging by the wild mag readings I'm getting from this tube,” he pointed again; “this has to be superconducting field coils.” He exhaled loudly. “Yepper, that's an antimatter rocket.”

“But no one's ever built an...” Jeannie began and trailed off. “Oooooh! We're rich, aren't we?”

Bill laughed loudly. “Yes, Ma'am, that we are! We've found found an honest to gods alien spaceship!”

Eyes wide in awe, Jeannie asked, “How long do you suppose it's been here? And where did it come from? And who...” she rattled off excitedly.

“Whoa, lady!” He laughed. “No way of telling yet,” Bill said. “From all the garbage that's accumulated, I figure it's been decades, at least. But it could be thousands of years for all I know.” He shook his head. “And no telling where it came from, unless it's got some sorta plaque like the old Voyagers,” he muttered.

“Holy Schmidt,” she replied. She clung to her analysis pistol and floated a meter off the surface of the strange craft, staring at it. “Damn. And it's not even shaped like a saucer.” She looked at Bill, and they both burst into laughter. “Hey,” she said suddenly. “Did you say that there were coils still superconducting?”

“Yeah, that's my guess. I figure a starship needs that level of efficiency. And since I'm reading serious mag fields, but no other power indications, permanently charged superconductors." Bill ended. “And it's obviously not cryogenic. That engine alone is going to make us rich.” He rubbed his gloved hands in avarice. “High temp superconductors, a working antimatter engine design... Heck, just the tungsten alone must mass two tons. That ain't chicken feed,” he observed.

“Oh, no!” Jeannie argued. “We are *not* salvaging this thing for materials.” She pointed her finger at him and shook it. “We aren't scavengers. The scientific value of a find like this is incredible!”

“Whoa, baby!” Bill said defensively. “I know, I know. I'm just making the point of how valuable.” Then another thought struck him. “And then some. Oooh boy!” He stared at the engine.

“What?” Jeannie demanded, puzzled. She tried to see what he was looking at; but saw only the gray metal. “What?”

Bill exhaled loudly, the air making a rushing sound in Jeanne's speaker. “The superconductor's still working.”

“Yeah? Amazing; but so?” Jeannie responded.

“And you'll note that this ship hasn't been blown to oblivion,” Bill continued.

Jeannie stared at the engine herself. “And that's an anti...” She stopped and shook her head. “No, that's just too silly, Bill.”

“Why?” he asked. “It has to be interstellar. So it must have had plenty of reserves.” He waved his arm around at empty space. “After all, you can't pull over at the nearest antimatter gas station and fill 'er up.”

“Damn. Antimatter,” Jeannie whispered. “How much is antimatter worth?”

Bill laughed. “Now Jeannie, we aren't scavengers. We aren't going to salvage this ship.” Jeannie's laughter joined his.

“Okay, point taken,” she replied cheerfully. “But maybe there isn't any. Maybe that's why it's stranded out here.”

“Maybe. But if we're going to be poking around this beastie, we'd best find out.” He shivered. “I don't want to blow myself to hell by accidentally turning off a containment field.”

Jeannie considered. “Uh, *no*. Sheesh, they'd probably see the flash from Alpha Centauri. Poof!” She mimed an expanding cloud with her hands.

“Yep,” Bill agreed. “Permanently alter your outlook on life. At the very least, it'd brighten the heck out your day.”

They floated and watched the alien craft. Bill reached over and clasped Jeannie's hand.

Finally he spoke, “So now what do we do?”

Jeannie thought. “Sweep,” she decided.

“Say what?”

“Sweep,” she repeated. “That's a ship. Have you ever seen a ship that didn't have some sort of external markings or access hatches?” She eyed Bill inquiringly. He shook his head. “So let's clean this crap off and find some.”

“Right,” he capitulated. “Got a broom?”

“Er.. not yet,” she admitted. “But I will. I can fake up a couple with some conduit and beta cloth.” She slapped her hands together. “I'll go inside and do that. You get the fencing out.” *Improbable* carried chain-link mesh similar to the stuff used planetside to reinforce cliffs, preventing, or at containing, rock slides. The Hunters used it to reinforce smaller asteroids during a move, restrain lose ore cargo, and to keep asteroidal material from flying off when firing off mining charges. It also made a handy surface to hook onto in no-lo grav situations.

“Yeah, that'll work,” Bill replied. “We'll need something to hang on to.” He chuckled. “Sheisse, this isn't so different from working any other find.”

“Worth a lot more, though,” Jeannie pointed out. She gathered up her spectro kit and headed back to the *Improbable*.

“Hey, Jeannie,” Bill called. “What about the x-rays?” As she twisted to look back at him he

pointed to the waiting cart.

“No way am I going to hit an alien spaceship that may be loaded with antimatter with half a dozen high energy x-ray pulses,” she stated. She continued to the ship.

“Good point.” He shuddered and nodded. He jetted to the cart, which he took in tow back to the ship.

Once back in the cargo bay, Bill put the flashbulbs and detector sheets back into their cubby holes. Then he pulled out a roll of chain-link, working carefully with the massive object. With kick off the bulkhead, got the roll moving slow out to the space between the two craft. He expended most of his thruster gas getting it stopped. Moving carefully to one end of the roll, he released the retention clasp. The roll unfurled springlike, until fully extended with the ends flopping back and forth. Eventually the flopping canceled out and the fencing floated motionless.

“That's one.” Bill looked at the *Whatzit* and did a little math. “Don't think just one will make all the way around that thick part,” he muttered.

“Nope,” came Jeannie's reply. “So it's a good thing I brought another.”

Bill spun in place to discover a huge roll of metal less than a meter from his face. “Cracked seals, woman. Don't sneak up on me like that.

“Heh, heh, heh,” she chuckled evilly. “C'mon let's get this open and in place.” She held up a bundled of wire ties. “I don't think we're gonna stake these out as usual.”

Thinking of the failed anchor, Bill agreed. “'Kay. Sooner started, sooner done.”

Several hours, O-tanks, and a lot of thruster gas later, they had the alien covered. On the bright side, the fence installation required getting bulkier crap of the hull, leaving little but dust to clear.

“But I'm too blasted tired to do even that,” Bill said wearily. “Besides which, it occurs to me that I don't want the *Whatzit* too clean.”

“How do you figure that? We need to get some imagery, after all,” Jeannie countered, sounding as tired as her companion.

“Albedo. I'd prefer not to have some amateur astronomer notice that something suddenly got brighter. I don't think we want to attract attention before we decide what to do about this.”

“Point,” Jeannie conceded. “Should have thought of that myself. Same principle as not putting up the slagging mirrors until the excavation's done.” She shook her head ruefully. “Let myself get into salvage.. or archeology mode instead of thinking 'bout jumpers. Tired.”

“Me, too, baby.” He grabbed Jeanie's improvised brooms, short stubs of conduit with rags tie-wrapped on one end, and clipped them into a rack in the hold and glanced at the sleeve pad. “Let's just get a snack and turn in early, babe.”

Jeannie smiled through her visor. What, skip a whole meal? You? You *are* tired.”

“No sheisse. Tell ya, lady, I don't think I'm gonna be much good to you tonight.” He took her gloved hand and pushed off to the airlock. “C'mon.”

***

“Hey!” came Jeannie's startled voice in the dark. “I thought you were tired!”

“I am,” was the sleepy response. “That's just a friendly grope.”

Jeannie slipped her hand over his. “Okay, then, friend. Now sleep.”

Chapter 4

I'll Make You an Offer You Can't Refuse.
Michael Franzese

The following morning, rested and fed, the couple spent a few hours crawling across the *Whatzit*. When they found something interesting, Bill would clear the dust, then hold a lamp while Jeannie took vids from various angles, and recorded notes. Bill was particularly excited by his discovery of what he insisted was an access hatch. Jeannie allowed that it might be a hatch, but refused to make too many assumptions about an alien mechanism.

“I think that about does it,” Jeannie finally announced. “No doubt we've missed something, but people are going to be poking into this thing for years, I'll bet.” She scrolled her pad, reviewing some of the imagery. “I want to integrate the vids with the radar scans. That'll give us a better idea of what to do next.”

“Sure,” Bill agreed amiably. “And copy the vids to my news bin, too, would you? This'll be great for the TWN piece we'll do on the *Whatzit*, you know.”

“Are you nuts?” Jeannie demanded with full blown outrage. “No, wait. Of course you're nuts.”

“True, but only mildly stupid,” Bill agreed amiably. “I didn't say *when* we'd send the report. But we do owe them something for the retainer we took. And this oughta be good for that bonus option, you know.”

“Okay, okay.” Jeannie gave in to the inevitable. The bonus reminder helped. “Let's go inside. How 'bout you make a couple of sandwiches? And I'd like tea.”

“Will do.”

***

Bill washed his BLT down with a stout of his own brewing, having mastered the various tricks of brewing in free fall and micro-g. Earthbound urban types wouldn't have approved of the flat beverage, but carbonation gets messy without gravity to keep things contained. And Bill insisted that heavily carbonated brews were a relatively recent innovation; his ales and stouts were traditional. They opted for a quick, light lunch; which Bill chose to wash down with a home-brew. With the sandwiches out of the way, they worked out their plan of attack.

“Ah, utopia!” Bill declared joyously. He took another sip from his mug. “A good stout, a pretty lady, and we're tied to a fortune.” He sighed happily. “In fact, I was looking at our finances a week or two back; adding in what what we got from the rare earths strike, we could retire permanently already. With this... We're gonna have to think about living large.” He stuck his mug to the table. “So whatcha got? How rich are we gonna be?” he asked Jeannie.

“Entropy only knows what we'll get for this; bound to be good though, if only for science value.” She sipped tea and worked with a datapad. "I've worked up a rough schematic of the *Whatzit*

from the radar scans, and filled in the stuff we found this morning." She handed the pad across the table to Bill.

“Hmm. Right, here's the hatch...”

“What might be a hatch,” Jeannie corrected.

“Gotta be,” Bill defended his position. “Big circle, obvious seam, six big triangles pointing at it, two recessed handles, another set of little triangles that all but scream 'Turn This Way.' Gotta be a hatch.” He burped. “Excuse me.”

“I'll concede that it's probably a hatch,” Jeannie responded. “Which probably makes sense. It's in the right place to give access to this area.” She pointed to a dark patch on the image. “This dense stuff is probably rad shielding or such.” She frowned and asked, “What about the six metallic insets around the hull aft of the thickest portion, just ahead of the fuel tanks?” she asked.

“Flush-mount antennas for radar or comm maybe. Doesn't seem like an optimal design, but maybe this sucker goes fast enough that anything protruding will tear off; I'm thinking of that streamlining.” He grabbed his beer, sipped, set it down again.

“Could be,” Jeannie said doubtfully. “Radar showed a high density under them; more like solid mass than electronics, I'd think.” She looked at the pad in Bill's hands. “What about the other seams; the circles that don't have handles?”

“No idea. Could be hatches that only open from inside, instrumentation ports, maybe just decoration.” Bill shook his head. “Gods know there doesn't seem to be anything else in the way of ornamentation.” He noticed his beer mug trying to escape and retrieved it. “Stay!” he directed, making sure the magnet contacted this time. “The row of fixtures on the tail are probably fueling inlets.” He pointed at a line of circles along the craft's spine. “And the hatch here,” He pointed to a opening indicated just in front of the heavy tungsten plate. “Pretty much has to be engine access. Maybe AM access, too.” He frowned suddenly, and reached up to rub his shoulder.

Jeannie saw this and said, “I'll get that.” She lifted and moved behind him and began massaging his shoulders. “So this afternoon's agenda?” she inquired.

“I want to run a neutron and gamma scan the length of the ship,” Bill answered. “And thermal. I'd like you take core samples of the cermet hull material anywhere it seems safe.” He tapped at the display. “That nose seems to be a solid mass. If this thing really is relativistic, that's going to be shielding, armor. And you notice that it's the widest part of the *Whatzit*? When this sucker is under drive, every thing that might vulnerable to a hit is behind it.”

“Yeah,” Jeannie said thoughtfully. “Even tapers down behind it, which seems redundant to me. But I'm not an alien. I guess they had their reasons.”

“Could be that it's pretty much linear in construction behind the shield, and then they just coated the whole thing with more of that ceramic stuff.”

“I s'pose.” Then she frowned. “Ah... But what about decel, when it's ass-end first? No shielding then.”

Bill's head popped up. “Good question.” His eyes lost focus for a bit. “Maybe the plasma exhaust does for anything that the mass shielding could deal with anyway.”

Jeannie dug her thumbs into his muscles. “Maybe. Doesn't much matter, now. Folk dismantling the thingy'll probably figure it out.” She finished her massage, and added, “Speaking of whomever, if we're going to sell this, I hope can find something removable, for proof.”

Bill grunted. Then, “Yeah, physical evidence would be shiny. Something small. I mean, we could move the whole *Whatzit* like any other cargo, but it probably masses so much that it would take forever to get anywhere.”

“Ohteeaitch, I don't much fancy leaving it unguarded, while we zip off to tell someone about it,” Jeannie countered. “So instead of auctioning it off, we work it ourselves, bring in contractors?”

Bill sighed. “Greedy Me kinda likes the part where we make huge piles of Marks.” He took another sip of beer. “But my better sense says I'd screw it up, and tie myself down to an office. Bleah.” He looked back over his shoulder at Jeannie. “Besides, that sort of thing has never been our strength. Likely lose everything an have to go on welfare back on Earth or something.”

“Is there any place still doing that?” Jeannie was mildly shocked at the notion. “Is there that much government left, that anyone would put up with?”

“Not every country went the way of the States, you know,” Bill explained. “Last I heard, England... Great Britain... UK, or what ever...” He shook his head. “You know, even when I was a kid in school, I could never keep straight which was what, or who,” he added parenthetically. “But I heard a while back they were still going. Pretty much a third world country though. Guy said a lot of Brits couldn't even get electricity anymore.” More stout. “Can't feature why anyone would choose something like that.”

“Too guvved depressing, boyo,” Jeannie said with a slight shudder. “We got out. And least some of the Merkins seem to've learned something.”But not our problem at hand,” she declared, getting back on topic. “As much as I hate to admit it, I'm not techy 'nuff to handle all this. We should sell it to someone who can properly develop the tech. But,” she continued; “That doesn't mean we don't get rich. We could sell this find for a lot less than it's worth and still be wealthy beyond our dreams.”

"Inshallah. Zeus, too. Or would Vulcan be more appropriate? Never could keep the deities straight either.” Bill non sequiturred. “Then we sell it.” Sip. And added the big question. “To who?”

“I thought about that while you were making sandwiches,” Jeannie said. “A few things to consider. One, getting a good settlement. Two, getting free of this albatross.” Bill started. “Yes,” Jeannie told him. “This is an albatross around our necks right now. We can't abandon it; but we can't spend it. We need to make the swap.”

“Yeah, I see what you mean,” Bill responded. “So who?”

“Ceres Development Corp could probably pay the most,” she replied. “But for speed and convenience... I'll check the ephemeris, but I think SpaceTech's main habitat is about four AUs in from us just now. Or Advantek shares the orbit; maybe another AU trailing. And they specialize in a wide

variety of tech R and D.”

“Let's pass on CDC," the man suggested. They're big; but they do minerals.” He frowned slightly. “And I never liked some of Advantek's payment policies.”

“SpaceTech, then?” Jeannie asked. “:Gods know, they certainly do R&D.”

“True enough,” Bill nodded agreeably. “And I think we can trust them. We've done a lot of business with them before for high value cargoes. In fact, I think the rare earths auction winner may have been agenting for 'em.” He sipped. “Let's do it. Two or three more days to get artifacts; then we boost for ST headquarters. We'll have to take our chance on leaving the *Whatzit* behind.” He smiled back at Jeannie. “You're a genius, beautiful.”

“Good in bed, too, while we've listing my qualities,” she added with a sly grin. “But we could improve the odds against some else spotting it, while we're gone. But you won't like it.”

“What, and why not,” he wondered, warily.

“We camouflage the thing,” she said. “Best thing would be to crumble a small carbonaceous chondrite, and spread it out over the probe. The probe we just cleaned up,” she added evilly.

“Aiigh!” he screamed. Then he paused and frowned. “Uh uh.”

Jeannie looked at him, puzzled. “Uh uh, what? You want to leave it in plain sight for any wandering jumper?”

“No, I don't.” Bill nibbled at the end of his thumb. “I don't think we should leave it at all.”

Jeannie looked outraged. “I'm not dragging that thing across four AU! Do you realize how long that would take? How low an acceleration we'd pull?”

Bill raised his hands in mock fright. “Easy there! Yes, I do realize. That's why we won't do it. G's would be about zip, and maneuverability worse. We'd be sitting ducks.” Sipped from his mug, and was saddened to find mere dregs. “So, instead, we hole up here. Break out the gatling and set up a skywatch. Just like we were working any natural lode.”

“Then how do we contact...” Jeannie began. Bill stopped her.

“Just like selling any cargo,” he replied. “We finish the survey, and transmit an offer to the station.”

“You want to blast word of this across the system?” Jeannie asked in amazement. “We'll have every claim jumper in the belt coming down on us. And newsies!”

“No,” Bill tried again. He paused to consider minor details, then continued. “We do it the slow, but careful way. ST's got our current public key. We send 'em a new one under crypto, and asked for a new PK from them. When we got that, when we're reasonably sure no one else'll be reading our traffic, we send 'em a brief and datapacket on the find. And another new PK. We keep doing new PKs, never reusing one; one time pad stuff, sorta.”

“Is that necessary? We're using 32k bit keys these days,” Jeannie noted. “I don't see anyone cracking that in a timely manner.”

“Not saying anyone can. But we're talking companies that specialize in moving the cutting edge of tech forward. “ A shrug. “So why not do what we can? Can't hurt.”

Jeannie conceded issue, and addressed the next point. “We post.. who, McMurphy?” She referred to their usual SpaceTech contact.

Bill nodded in agreement. “Yeah. That has the advantage of getting an e-sig from someone we know personally, to verify the new PKs coming in.” He picked up the datapad. “I'll just generate a few PKs to get us going...”

“Cool!” Jeannie smiled. “But let's get back to work. Or we won't have anything to offer.” She laughed lightly. The two pushed away from the table. Bill set the pad aside and gathered the used dishes.

***

In the mudroom, the intrepid explorers suited back up for the rest of the day's work. Jeannie clipped instruments to her harness while Bill refreshed their LS packs.

“Hey, hon,” Jeannie said, “should we run out the floodlights? This would be a lot easier if we don't have to drag flashlights around.”

Bill paused to answer before attaching his helmet. “Maybe I'm paranoid, babe. But we made a point of even keeping the *Whatzit*'s from reflecting to much. Actually lighting her up seems counterproductive that way.”

Jeannie frowned and shrugged. “Whatever. Just seems unlikely that anyone could spot our lights. It isn't as if we're running out slagging mirrors.”

“But not impossible,” came Bill's voice over the comm.

“Okay, whatever.” Jeannie fastened her own helmet, and checked seals. “Ready.” She waved toward the airlock. “After you, kind sir.” They crowded into the lock, closed the door, and started the cycle.

When the locked pumped down, Jeannie released the outer door and they pushed out into the cargo bay. Bill fetched the cart from its mount. “Load 'em up!” he called.

Jeannie floated to the tool locker with a large satchel. She open the cabinet and surveyed the assortment of available hardware. “Hmm. It's been a long time since Breaking & Entering 101.” She considered the options. “Now, if I were a burglar, what tools would I want?” She pulled two pry bars from their restraints and placed them in her bag. A small collection of hammers, screwdrivers, wrenches, ties, clamps, and oddities followed.

Meanwhile, Bill began loading flashlights, spare batteries, two multimode detectors, specimen

bags, and spare handjets into the cart. Jeannie dragged her tool bag over and loaded it. “Let's get going,” she instructed. Together they dragged the cart out of the bay and over to the *Whatzit*.

Bill pointed towards the tail end of the craft. “Let's start there. Full set of pics all around the engine and up the spout. I'll run a scan for neutron, gamma, thermals, and magnetics.”

“Sure,” Jeannie agreed. “We'll work our way up to the nose.” She paused for thought. “Spiral our way or go straight up and down in stripes?” she asked about the search pattern

Bill snapped the detectors to his suit harness, and extended the probes on their cables. He strapped them together to simplify one-handed use. “Stripe it for now, I guess,” he answered. “It's quicker and good enough for the preliminary negotiations. Later we can run spiral. That might help give us various angled readings on a point, if we come up with something odd.”

Jeannie laughed. “What constitutes odd on a *Whatzit*?”

Bill chuckled, and began climbing the netting down to the ship's engine. Jeannie triggered her jet to drift in the same direction, and snapped some pictures as she floated.

Once moored at the engine, Bill double checked the data cards in his detectors, and began a sensor sweep. He ran the probes in close to the exhaust tube to get readings on the rise and fall of the magnetic field strength. He worked his way up to the tungsten plate, which he also swept across. Then he paused to check the recorded data. “Looks good,” he decided. “Nothing here we didn't see this morning.” He gripped the net with one hand and considered the engine. “Seems like we should be doing more than this. Hardly a proper investigation.”

“Bumblin' bureaucrats, Bill. Think initial survey, not investigation,” Jeannie shot back. “We're not set up to do one. We could even do more harm than good. All we need are basic starter stuff, to make our pitch to SpaceTech.”

Bill sighed. “I guess. Still...”

“Oh, come on, Bill,” Jeannie chided. “You know better. Now let's get this sweep done.”

“Yeah, I know.” Bill one armed himself over the lip of the plate, and started scanning again. He worked his way up the length of the alien craft. Jeannie trailed behind with her lights and camera. “First hatch,” Bill announced. They had reached the smaller hatch which Bill suspected was an engine and antimatter access panel. “Get several shots of this one. I'll put some extra light on it.” He directed two more flashlights on the area. Jeannie recorded everything.

“Got it,” she said. “Let's keep going.” They continued the survey. After quartering the ship with four passes, Jeannie paused to load a fresh data card into her camera. Shortly after, they reached the first of the 'refueling ports' along the spine. They repeated the detailed recording procedure they had used at the maintenance hatch. They moved on.

“Well, this is terribly exciting,” Bill stated boredly. “And to think, people used to spend their lives doing this stuff with the pyramids back on Earth.”

“Yep,” Jeannie replied. “But once we've got it out of the way, we'll move on to the neat stuff.

Just think about how much money this'll bring in."

Bill smiled, and continued his scans. "There is that," he said cheerfully. Greed is wonderful motivator.

And then motivation was needed. By the time they completed their seventh pass, they were both incredibly bored. Beneath the dirty accumulation of asteroidal trash, the ship was a smooth off-white color. The entire hull appeared to be the same cermet composite they had already observed. With the exception of the hatch, smaller ports, and metallic insets found the previous day, the hull seemed featureless; just a smooth oversized cigar.

"Break time," Jeannie announced. She moved down to the hull and clipped herself to the cargo net. Bill flipped his detectors to standby, and settled down beside her.

"Have you spotted anything interesting?" he asked her.

In her helmet, Jeannie shook her head. "Nothing we didn't spot this morning." She pointed to his instruments. "What about you?"

"Bleah," he answered. "Maybe a computer could make something of it. I can't." He pulled a datapad out of a thigh pocket and jacked it into each detector in turn. He called up a display. "Ta da! For what it's worth. Basically, I'm getting zilch, more or less, on any sort of ionizing radiation. Well, maybe just a bit of a neutron count near the funny insets up front." He thought about that. "Hey, maybe they're not antennas; heat radiators from some like a mini-nuke plant?"

"Inset plates, and not exposed vanes?" Jeannie dismissed the notion. "All the efficiency of gov health care."

"If they superconduct, that might make up the difference," he argued back. Another quick scan. "And the plate reads very slightly warmer than the surrounding material. I rest my admittedly preliminary case."

"Get anything around, those fuel ports, if that's what they are?"

"Oh, yeah," Bill said brightly. "Not so much the ports, but the hull. Around what looks to be the forward tank, the hull reads lower temp way from sunside than the rest of the hull. Like it has less thermal mass to hold what solar heat there is this far out."

"You're thinking some of the tanks are still full?" Jeannie asked curiously.

"Might be. 'Course, might be that it isn't tank space either, and it doesn't mean anything. Can't really tell." He shrugged and added, "Unless you want to start poking holes."

"That would be *no*," she declined. "That doesn't strike me as a really bright idea."

"Thought not," Bill grinned. "Shall we continue, boss-lady?" He offered her a hand.

"Thank you," she replied, grasping his hand as she unhooked her feet from the net. They pushed on.

A few minutes later Bill suddenly spoke, “Whoa nellie! Whats we got here?” He brought his face closer to the hull, and began brushing at the dirt.

Jeannie closed in. “Find something?” she asked. She twisted to peer past his helmet. “What's that?”

That was a small hole in the hull. Bill looked at it, then stuck a gloved finger into it. It fit snugly. “You know what it looks like to me?” he asked rhetorically. “A bullet hole.”

Jeannie objected, “No way. How would it...”

Bill interrupted. “Nah, I didn't say it *was* a bullet hole,” he explained. “It just looks kinda like it. I'd say it was a meteor hit. Probably pretty low velocity, to judge by the damage.” He pulled his finger out of the hole, and touched the edge of it. Tiny cracks radiated from the center. “Had to have happened in-system, after the ship had decelerated; or it would have blown 'er apart.” He tapped the hole's edge. “I doubt if it was doing more than a few hundred meters per second, relative. 'Bout like a high power rifle,” he added.

Jeannie brushed his hand away, and fingered the hole. “This is pretty close to that 'fuel' port.” She nodded her head towards the forward fixture. “Think it holed a tank?” she suggested.

“Hmmph.” Bill grabbed at his datapad and reviewed some figures. “Could be, at that. Consistent with my temp reading, anyway,” he decided. He pushed Jeannie's hand back and tried to peer into the tiny hole. “Did you bring the fiber scope for the cam?” he asked.

Jeannie smacked her helmet 'forehead' with the palm of her hand. “Damn! Where's my head at? Of course, I did.” She reached into her left thigh pocket and pulled out a coiled tube. She straightened it out, and snapped it onto the front of her camera. “Here we go,” she announced. “Out of the way, bitte. Coming through.” Bill pushed back from the hole, and Jeannie fed the flexible optic extension into it. “See if you can shine your light in there past the pickup,” she directed Bill. He aimed one of his lights into the hole. Jeannie fiddled with her camera, and boosted the video gain. They both watched the viewfinder display as she wiggled the optics.

“Hmm,” Bill mumbled. “Not a spherical tank... Oblate spheroid seems silly. Point the camera straight in at the middle,” he directed. Jeannie did so.

Jeannie considered the image. “Looks like a toroidal tank. I wonder why that shape, and not a sphere?”

Bill shrugged. “Beats me. Doesn't seem particularly efficient; unless they needed the axis for something else.”

Jeannie stopped recording, and retrieved the tubular optics. As she removed it from the camera body and stowed it, she said, “Maybe so. Let's wrap this up. Eight passes is plenty for what we want.”

“Sure,” came Bill's answer. “And once we get past the front hatch, I'll bet the only surface detail we find is micrometeoroid scouring.” Jeannie snapped a picture of Bill hanging from the net. “That pointy nose has to be a solid shield,” he added.

“Oh, joy,” Jeannie exclaimed. “Then we're nearly done with this part.”

Bill unlimbered his scanners and started his sweeps again. “Let's do it to it.”

“Right behind you,” Jeannie replied. They moved on. As they encountered another of the metallic insets, she said, “Hold up here. I want to check spectrum on this stuff. Don't know why I didn't think of it before.”

“Sure thing,” Bill mumbled absently. His meters were reading a very slightly elevated neutron flux. “I'm pretty sure there's a little fission generator in there,” he called back to Jeannie, as she poked around the cart retrieving her analysis gun. “I'll bet it's like our old SNAP's. Aux power for when the AM reactor is offline.”

“Could be,” Jeannie said. She drifted in close and grabbed onto the net. “Let me at that metal.” She pushed the muzzle against the inset and squeezed the trigger. The green light flashed, and she check the display. “Oops. Screwed up.” She put the muzzle against the plate again. “That's funny,” she muttered. “The damned thing must be broken.”

“What's the prob?” Bill inquired. He looked at the blank spectrographic display. After a moment he grinned to himself.

“I can't get this thing to give me reading on the metal,” she complained. She whacked the gun with one hand, and tried again.

“Umm... Jeannie,” Bill said gently. “That probably won't work.”

“I know,” she replied plaintively, “It's broken.”

“Nope,” he contradicted. “Think about it. We thought they might have used superconductors.”

“Yeah, so?”

“So,” Bill explained patiently, “thermal conductivity and electrical conductivity are rather closely related.” He smiled. “Your sampling laser isn't able to zap a bit of the material because it's trying to heat the entire plate simultaneously. All that mass just soaks up your piddly exciter beam.” He shrugged. “Just have to wait until we get a chance at a discrete sample.”

Jeannie considered. “Damn. You're right. I knew that; I just forgot.” Her head shook. “I'll be damned if I'm going to try applying enough heat to vaporize that whole plate; no telling what it's connected to inside. I'd probably kill us both, if the sampler even had that much output.” She bundled up the sampler and headed back to the cart, mumbling curses to herself. Bill grinned.

When she returned, she said, “Well, it was a good try anyway. I suppose I'd best stick to pictures, huh?”

“Yep,” he agreed. “For now. But you can core the nose later.”

“Hmmph. At least the cermet stuff's a little more obliging.”

Again, they pushed on with the survey. They took a great deal of extra care recording imagery of the main hatch, with its accompanying symbols. As she shot, Jeannie noted, “They must have planned for the ship to be found by others. These damned triangly arrows are too stylized to be their regular symbology.”

“Doesn't mean they expected 'aliens' like us, though,” Bill disagreed. “This is a starship. Trips probably lasted hundreds or even thousands of years. Their own language could easily change in that time.” He pointed to the hatch. “They were just telling their own future technicians how to get inside.”

“Maybe,” Jeannie replied. “But... Whoops! Look down by your foot!”

“What?” Bill inquired, peering down where his feet hooked the net. He stood at the edge of the area they had swept clear previously.

“Another meteor hole, I think,” Jeannie said excitedly. She scrambled to get the flex-optics out of her pocket. Bill crouched down by the hole.

“Sure is,” he confirmed. “Just like the other one; only bigger. Double strike,” he commented. “Wonder what the odds of that were?” He pulled a tape measure out. “Just about 2 centimeters across. Get that camera in there! This may poke into the main cabin or something!”

“Outa my way, bud,” Jeannie ordered. “And give me some light.” She eyed her screen. “Crap, the hull must be three meters thick, here. All I can see is more hole; like a tunnel. And dark.” She pulled the optics back. “Forget it. If we want to see in there, we'll have to go in there.”

Bill spoke, disappointment evident in his voice, “Ah, well. It was worth a try.” He considered the position of the meteor strike. “If this was the control section of the ship, that might be what killed it.”

“Could be,” Jeannie agreed. “Think we'll find some dead aliens in there?”

“Nah,” he dismissed the thought. “For all that this thing's bigger than our ship, it's pretty small for something interstellar. I imagine it was an unmanned... unbeinged...” he grinned through his faceplate, “...robot probe.” He shrugged. “Like Voyager; only more so.”

“Yeah,” she conceded; “but an actual alien would make a nice sales exhibit; wouldn't it?”

“Yep.” Bill viewed the remaining nose of the probe. “Only a few more meters. Let's finish this up quick,” he suggested; “I'm hungry.”

“You're always hungry,” Jeannie pointed out. “But, we're almost there. Silly to procrastinate now.” They continued the survey. The nose of the ship was still the same whitish material that constituted the rest of the hull; but it was less smooth at the point. It had a pebbled look, obviously the micrometeor pitting, Bill had anticipated, the result of micro impacts with dust and gas at interstellar speeds.

Jeannie killed the cam and hooked it back on to her harness. “That ought to do it,” she said. “Billy, why don't you go get dinner started?” she asked. “While you're doing that, I can get a couple of

quick core samples."

"You sure about that, honey?" Bill asked. "How's your air pack holding? Mine's pretty much at its limit." He tapped at his chest pack.

"I'm fine. I always have run longer on a rebreather than you, anyway," she replied. "It'll only take a few minutes." She took him by the hand. "Come on, I'll even walk you home. Got to get the drill anyway." She grinned at him.

"Okay." Bill stowed the detector probes in their cases. "Good 'nuff. Soup and sandwiches acceptable?" he asked. Together they jumped and drifted back to the *Improbable*. Bill fired his jet briefly to steer.

"Peanut butter and strawberry jam?" Jeannie suggested.

"And tomato soup," Bill replied agreeably. "It'll be waiting on you." They entered the cargo bay. Bill proceeded to the airlock, while Jeannie acquired her core drill.

"Bill!" she called, as he closed the lock door. He paused, and looked back.

"Yeah?"

"Here," Jeannie answered, "take this back inside for me." She tossed her camera to him. He caught it and closed the door.

Inside the ship, the air locked cycled. As pressure built up Bill's suit collapsed on his frame. The lock indicators signaled completion. He open the inner door and moved into the mudroom. Bill reached up an pulled off the helmet. He hung it on a wall clip. He took off his life support pack and detached the used cartridges. He replaced them with fresh spares from a cabinet. The old units went into a recycling bin.

After he had removed the rest of his vacuum gear, Bill toweled himself off and went to the kitchen. He retrieved a bag of soup from the freezer. It was Jeannie's own homemade recipe; prepared from fresh tomatoes, and frozen for occasions such as this. He emptied it into a covered pot and put that into the oven to thaw and heat. While it warmed, he prepped the promised peanut butter sandwiches. That done, he set up two trays.

Meal preparation was well in hand, so Bill carried Jeannie's camera to the computer work station. He popped the loaded data card out of the side, and four other from their storage compartment. One at a time, he ran the cards through the comp to copy them. He saved the data to comp memory, and duped it to two more cards. "Too valuable not to back up to hell and gone," he mumbled to himself. The oven dinged.

Bill moved back to the kitchen area. He removed the pot of soup from the oven and split the contents between the two covered trays. He set the trays on the table.

As he did, he heard the lock cycling in the other room. "Perfect timing," he decided. He moved to the mudroom to help Jeannie with her suit, arriving as the lock opened. She popped off her helmet and clipped it to the wall. "Here," she said, holding up her sample bag. "Core samples." Bill took the

bag gingerly, as it was still rather cold. “I took two,” Jeannie continued. “One from near the point of the nose. Thought we might do double duty, and get some interstellar material samples that way.”

“Good thinking,” Bill approved. “Samples are sealed?”

“Uh huh,” Jeannie mumbled as she pulled her helmet off. She hung it on another wall clip. “Both of them. The second came from near the hatch. Neither one came anywhere near completely penetrating the hull; and they're both a meter long. That hull's thick,” she decreed. “And it seems to be homogenous. Near as I can tell from just looking, it's just a layer of that cermet several meters thick. Take a look.”

Bill opened the bag and pulled out a meter long cylinder of grayish white material encased in clear plastic. He hefted it. “Doesn't mass much, does it?” he observed. “Not nearly what I would have expected, anyway.”

“Look at it,” Jeannie instructed. “It's foamed or something.”

Bill peered closely at the sample. “Sure is. That's interesting. I'll bet it makes a halfway decent thermal insulator. And it sure keeps the mass down.”

“It sure does,” Jeannie confirmed. “We need to check that thing's total mass, eventually. Despite that massive look it has, I'll bet that it's pretty light weight.”

“Oughta be,” Bill nodded. He put the core back into the bag. “Almost all it's mass had to be reaction mass.” And those tanks aren't all that big for a starship.” He frowned in thought. “For best efficiency... high Isp... they had to be running hydrogen. Low mass stuff; so the ship had to be low mass to maintain a decent ratio.”

“Enough already,” Jeannie complained. “I want dinner, myself, now.” She grinned and pushed past him.

Bill shrugged, grinned, and called, “Chow time!”

Chapter 5

You can't hide secrets from the future with math.
MC Frontalot

They started their second day of exploration by reviewing their photos and radar imagery. The plan was to open the forward 'hatch', if possible; and neither prospector was thrilled with the idea of going in blind.

Bill sipped coffee and stared intently at his datapad. He pointed to an elongated smudge on a radar image. “It's mostly hollow, except this. What do you suppose it is?”

Jeannie had already finished eating. She leaned across the table and considered. “I'd expect it to be the generator, the SNAP,” she decided. “It's in the right place for the hull radiators. The hatch is probably the main access to power and control.” She snorted, then sighed. “Face it, honey. We just aren't going to learn much looking at these pics.”

“I know,” Bill admitted. “I just want to get in there so badly that I'm consciously trying to compensate for my usual tendency to rush.”

Jeannie smiled from her position above the table. “That's my wise little fool.” She reach out and ruffled his hair. “So?”

Bill smoothed his hair, then pushed up. “So... it's time. I'm getting dressed.” He kicked and shot towards the mudroom. Jeannie grinned and followed.

***

Once suited up, they paused in the vacuum bay to stock up on the tools they expected to need. After loading the obvious items such as scanners and recorders, Bill went to a cabinet for extra recording media. When he turned back to the cart, he started. “Jeez, Jeannie! It's a spaceship; not an ore deposit!”

Jeannie had opted for less subtle equipage than Bill. She had stuck two pry bars in the cart. A massive hammer floated from her waist. And she held a pickaxe in one hand. “What can I say? We're getting in there one way or another.” She grinned through her faceplate and laughed.

Bill's chuckle joined hers. “Well, I guess so,” he said. “C'mon. Let's go.”

The intrepid explorers stood hooked in the netting around the alien craft. They looked at each, then grinned. “After you,” Jeannie spoke first; waving her arm towards the hatch.

“Gee, thanks,” Bill responded dubiously. “I'm honored... I think.” He crouched down and grasped the handles set into the circular hatch.

Jeannie watched and said, “Ten to one, it's vacuum welded.” She held out a hammer. Bill declined.

“Let's try it first,” he suggested. He gripped the handles firmly, set his feet more securely in the cargo mesh, and twisted. “Uhhn! Nope.” He considered the triangular pointers. “Maybe that's the closing direction.” He twisted in the opposite direction. “Uhhn! Uh uh; not that either.” He looked up at his grinning partner. “I don't suppose you'd care to help?” he inquired sarcastically. She held out the hammer. “I was referring to helping turn this beast,” he said sourly.

Jeannie knelt down and rapped the hatch firmly with her hammer. She tapped around the circumference. “Now, try again,” she directed. Bill twisted.

“Uurgh! Nawp. Gimme a hand,” he pleaded. “Take this handle, and turn.” They applied pressure. Then Bill noticed something. “Jeannie! Turn it clockwise! You're fighting me!”

Through the helmet visor, Bill could see Jeannie blushing. “Sorry,” she offered. “It was just automatic; like opening a jar.” They tried again; this both turn worked to rotate the hatch clockwise, as indicated by the arrows. “I think it budged!” she exclaimed. “Again!”

As he pushed, Bill suddenly felt something click, and the hatch loosened. "Son of a gun!" He grabbed both handles and twisted again. It seemed to have hit a stop.

“Um, Bill; try pulling,” Jeannie suggested. She watched as he braced himself and heaved strongly on the hatch.

“Yaagh!” The hatch came free with no resistance at all. Bill inadvertently threw himself off the hull, hatch in hand. Jeannie watched, laughing, and noticed a line attached to the hatch.

“Bill...” she began. As prospector and hatch drifted, the hatch lanyard tightened. The cover came to a sudden halt. Startled, Bill lost his grip, and did not halt. Jeannie cheered, “Bravo! Well done! Encore, encore!” She laughed.

“Oh, very funny,” came Bill's weak rejoinder. He fired a hand jet and returned to the opening in the hull. Regaining his footing he joined Jeannie in staring into the blackness within. “Well,” he intoned, “in the old SF stories, this is where the horrible insectile aliens would embed horrible monsters in the brave explorers' guts.” They peered into the black interior. Bill held a flashlight out to Jeannie and politely said, “Ladies first.”

In mock disgust, Jeannie took the light and replied, “My hero.” She directed the beam through the hatch at the interior. “I don't see any... Nope,” she corrected herself. “There's something.”

Bill looked past her. “Where...? Ah, I see. Is that thing just mounted on the wall?” he wondered. Some eight or nine meters inside, the sole visible fixture was a silvery ball that seemed to be attached to a forward bulkhead. All else was still hidden in darkness. Bill measured the exposed entrance with his eyes; it was uniformly just over a meter circular, and seemed to be six meters long before opening onto the room housing the sphere. “I'm going in,” he decided.

“Good,” returned Jeannie. “Better you than me.”

Bill upended himself to advance into the hatchway head first. He paused and told Jeannie, “I was only kidding about the horrible aliens, you know.” He moved into the short tunnel. “I hope.” He

stopped in the tunnel and peered into the room. “Just a round room,” he called back. “Proportions about like a can of tuna. But four meters thick, and about eight meters across.” He waggled his light around. “It's empty. Except for that beach ball on the wall.” He put his hands on the ledge of the hall and pulled himself into the room. “Come on in, Jeannie.” No response. “Jeannie,” he called. He pushed back to the hallway. As he did, Jeannie's face reappeared at the opening.

“Billy,” she said worriedly; “are you all right? You faded out.”

“I'm fine,” he responded reassuringly. “The ship just blocks the suit comm. The metal in the cermet composite, I imagine. Or that big radiation shield.”

“Damn. Of course,” Jeannie replied. “I should have thought of that.” She started into the hatch. “I'm coming in. Watch your head.”

“Wait a minute,” Bill responded. “Bring in some more lights and my detector.” Jeannie disregarded the request and floated into the room.

“Already got 'em,” she announced. “Credit me with a little sense, honey.” She tugged on a a line clipped to her harness, and a bundle of the requested equipment followed her into the ship. “So what do we have here?” she asked, looking around.

As Bill had said, the room was nearly empty, save for the metallic sphere. The round wall, as well as the 'floor' and 'ceiling' were the same off-white composite with which they were becoming so so familiar. Bill pulled a laser rule out of his suit pocket. He held it up and activated it. “Nine point one three seven meters by four point five six eight. Walls are featureless... Nope, never mind.”

“What?” Jeannie asked. Bill pointed behind her. She turned and faced yet another hatch on the aft bulkhead.

Bill said, “Gimme my detector, would you? I'll lay odds that's where we're going to find the nuke generator this sucker's got to have.” Jeannie unclipped his test set and handed it to him. He turned on and waved the probe at the door. “Yepper. Elevated neutron count,” he announced.

“Dangerous?” Jeannie asked.

“Nah. It's above background. But it's perfectly safe.” He moved closer to the bulkhead. “Either they've got good shielding, or it's decayed to uselessness.” He eyed the door. It had no markings, but was equipped with handles similar to those on the main hatch. He grasped them and twisted. The door came off in his hands as before; again anchored with its own lanyard. “Looky here, Jeannie.”

Nervously, Jeannie said, “Is that a good idea?” She tried to look into the exposed area.

Bill released the the cover and stuck a light and the detector probe inside. “Gotta be a generator,” he decided, watching his display. “And it's still running, I think.” Jeannie looked at his instrument readings.

“Must be,” she confirmed. “Neutrons, but at a safe level. Elevated temp.” She looked into the generator space. It was a cylindrical area only just large enough to hold a metallic canister about one and a half meters in each dimension. Fins of the same material as the outer metal insets extended from

the canister, and disappeared into the walls. “I don't even see room for moving parts,” she decided. “Must be strictly thermal. Ultra simple and rugged for decades or centuries of service, I suppose.” She pulled back and let Bill look in.

“Well, let's *not* take that apart for salvage,” Bill said. “Mama didn't raise me to be a nightlight.” He put the access cover back in place. “So what else do we have here?” He asked as he turned back to the main room.

“We need more light on the subject,” Jeannie decided. She began turning on the small lamps, and twisted the lens housings to provide area coverage. The room brightened.

Bill floated, slowly turning. He examined the walls. “Bingo!” he declared. “Looky there.” He pointed the the forward bulkhead. “Missed it in the dark.”

They stared at Bill's discovery, The silvery sphere they had seen was was surrounded by shallow inscriptions. They resembled neither writing, nor true hieroglyphics. The basic pattern was a collection of wavy lines, triangles, circles, and a square. The pattern appeared six times, arranged to surround the sphere. Each copy seemed identical to the others. The patterns were oriented to center on the sphere.

“So,” Bill said facetiously, “do you suppose the sphere is important?” He grinned.

“Nah,” Jeannie replied in kind. “Probably just some kid's lost beach ball.” They laughed.

Jeannie moved up to an inscription and ran her hands over them. “But what does it mean?” She traced over the wavy lines; a thought tickling at the edge of consciousness. Then, “Vids! We haven't taken pictures.” She lifted her cam and started panning across the room, taking care to cover every bit of area. She paused at each repetition of the odd graphics for detail. She imaged the sphere from every imaginable angle. “Bill,” she called, “open that generator space again.” He did so, and stood back to let her capture the picture. When she finished, he replaced the cover.

Jeannie paused, then said, “Move over to the sphere. Put your hand on it. It'll give a sense of scale,” she explained.

“Sure,” Bill said. He reached up to the thing, saying, “You know, it looks like a giant Yule tree ornament. A Yule ball.” He touched the sphere, and asked, “Like this? What the...”

“You broke it!” Jeannie exclaimed. At Bill's touch the glittering ball had detached from the wall and begun drifting. “Catch it,” Jeannie ordered.

Bill reached out and grasped the ball clumsily with his gloved hands. At just under a meter in diameter and totally featureless, it was an awkward object to handle. “Sheisse. Do you think we can put it back?” he asked.

“Whoops! Hold it.” Jeannie raised her camera for a few more seconds. “So long as you've got it loose, I might as well get the shots.”

Still grasping the oversized ornament, Bill examined its previous rest. “Take a look at this. There's an iris-type of access panel here.”

“Really?” Jeannie said. “I didn't notice that. Let me get a shot.” She snapped some pictures of the closed iris. It was about half a meter across; far too small an opening to pass the ball. The cover was twelve segments that converged on a black dot in the center. “So what's the little dot? A seal, maybe?” She reached out and touched it. Instantly, the iris spiraled open. The black dot was revealed as the tip of a rod that retracted as the cover opened. “Uh oh.”

“Uh oh. Now you've done it. Alien embryos, for sure.” Bill shined a light into the opening. “Whew! I think you just found the other end of that meteor hit on the hull.” The iris had opened to reveal a mass of shredded *something*. Bits of metal and glass, and other less identifiable items drifted out.

“What was it, do you suppose?” Jeannie asked. “Some kind of electronics?” She captured some of the drifting bits and placed them in a small sample bag.

“I think so,” Bill responded. “You know, if you were to blast our navcomp with that shotgun of yours, I think it would bear a striking resemblance to this mess.”

“The ship's computer, you think then?”

“Yeah. Wild ass guess, but yeah.” Then he considered the sphere he had left floating. “But what was that?” He frowned. “If it was part of the computer, why isn't it in there, too?”

Jeannie poked around in the alien electronics. “I think some this stuff was optical fiber. I'll bet the ball interfaced somehow.”

“But why?” Bill wondered. “It was left out with the pics, as if they expected it to be found.”

“Ship's log?” Jeannie suggested. “You know: 'These are the voyages of the starship *Whatzit*...'” She laughed, and Bill joined her.

“Why not. It makes as much sense as anything.” He looked at the Yule ornament. “But how's it interface? I don't see any seams in that shell.”

“Me neither,” Jeannie said. “Maybe it coupled inductively.”

“Doesn't seem very efficient,” Bill replied sceptically. “But I guess it is pretty well protected against accidents.” He pulled the Ball closer and spun it around, examining the smooth surface. “Pretty thing,” he mused. “Maybe it *is* an Yule ornament. Let's take it back to the *Imp*. This should make an excellent sample.”

“Sure,” Jeannie spoke. “Just let me get some more pictures of these inscriptions. They've got to be important.” She held out her hand. “Gimme your ruler,” she demanded.

“Huh?”

“Come on, your pocket ruler,” she elaborated. “You've always got it. Give it to me so I can can get an absolute scale in the shot.” Bill rummaged through his thigh pocket until he found the requested ruler. He held it out.

“Nah,” she changed her mind. “Just put it up on the wall. By the wavy lines.” He complied. She scan the scene. “Let's go all out. Set it up by each set. Later, we can have the comp check it out and see if each one really is an exact copy.” They repeated the procedure five more times.

Finally, Bill examined the room one more time. “Jeannie,” he decided; “if we're doing an initial survey, I think we're done. This is both too simple and too complex for us to learn anything more. Unless we want to start taking things apart. And that probably isn't a good idea.”

Jeannie looked back at him. “You're right. I just took my fifth set of pictures of the damn graphics.” She pointed at the wall. “I'm wasting cards. Let's just take the Yule Ball back to the ship.”

“Yep,” he said agreeably. “Got a sample bag I can put it in?”

“Look in my satchel,” she directed. He did so, and found a net bag that would contain the Ball. He slid it around the gleaming sphere. Next, he and Jeannie gathered up their equipment and made ready to depart. “Got everything?” Jeannie asked.

Bill shined his light around the room again. “Yeah. Let's go.” Jeannie led the way back out the diminutive hallway with the bagged sphere in tow. Bill followed with the bundled equipment.

Outside the craft they clipped the Ball to the waiting cart. Bill stuffed his bundle into the cage. “Shall we close the hatch?” he asked.

“Already on it,” replied Jeannie. Bill turned and found her putting the cover back into position. She anchored a foot and rotated the piece. It clicked into place. “Got it. Let's go home.” They clipped to the cart and headed back to the *Improbable*.

Inside the bay, they spent a few minutes putting their gear away. Then they moved to the lock.

“All three of us aren't going to fit in that lock,” Bill observed. “You go ahead and take the Ball through. I'll cycle through next.”

“All right.” She entered the lock with the net bag while Bill waited. A few minutes later, the lock completed the cycle, and Bill took his turn going in.

In the mudroom, he found Jeannie nearly done with unsuiting. The Ball floated free in the middle of the room. While Bill removed his suit, Jeannie grabbed a towel and swabbed herself off. When she was done, she handed the cloth to Bill who followed suit.

“You're awfully quiet,” Jeannie commented, watching him dry hi hair.

“Thinking. You're quiet, too,” he replied.

“I guess I'm thinking, too.” She frowned. “For all that we've only spent a couple of days with the *Whatzit*, I think it's time send the offer.”

Bill considered the proposition. “Um, not yet. We need to wrap up some more stuff this afternoon.” They moved into the common room, dragging the ball behind them like a silver balloon.

Jeannie settled onto the couch while Bill dragged the Ball into the workshop in the next module. When he returned, she questioned him. “Wrap up what?”

He eased down beside her. “Well, we need to do at least one brute force check we've been ignoring.”

“Such as?”

Bill smiled. “Have you forgotten that we still haven't actually measured that beastie? Length... dimensions we got from radar and lidar.” He shrugged. “But I definitely want to get at least a rough check on its mass.”

Jeannie blushed slightly. “I had forgotten. Senility must be setting in.” She laughed lightly.

Bill tousled her hair. “Nah, just the excitement, I think. Gods know, I nearly forgot,” he said, grinning. “I'll bet we can get everything out of the way Before suppertime tonight. And I'll spend the evening getting the most precise position and orbit checks I can for the *Whatzit*. If we're going to sell it, we'd better be able to tell SpaceTech where we are.”

“Good idea,” she giggled. “I wouldn't want an outfit the size of SpaceTech to come gunning for us.”

“No indeedy; I don't think the Co-op would cover us on that.” He laughed, and got up.

The pair elected to get on with the work. They had taken only a short bit of time for a small lunch before suiting up and heading out to gather some final data on the *Whatzit*. In the cargo bay, they selected their gear.

Jeannie hovered over the open tool crib, and made her choices. “Bill,” she called, hand on the grip of an instrument case, “are we planning anything fancy?”

Bill stashed a tubular container in their cart and replied, “Nope. Just mass check. Calibrated thruster, inertial finder. That oughta do it.” He pushed off from the cart toward another cabinet. “Heck, if we try to do everything, we'll be here the rest of our lives. And we'll never get paid.” He opened the cabinet and poked around.

Jeannie bundled up the indicated equipment and moved to the cart, where she noted the tube. “Is that thruster big enough?” she wondered aloud.

“Ought to be,” Bill said. “I only want to budge the *Whatzit* just enough to get its mass. I sure don't want to screw with its orbit.” He sighed and looked back to Jeannie. “Honey, where did you put the inertial compass?”

She snorted. “Rack Four.” She pointed to a position a few meters away. “Over there, silly.”

"Sheesh." He closed the cabinet and pushed over to the appropriate rack. "Got it. Here, catch." He pitched a hatbox-sized container to Jeannie. She fielded it, and stowed it in the cart.

“What else do we want?” she asked.

“Marker transponder,” came Bill's answer.

“Do we really want to do that? Since we're staying on site?”

“Think of it as insurance. If we have to pull up stakes suddenly.” He shrugged, the gesture partly masked by his suit. “Besides, McMurphy's people can use it as a nav beacon when they show up.”

Jeannie grunted assent and opened the cabinet Bill had been searching. She eyed the cubbies and drew out a transponder. She flipped up a cover and checked the battery status. “Any particular frequency you want?” she inquired.

“Not really.”

“One-ten Megahertz, then.”She thought, then entered W-H-A-T-Z-I-T as the access code.

Marking transponders were standard tools for prospectors who did not mine out their own lodes. In such situations, the prospector would locate a rock bearing a rich ore then sell mining rights to another outfit; often one of the large Ceres-based concerns. But a sale was useless if the buyer could not find his property. So the prospector would set a transponder beacon on the asteroid, where it waited in silence until triggered by a properly coded digital signal on the correct frequency.

Jeannie placed he marker in the cart, then recorded the access data in her pad. She looked up as Bill drifted in. “Let's get this over with,” she spoke.

“You said it,” Bill answered. “This is going to be the most profitable week of our lives!” He tugged on the cart and headed out into space. Jeannie grasped the trailing end of the cage and added her own momentum.

“Park it at the nose,” Jeannie suggested, pointing to the larger end of the alien spacecraft. “We can anchor it to the mooring line.” Together they fired their handjets and floated over to the line connecting the two craft. As they closed on it, Bill reached out an clipped a lanyard ring onto the cable. The cart tugged on the restraint and stopped.

At the cart, Bill stowed the tape measure. He pulled the tube and the box holding compass out. "Thruster or compass?," he inquired of Jeannie, offering the objects.

She took the box. “Compass. Where are you going to place the rocket?”

He grinned. “Where else?” Bill pointed to the tail. “I'll strap it to the *Whatzit*'s engine, of course.”

“Makes sense,” Jeannie nodded. “I'll put this on the nose then.” They took their respective burdens to their assigned places.

At *Whatzit*'s aft end Bill looped a couple of cargo straps loosely around the engine housing. He opened the tube and slid a slender object out, a solid fuel rocket with a carefully precomputed thrust,

and slid it under the straps, which he carefully tightened around the metal cylinder, firmly fastening the rocket to, well, the rocket. Finally, he twisted the cap off the rear end of the thruster. It came loose trailing a wire. Bill pushed off from the engine at a right angle to the ship's axis. The wire trailed behind him.

At the nose, Jeannie set the inertial unit in place. Lacking a decent place to strap it down, she opted for a thermoplastic anchor, resembling a polymer soda can. Pulled a tab on end waited for plastic to soften, and pushed it against the *Whatzit.* She set the inertial compass into the hot mass and waited for it to solidify. It wasn't long. With the plastic set, she pressed the compass' power button. A pilot light glowed amber, then green as the unit zeroed itself. Taking care not to touch the ship or compass Jeannie moved away. “Bill,” she called, “I'm all set here. Are you ready?”

“Just waiting on you,” he returned. “Here we go.” Bill stuck gloved finger into the cap he held and punched the button within. The miniature booster fired silently. For a minute it jetted mist, then burned out. “It's done,” he announced. “Did she budge?”

Jeannie moved back to the compass and checked the readout. “Can't prove it by my eyes; but the compass says it did.” She let the inertial unit talk to her datapad. Then she told it what class of rocket Bill had used. She frowned at the result. “Bill, this thing says the *Whatzit* only masses in at about three hundred-forty tons.” She shook her head. “That doesn't sound like enough for a starship.”

Bill had come up while she checked the numbers. He read the pad for himself. “Hmmph, with the water in our tank, *Improbable* masses more than that." He shrugged. “Well, it is just an unmanned probe. And I imagine her tanks are pretty close to empty.”

“Still,” Jeannie objected, "that's hardly anything...”

“Well heck, Jeannie, it is an antimatter rocket. Compared to our steroidal teakettle, it would've had a fantastic power-mass ratio,” he explained.

“Evidently,” she snorted. “I want a drive that good.”

“Don't we all,” Bill agreed.

“Well,” she said suddenly, “we aren't going to do it screwing off out here. Let's get this stuff put away, and write a letter.”

“Sounds like a plan,” Bill replied. “Then we can screw around inside. So far as I'm concerned we can leave the fence on the sucker. All I want is the compass,” he pointed at the unit on the nose. “You pry it loose, and I'll plant the beacon.”

“Okie dokie,” answered Jeannie. She went to work on the inertial unit while Bill obtained the marker beacon from the cart.

Beacon in hand, Bill floated and considered. Then he headed for the *Whatzit*'s hatch. He lifted an edge of the cargo mesh and slid the beacon underneath it. Then he wedged a plastic anchor under it, and pulled the pin. Satisfied that the beacon was doubly secure, he opened the access cover and activated it.

Meanwhile Jeannie had managed to pry the compass off the ship's nose. She put it into the cart and headed back to the *Improbable*. Seeing that she was done, Bill followed suit.

In the cargo bay Bill said, “How 'bout you go on in and test the beacon, and start the comp on data compilation for the report?” He waved towards the cart. “I'll get this junk put away.”

“Sure,” she agreed. “Easy day today, huh?” She entered the lock.

“Bleah. Maybe I'm not hauling tons of ore around this time, but I sweated as much going into the *Whatzit*.” Jeannie had no reply.

Taking his time to get it right, Bill started stowing gear. When he got to the inertial compass he muttered, “I still say it belongs in this cabinet.” He located an empty cubby and put the compass away. He clipped the empty cart to a rack, and strapped it down for good measure.

He cycled through the lock. Before taking off his suit he called to Jeannie, “Is the marker running okay?”

“Yes,” she yelled back from her position at the workstation. “Loud and clear.”

Satisfied, he stripped off his suit and swapped the expendables for fresh cartridges. He entered the common room. “Since we're done working out there today, I'm going to shower and put on some fresh clothes, Jeannie.”

“Sure, honey,” she replied. “What would you like for supper? I've got more of that lentil stew.”

“That'll work,” he smiled. He floated into the personal area. Jeannie glanced at the comp display; it reported that the instrument memory card data had been extracted and compressed. She started it sorting graphics, then floated to the kitchen. Chicken salad sandwiches, lentil stew, apple pie, and cold beer.

A few minutes later Bill came back out in shorts and a tee shirt, hair still damp. He watched Jeannie set sandwiches in trays, followed by soup. “And pie!” he exclaimed. “Does this mean I've been a good boy?”

“Yep,” Jeannie answered. “I'm even springing for beer this time.” She grinned. “Since we're about to be extremely wealthy, I thought we'd celebrate.” She retrieved the promised beverages from the refrigerator and set everything out on the table. “Come and get it!”

“Whee!” Bill slid into place at the table. “So just how soon will we be rich?” he asked.

Jeannie settled into her own space and started on the soup. “I'd guess that's up to SpaceTech. Depends on how much they want to haggle. And for this sale, I think we'd best stay on until their folk arrive. No telling how long that might be.”

“How far's it from their station?” Bill ate.

“About four AU today,” Jeannie informed him. “Call it six hundred mega-klicks.” She spooned stew into her mouth, chewed and swallowed. “But that doesn't mean much. It's all in how much of

hurry they're in. They can boost high, and make it in a couple of weeks, I suppose."

"Drain their tanks doing that," Bill observed. He reached for the pie. Jeannie slapped his hands away.

"Eat your stew first," she chided.

"Yes, Mommy." He pulled out his datapad. "I think it's about time to work up the offer." He scratched at the pad with the stylus, and read the results. "Excellent. Mail's going to be convenient. There's a Postal Web microwave node right on the station."

"You want to send all of the preliminary data ahead?" Jeannie asked.

"Yeah. Raw data right off the cards. But wait till we get the PK before you tell what we got; remember, senile one?" He smiled, "Then let 'em know there's something coming that calls for serious money." He looked thoughtful. "Whattaya say we hit them up for a hundred million <arks?" he suggested.

Jeannie considered the figure. "Sounds fair. We're rich. They can afford it. And they're bound to make many many times that much off the tech." She nodded. "Do it."

Bill polished off his sandwich and started in on the soup. "Right. I don't want to waste time bargaining forever." He shrugged. "They don't want it; we go somewhere else. Ceres Development, maybe."

Jeannie reassured him. "They'll take it. And probably think they're taking us. But a hundred's enough for me."

"Gods, yes. We could buy our own commercial station for less." He made a face. "Not that I want to, mind you."

"No, but a self-supporting farm on our own rock might be nice as a permanent base."

He considered the proposition. "I could live with that. Be kinda nice to have a permanent place to keep my books."

"What books?" she asked.

"The ones I'll start keeping when we have a permanent place." He grinned at her.

"Idiot." She smiled fondly. "Eat your supper."

After they had finished their meal, they composed the offer for SpaceTech.

FROM: IMPROBABLE Hunter Partnership
TO: SPACETECH ENTERPRISES- ALFA STATION
PURCHASING DEPARTMENT Harrison McMurphy

Hi Harry,

I hope your pockets are healthily full, because we have a proposition for you. And this is one ST will _not_ care to pass up. We've just made a dream strike and you get first option. I'm attaching a datapack of vids, spectro readings, and so forth, for your review.

Harry... We found a ship. An alien ship. You name it, we got it. AM engine, foamed structural cermet composite, _HiTemp Superconductors_.

For a measly Mk100,000,000 it's SpaceTech's. You get the samples, orbital elements, beacon data, and all our preliminary data, naturally. I figure we can use the usual exchange protocols so no one gets antsy about payment. Security Protocols: This is hot stuff; and we don't need to shout it across the system yet. That's why we asked for that new PK. And I'm attaching yet another new key for us. I think we should do new keys for every msg, one-time pad style.

I'm going to sit on the find until your people show. I'd rather they weren't beaten here by half the jumpers in the Belt.

Interested?

Later,

Bill

... And Jeannie! Hi, Harry! J.

"Sound good?" Bill asked.

Jeannie looked the letter over a last time. "Si, store it. I'll have the data attachments in just..." Her nimble fingers flew across her pad. "There! I just sent the datapack to your bin."

"Harry's gonna freak."

"Yep." She grinned. Then she raised another issue. "Bill, just how paranoid should we be feeling?"

"Eh?" Raised eyebrows.

"I think we should assume the word'll get out. Dumb luck on guessing a crypto key, cleartext tossed in the trash, something." She frowned to herself.

"Ye-e-ah," Bill answered hesitantly. "So?"

“So I think we should call in some backup, security; Ivan's people.” Their old partner had built upon his experiences with claim jumpers and established one of the toughest security firms in the Belt.

Bill thought about it. “Umm... It's one more outfit to spread the word...” he began. “But yeah, I think we'd better. I trust Ivan.” He nodded to Jeannie. “But the question is, can he get a ship out here soon enough to do any good?”

His wife grinned. “I don't see why not. Remember those goddamn fission drives he had built a few years back?”

“Oh, jeez, yeah!” He shook his head, smiling at the recollection of the hi-g nuke-salts rockets. “They pull... what? A couple of full G's for hours?”

“Yeah. I hear it shocked the hell out of a few jumpers.” Jeannie shrugged. “So I figure he can get something here. And probably a heck of a lot quicker than we made it.”

“Cool,” Bill decided. “I'll write him, too. No need to tell him what we need protected; I'll just tell him to send the cavalry.” He stared blankly for a moment, then, “How much do we want spend on this?”

“We've got plenty banked now. And more on the way. Just tell him to get one of his hotshot cruisers here in minimum time.”

“It'll cost.”

She stuck her tongue out at him. “Don't get cheap now. It's worth it.”

“All right, all right,” he gave in. He tapped at the keyboard for a few minutes. When he finished the message to Ahacic Security, he grabbed the ST datapack and attached it to the letter to Harry. He queued both messages. Then he issued the targeting instructions for the commset. The mail went out over a ten meter mesh dish on the hull. In half an hour, the omni array at the Postal node would receive the data, and route it to the servers. The node would likewise route any outgoing traffic to the Hunter's return contact coords. In the mid-twenty-first century, spacecraft were still sending text mail, little more than elaborate telegrams. Over planetary distances v-calls were excruciatingly elongated, even when the power and bandwidth would allow high bit rate contacts. At four AUs to the ST hab, even *Improbable*'s hi-gain set was limited to a piddling eighty kilobits per-sec.

“That oughta do it,” Bill announced.

Chapter 6

There's two possible outcomes: if the result confirms the hypothesis, then you've made a discovery. If the result is contrary to the hypothesis, then you've made a discovery.
Enrico Fermi

The couple began their fourth day on location by unshipping a long shipping container in the vac hold. Bill grabbed a recessed handle on one end of the container and tugged. It slid free of the shipping rack. He grabbed the rack with one hand and braked the ungainly mass. “Hey, babe. Help me twist this sucker around to the hatch.”

“Got it.” Jeannie grasped another handle, and braced herself on the rack. The box moved towards the open door. They wrestled it through the portal, then maneuvered the crate away from *Improbable* to the *Whatzit*.

At their destination, they clipped the box to the mesh near the probe's nose. Bill unsealed the lid.

“Beautiful,” Jeannie declared, looking at the contents.

Bill shook his head. “I do appreciate fine machinery, and this is a fine piece, but beautiful it ain't.” He reached into the crate and pulled the contents free of the nestling foam.

“Hey,” Jeannie protested. “I like gatlings. I wish they'd make them in handguns. I'd swap my shotgun for one.”

Bill blinked at the mental image that comment created. He shuddered, and tried to suppress the picture. “Just help me put this thing together, okay?”

Their toy was a thirty millimeter gatling-style autocannon. Most of the the length of the six two-meter barrels were shrouded by an airjacket, to help the barrels shed heat in operation. Gun barrels get rid of waste heat by radiation, and in atmosphere via conductance and convection. With their usual relatively low rates of fire, most personal sidearms can keep up on radiance alone. The sky defense gun had a rate of fire of several thousand rounds per minute. Without the air jacket, its barrels would probably burn out before any hostile encounter was completed; a bad thing when facing off against murderous claim jumpers, pirates.

Large recoil compensators topped each barrel, further diminishing the chain-gun's alleged beauty. They would redirect some of the propellent gases to minimize the “rocket effect” of shooting.

A largish circular cassette of ammunition would feed caseless rounds, alternating depleted uranium and high explosive, to the gun's receiver, where they were fed sequentially into the electrically spun firing chambers. The deadly device spat eight thousand high density rounds per minute at over two thousand meters per second; a veritable wall of high density death and dismemberment in the path of would-be claim jumpers.

The gun assembly was held in actuated brackets that allowed it to pivot up and down. And all

that rested in turn on a rotating platform. The gun, under computer control, could engage the entire sky.

The Hunters used some purpose-built hardware to bolt the gun securely to the retention fencing around the *Whatzit*. It wouldn't do, for recoil to send the contraption flying off into space at the first shot.

Once the gun was mechanically mounted, Bill attached its targeting sensor, a combination of IR and optical cams and lidar. Jeannie connected power and control leads to the shipping box which held the power pack and targeting comp, which would control the gun in autonomous mode. For manual operation there would be a set of redundant cable links run back to *Improbable*.

Bill pulled an ammo cassette from the trunk and wrestled it into the gun. “That's got it, babe. Give it a try.”

Jeannie glanced at the muzzles' point of aim and tapped at the targeting controller. “Giving it twelve rounds. Better move back some,” she cautioned. When Bill had eased back a couple more meters, she let loose.

White fire exploded from the muzzle, spraying out from the oversized compensators. “Done. You wanna top her off?”

“Sure,” he replied. “He returned to the gun case, retrieved a dozen loose rounds, and refilled the cassette. He turned to Jeanie, and asked, “Whattaya think? Another set of skywatch sensors over here, too?”

“Well...” she began somewhat hesitantly.

“Nah,” Bill answered his own question. “Now if this were a big rock, where a ship could approach from behind the horizon, sure. But anything you can see from here you can see from the *Improbable*.”

“True.”

“Good enough.” Jeannie grabbed the ends of the remote cables, and they drifted back to their own craft. She opened an external panel near the lock, and attached the leads. “Let's go inside.”

“I'll wait out here, while you check our sights,” Bill countered. “Pop off a flare, and set calibration so the comp can hit it.” The targeting controller should know where its gun was; the trick was to relate that to the target's position. “I'll go back and reload when you're done. I should have thought of that before.”

“Yeah, okay,” the woman replied. “Give me a few minutes, to get inside.”

Once through the lock, Jeannie pulled off her helmet and gloves, but moved through to the control space without otherwise desuiting. No call to make Bill wait more than needful. She settled into what she called the tail-gunner's position and checked weapons status. Counter missiles, guns – the gatling's more conventional ship-mounted little brothers – chaff and flares, and shipkiller all showed ready as usual. Business asuUsual for *Improbable*; the partners had been prospecting for more than a dozen years, more successfully than average. In that time, they had invested in quite a few

modifications, including weapons systems. The craft was by no means a warship, but they tended in that direction a little more than most prospectors, and could at least discourage the typical jumper while waiting for backup from a security company.

Now the skywatch autocannon showed live, too. She opened that one on its own display, then tapped a comm icon and spoke, “Are you clear? I'm about to light one off.”

“Yep. I'm just inside the lock,” Bill confirmed. “Do it to it.”

Jeannie launched a flare. While it shot out to a reasonable test distance, she set the autocannon for a six round burst. When the flare was a few klicks out, and sputtering down, she let the cannon have its head. She had a gun's-eye view of the flare as the comp decided to kill it. Burst off... and a clean miss, all rounds. “Crittershit. Just once...”

“Really now, what'd you expect, Jeannie?” Bill interrupted. “That's what calibration's for.”

“Yeah, yeah.” She told the comp to try again, before the flare burned out. Another wash of fire from the cannon, a brief moment, and the flare disintegrated. “Much better.”

“Yep. If you'll stand the gun down, I'll go reload.”

“Offline,” she confirmed. “It wouldn't do to blow ah... *eliminate* the only penis for a billion klicks.”

“Hey!” Bill complained. “I thought you loved me for my tongue, too.”

When her better half had reloaded andwas headed in, Jeannie reset the autocannon config; autonomous mode, fire selection wweightedeighty percent for twelve round burst, and a one klick safe radius where the gun would not fire. “We're live. I'm about to rustle up some grub,” she added humorously. “Any preferences?”

“Any stew left?”

“No, we finished that off.” Before Bill could speak up again, she added, “And don't say sandwiches. I'm sandwiched out for the foreseeable future. For the unforeseeable future, even.”

“How 'bout spaghetti then?” he suggested.

Jeannie open the pantry inventory. “Don't have any in the fridge; that's still in the deep freeze” She made a note to remind herself to move that, and a few other items to the more accessible storage. “Oh! How would you like rabbit fricassee?” she suggested.

“Sounds muy bueno. I'm in the lock now; see you in a few.”

“Icy. I'll start lunch.” Which task she undertook right after stocking the fridge from the freezer, so they'd have something ready to heat for the next few days. “And since we have a couple of weeks of nothing else to do, I think it's time for another cooking spree.” It wasn't that either of the prospectors hated cooking; it was just inconvenient to stop and cook every mealtime, when there was rock to be dug and ore to be slagged. They had fallen into a pattern of cooking en mass during downtimes, and

freezing individual servings for later use. Bill generally took care of soups, stews, sauces, and more elaborate dishes. Jeannie most often did simpler fare over a grill; kebabs, roasts, steaks, burgers. If it would go on a skewer or rotisserie, Jeannie would grill it. Neither was locked into one mode, and Bill was especially likely to experiment, usually to their mutual culinary delight. But Jeannie had only to reminisce about the frozen french fries fiasco (pre-cooked) to shut him up when his ego got the better of his mouth.

As they ate, Bill plotted. “After lunch, I want to get back over there and pry into that cubbyhole full of trash. I figure that was whatever passed for the probe's computer... What?” he demanded, seeing Jeannie's head shake.

“Nope,” she replied. “No can do. We agreed to assume that word would get out before we wanted, right?”

“Yes,” he affirmed patiently. “Hence, the skywatch and cannon. And Ivan. Now that security is taken care of...” Bill watched Jeannie's solemn face. “Or not. What?”

“We're on our own here," Jeannie elaborated. "We should assume every jumper this side of Sol is on the way. Maybe some have slicked up superdrives like Ivan's nuclear rockets. Or somebody else could be playing tourist or researcher out this way. We shouldn't get too involved in poking around the *Whatzit* until we have backup.”

Bill pouted; a silly expression for a thirty-four year old man. “But we can...”

“Honey, the autocannon is just dandy, but wouldn't you feel silly stuck ass deep in broken *Whatzit* innards, unable to get to the counter-missiles, when a jumper launches a heavy-g warhead at *Improbable*?”

He tried another approach. “You could maintain watch while I poke around.”

Jeannie shot that down, too. “And when you mistake the thingy's main power bus for a TTL logic path, and I'm not there to kickstart your bloody pump?”

“I'm not about to mistake a heavy power for a wire carrying...”

“Superconductors,” she said slowly, as if to a slow child. “We aren't familiar with *Whatzit* tech, that being why it's valuable. That means you aren't necessarily going to recognize everything.” She eyed him, and decided to salvage his fragile male ego. “And it's *broken*. Which means you might tap into what really is just dataproc input, not knowing that on the other side of the bulkhead it's shorted to a gazillion volt feed for the interstellar hypercomm.”

Bill grinned at the last bit. “Okay, okay; so maybe you have a point besides the cranial edition.” He essayed one of his own. “Or activate the free electron laser bug zapper?”

“Now you've got it!” she gushed at her slow child.

“Don't push it,” he warned playfully. “You can be replaced.”

“Not for several weeks and a billion kilometers, and you have trouble holding out 'til bedtime.”

“Veritas, vixen,” he admitted. Then he eyed the bedroom doorway suggestively. “ So long as it's, um... up, for discussion...”

Jeannie lifted her datapad and scrawled words across the display. “Note to self; shopping list. Saltpeter. See if you can get it by the kilo.” She glanced back up. “Oh, I'm sorry; what were you saying?”

“Never mind.”

“Don't worry, stud,” she assured him. She reach over and stroked his forearm, slowly up and down. “We'll have plenty of time for that, too.”

“'Too' the wench says,” Bill tossed aside. “And what else might we be doing?”

“Other than watching our backs...”

“And your backside?” he inserted hopefully.

“Sure, that too, my monomaniacal sex fiend,” she conceded. “But we can do a little maintenance; we're up on the scheduled stuff, but the *Imp* is more'n twelve years old, so there's always going to be something worth checking. And I want to do some cooking.”

Bill nodded in satisfaction. “And we've got the Yule Ball and those vids to play with.”

She grinned. “Maybe we'll decode those hieroglyphics, even.”

“Worth a try." Then more morosely, “'Course, with my luck, it'll be notice that I've just invoked the alien mummy's curse for opening the probe.”

Jeannie giggled. “It's about time you got properly paranoid,” she remarked; then, “Aw, heck. Go ahead and play with that stainless steel beachball, honey. We've got it; it'd be silly not to check it out. We're gonna be waiting for weeks, if not months.”

“Sweet,” Bill said. He rose and started to move to the workshop, where the Ball awaited.

“After,” Jeannie continued, “you wash up the dirty dishes.”

Bill halted himself on the door frame and looked back. Jeannie pointed at the utensils in question.

“Aww, Jeannie,” Bill whined playfully. She remained steadfast and shook her head.

“It's your turn.” She smiled.

Bill eyed her head to toe and back again provocatively. “I thought it wasn't my turn until bedtime.”

Jeannie shivered a little in her t-shirt, though the craft was conditioned quite comfortably. “A

quickie might be..."

Bill had already launched himself toward the door, sweeping up the brown-haired beauty on the way.

***

A billion kilometers away at Ahacic Station, the aptly named headquarters of Ahacic Security Associates, Bill's email had stimulated its own brand of busy activity. When Ivan found the request in queue that morning, he acted immediately. The Hunters were more than old friends and occasional associates; they were established customers with excellent credit. In fact, when he pulled up the account, he saw they were carrying a positive balance. Ah, an ordnance credit; the upfront estimate on their last contract had been a little high. Wimpy jumper'd died fast.

Ahacic read the brief note again. A big find needed round the clock eyes. Immediate dispatch, please. A suggestion that heavy weapons might be in order. That last was a little unsettling, Ahacic being familiar with Jeannie's and Bill's idea of a minimally adequate defense; he had taken it seriously. "What in deecee are they up to?" he wondered aloud. "All the way out in the leading Trojan, and they need a dedicated crew *right now*? What'd they find; Niven's own mother lode of monopoles?" His commcomp beeped. He glanced at the clid and accepted the v-call. "Hi, Toby."

"Guten tag, Ivan," the display image replied.. "I rousted Heather and Alex. They're prepping the *Golfball* now." He gave a puzzled look. "What's up, exactly?"

"I don't know the details," Ahacic replied. "Been wondering just that. But I know the Hunters; if they want backup, they need it. That's why I'm rushing things."

"Every prospector thinks they have the greatest ore strike in history," Toby opined. "What makes these folk special?"

"The clients happen to be old friends, and they aren't in the habit of asking for help they don't need. They go fairly well equipped." Ahacic grinned at the younger man. "Wait'll you meet Jeannie and her... sidearm. Anyway, they can afford it, and they're friends. So we go all out," Ahacic said firmly.

"But a one g assisted boost? To the Trojans?" Toby looked doubtful.

Ahacic nodded sternly. "You'd boost a full g all the way if it could be done." When Toby grimaced, he added, "You're all getting the hi-g bonus; suck it up."

Toby's expression eased. "Yeah," he said happily, as money had its way with him.

Ahacic pushed on. "I used to partner with the Hunters. They tote a first-rate point defense gun, counter-missile systems, and one small nuke." Toby whistled, and Ahacic continued, "If they think that's not enough, something serious is up. So you and the girls boost hard."

Onscreen, Toby exhaled loudly and nodded. "Gotcha, boss." He glanced down at something out of view. "We're getting *Jumper Squared* attached now." That was a independent craft they'd be using as a first stage. "We'll complete propellent loading, complete with the drop tanks, this afternoon." He shook his head. "Sludge, must be an incredible strike to pay for all this."

“They must think so, or they wouldn't have asked for it,” Ahacic agreed.

“Anyway, Toby continued, “We'll boost by twenty hundred. Profile has us on-site the evening of the seventeenth.” He offered Ahacic a questioning glance.

Ivan nodded. “Good enough. I'll advise them.”

“All right then, Ivan.” Toby shot a quick peek at his watch. “I need to get going. Barrett was griping about the laser modules; didn't want to let loose of all their current inventory. But if I'm going to be out on a supply line this long, I'm taking plenty of spares with me.”

“Later, Toby,” Ahacic spoke. “Let me know if you need a hand with them.”

“Thanks. Mañana.”

“Toodleloo.” The executive grinned and cleared the comm, still ponder just what his old friends were doing.

***

Bill hovered over the glittering, silvery sphere strapped down on his work bench. He looked over the instrument readings once more, and shook his head. Then he said, “Damn. This is spooky. Jeannie, come look at this.”

“Whatcha got, love?” she called back. “The Yule Ball giving you trouble?” She pushed over to join him at the analysis equipment.

“Gods. I'll say. Look at my spectro prints.” He pointed to the display of a laser equipped spectrograph. “Zilch. So far as the spectrograph's concerned, the Ball isn't there. All I'm getting is straight reflection on the laser; I might as well be shining a flashlight on a mirror for all the data I'm getting.”

She bent over to read the screen herself, and frowned. “More superconductors?”

“Must be,” he replied, nodding his head. “Apparently the laser isn't exciting the material at all. I can't even generate a hot spot with a torch.”

“Life,” she said, surprised. “Is there anything these guys *didn't* use superconductors for?”

“Apparently not. They couldn't even settle on just one kind of room temp 'conductor.” He ran his hand across the Ball. “It didn't occur to me at first what it was 'cause of the color. Those hull insets were a sort of bronze color; this,” he pointed at the silvery metal; “just confused me.”

“That's normal,” Jeannie assured him. “*Everything* confuses you.” She giggled.

Bill rolled his eyes. “Some help you are,” he muttered. “Anyway, that isn't the spooky part; superconductors we know. Take a look at the optical imager on high magnification.” Bill turned another display towards Jeannie, then started scratching a spot on the glistening globe with a carbide scribe.

She watched the now changing display for a moment, puzzled. “Tax me” she exclaimed obscenely. “The surface moves?”

“Yeah. Almost as if it were building up a callous where I'm probing it. I'm pretty sure I felt it shift once.”

“Is it alive?” Unconsciously, she shivered slightly.

“How could it be? That probe has been out in space entropy only knows how long. Uh huh, I think it it's nanotech.”

“You're kidding.”

“No; I think this is a nanalloy.”

“A nannawhat? ” She looked confused. “What's that.?”

“Well, until today it wasn't much of anything,” Bill replied. “But looking at this, I can't think of anything else.” He turned to face his wife. “I think this isn't really a single solid object, at all. It's a mass of interlocking microscopic machines. And the damned things are superconducting.”

“But...” she began.

Bill cut her off. “Look, it makes sense. The nanalloy itself constitutes a self-repairing physical shell. As an area is damaged, the nanocritters just flow around, constantly replacing the damaged critters.” He reached for a simile. “Think of a bunch of little bugs on a ball, all hangin' onto each other. And their shells... chitin is a superconductor.”

“If you try to push the bugs off the ball, they just hold on harder. If you try to burn 'em off, the SC shells draw off the heat to a safe level. If you manage to heat one to the point where the underlying mechanism... the bug guts could get damage, the bug crawls away under the others, and another itty bitty bug takes it place.”

“Shiny,” Jeannie chirped. “And if the nanalloy is smart enough, it doesn't have to be a sphere. You could tell it to be a bowl, or even flatware. Or... a nanoknife; we could sell 'em to the Swiss Army.”

“How 'bout telling it to be a p-suit?” Bill's countered. “Fits perfectly, better than a partial-p skinsuit. Protects you from extreme temps, maintains pressure, flexes exactly where you want it to flex like your own skin, and resists punctures.” He stared off into the distance, smiling a little smile. “Figure nanalloys out, and there's all sorts of icy stuff you could do with it.”

“No shit, Edison.” Jeannie stared wonderingly at the Ball. “That's a lot more than it looks at first glance. If all they needed was a ball, they wouldn't have to get so fancy.”

“I know,” Bill agreed. “I think we've got an alien's super safe deposit box.”

“That's silly.” She paused. “I think.” She considered briefly. “Makes sense.” She gripped the edge of the table. “Billy, this is beyond spooky. This is scary. I want that thing outside the ship.”

“But why?” he objected.”I'm still working on it.”

“Bill, that thing is still active. It's moving. That means there's still a functioning controller in it. And besides, what if it isn't meant to keep us out?”

Warily, he asked, “What's that supposed to mean?”

Jeannie pushed away from the Ball, and looked to Bill. “Pretend it isn't a safe deposit box; imagine that it's a cage. Or... an isolation chamber, quarantine? What if something dangerous is locked inside? I don't want it getting loose in my home.”

“Jeez, and I thought it was spooky before. Right; I'll tether it outside. After all, I'm not paranoid,...”

“...the universe really is out to get me.” Jeannie continued. They swapped grins.

Reassured, Jeannie reached over and clasped her partner's hand. “Thank you,” she said.

He shrugged and smiled. “Besides,” he went on, “I want to try a flashbulb on it. I bet I can get an x-ray image through the SC shell. I'm not giving up; there's money in this. We sure can't make a room temperature superconductor yet. And if that's a nanalloy, it's orders of magnitude better than what we can do, so far as I know.”

“So?” Jeannie commented.

“So how would you like to work an ore lode by dumping a bucketful of dust on it, then kicking back and sipping beer? Okay, wine in your case.” he asked. “Theoretically, nanocritters could pull whatever mineral you want right out of the surrounding rock.” He eyed the sphere avariciously. “We can't come close to that now. But these things might show us how.” He turned back to Jeannie. “This whole damned ship is nothing but research possibilities. SpaceTech's gonna love it.”

“Oooooh... Heck, I love it myself. We're rich.” She smiled. “But work with it outside,” she repeated. “After you've flashed it, you can work in a bubble.”

“You betcha.” He began unstrapping the Ball from the workbench. “Would you get the doors for me?” He grasped the Ball, holding it in both hands. “I'm putting it in the airlock while I get dressed.”

“Okay." Jeannie pushed off the bench towards the mudroom. “And you be careful out there with that thing.” She grinned. “Your warranty's expired; and I can't replace you out here.”

Floating through the mudroom door, Bill responded, “Yes, Mommy; I'll be good.”

In the mudroom, he placed the Yule Ball in a small utility carry net and put it in the airlock. Then he went through the process of suiting up. When he was dressed, he entered the lock and cycled through. He clipped the net to his harness and left the lock.

In the cargo bay, he paused and looked at the gear racks. When he had spotted what he was

looking for, he unclipped the netted Ball from his suit and attached it to a ring near the entrance. He pushed to a rack on the opposite side of the sphere.

Bill pulled a flashbulb from a bin in the rack. He clipped it to his harness. Then he worked his way to another rack, where he obtained a thruster. He went back to the door and retrieved the Ball. He transferred the flashbulb to the net, And pushed out of the ship.

As he drifted away from the tethered vessels he looked around and considered angles. The *Whatzit* should be an adequate screen to protect the *Improbable* from any backscatter. He fired his thruster to kill his drift; then maneuvered to the far side of the alien craft. Again he fired the jet, coming to a stop near the alien. *Improbable* was hidden behind the alien's mass.

Bill took the flashbulb out of the net. Letting it float, he extended the directors, and unreeled the trigger. He tapped gently at the unit, until he had it aligned with the ships, and pointing directly away from them. Satisfied that he had eliminated any residual motion, he jetted several yards away and braked. He removed the Ball from the net, and set it in line with the flashbulb. He repeated the process of damping out its motion. That done, he moved back again, and set the detector sheet in place.

Finally satisfied, Bill fired his thruster, taking care to keep the trigger line spooling free, so not to disturb the alignment of his setup. He moved back to the *Improbable*, safely behind the *Whatzit's* mass. He called to the ship, “Jeannie?”

After a few moments, she replied, “Yes, love?”

“I'm ready to flash the Ball.”

"Oh dear, I've partnered a flasher,” she quipped. “Okay, go for it.”

Bill flipped up the safety cover on the trigger. “Here goes.” He pushed the button. A red light on the remote lit briefly and faded. “That should do it.” He began reeling in the wire. “I'll go get the picture. While I'm out, I'll get a work bubble set up and put the Ball in there. See ya when I'm done, babe.”

“All right; it'll be dinner by the time you're done. I'll get something started.”

“Grazi, Jeannie."

Using his thruster, Bill moved back to the Ball. He looked it over, but it appeared unchanged as usual. He stuffed it back into his bag. The detector sheet had drifted a bit; it took him a moment to spot it, whereupon he rolled it up and slid it into its tube. That went into Bill's net. He considered the expended flashbulb and gave it a solid push. It drifted away. Hopefully, it would cool sufficiently before it reached the skywatch no-shoot boundary that gun wouldn't waste ammo on it.

With that part of the job done, Bill headed back to the *Improbable*, and reentered the storage sphere and located an uninflated cargo bubble. He grabbed the bubble and left the bay. With his arms full of bubble and thruster, he moved towards the prow of the alien ship. He tethered the bubble to the fencing, then began spreading the bubble material and located the minimal airlock. He opened it, placed the Ball inside, and closed it again. Once a quick inspection assured him that all was well, he pulled a tab on the limp material. It inflated rapidly.

When the vac-tent was fully tensioned, Bill looked it over once again. He peered through a window at the Ball within. Satisfied, he turned, and thrusted back to the *Improbable* and cycled back through the lock. In the mudroom, he stripped down. He grabbed a towel and entered the common room. “I'm back, he said unnecessarily. “Got the imagery from the flash?”

“On the wall screen,” Jeannie replied from the kitchen.

Bill turned about and viewed the display. He squinted as he tried to pick out details. “Well, it sure as heck flashed through that shell,” he noted. “But what's this inside?” He pointed at two vague shapes contained within the hazy ghost of the shell.

Jeannie floated over. “Looks like you've got a brick and a plate, hero.” She grinned. “On the bright side, I don't think a dinner plate is going to creep out at night and eat our brains,” she said with a light laugh.

“Brick, huh?” He snorted quietly. “Maybe the aliens have threeper window warriors,” referring to a series of Earthside American incidents about the time the Launcher Company was also scaring the feddies. “On the down side, I can't imagine what makes them so important so's to require this kind of protection.” He frowned. “I want inside that grapping Ball.”

“How, pray tell?” Jeannie inquired. “You can't cut, burn, or pry it open.”

“I know,” he admitted. “But everything else about that ship has been easy access. Not a single child-proof cap aboard. What makes the Ball different?”

“It's alien,” Jeannie reminded him. “It doesn't *have* to make sense by our standards.”

“But still...”

“But nothing,” Jeannie said firmly. She grabbed him by the shoulders and spun him towards the dining area. “Look; food! Eat.”

“But...”

“A freakin' first,” Jeannie noted in amazement. “*Bill* doesn't want to eat. Dear Diary, today Bill wasn't hungry. Clearly the alien spaceship has a singularity-based stardrive which has permanently distorted the spacetime continuum.”

“Okay, okay,” Bill capitulated. “I'll eat.” He added a sly grin. “Since you insist.” They both chuckled. Bill went on, “I'll work on it some more later, I suppose.”

“Aww,” Jeannie piped up, “I thought we could watch a vid after dinner. I picked one out already. And we got a mail packet from the node.”

“Chillin'!” Bill exclaimed. “Harry oughta have something for us.” His eyes gleamed greedily, as did Jeannie's.

Halfway through dessert the comp dinged and announced another mail packet. Bill shot a hopeful look at the comp, then stared longingly at his pie. The pie won. Counting calories, Jeannie skipped the snack; she glided over to the work station and began sorting posts.

“Bill, you've got a new catalog from Nukes R Us,” Jeannie called.

He swallowed a last bit of pie and drifted over. “Just file it,” he instructed. “I'll look it over another time. Did we get an answer from SpaceTech yet?” He peered over her shoulder.

“Yep,” she replied. “Decrypt... There we go.” A new text-filled frame opened in the display.

> FROM: SPACETECH/ALFA STN H. MCMURPHY
> TO: DRIFTER
>
> Bill, you are nuts. We know this. And if it were anyone else, we would write it off as a scam. But my people have barely looked at your data and are already telling me to buy.
>
> OK. Here's the deal. We'll take an option on the probe. I'm escrowing Mk200,000 in your names. I'm scrambling the *Profit Motive* on a hi-g profile. Look for her late night on the 19th. Besides her ops crew, I am sending my representative Martin Sinclair and a couple of tech types; names later, when I pick them. If they verify your find, we buy. We'll dicker more when we have a better sense of what is for sale.
>
> Let me make a tentative counter-offer, though: You keep the earnest money and a lump sum payment of ten mega-Marks, with a 10% share in derivative profits for 10 years.
>
> Think it over and argue it out with Sinclair. He is authorized to commit ST on this.
>
> Security: Concur on the cryptography. New PK attached. Knowing Jeannie, you already called in security; Maximum Response or ASA, I assume? Anyway, I imagine they'll arrive before my crew. Tell them that SpaceTech will pick up their tab starting from the time we sign a contract, so they should stay on site. Sinclair can sign off on that too.
>
> H. McMurphy

Jeannie giggled and rubbed her palms together. “We're rich. I love it. Either deal we take, we're rich.” She turned to Bill and asked, “Which should we go for? I like the lump sum, myself.”

“Yeah, but that profit-share could...” He whistled, then frown and read the brief letter again. “The nineteenth? They're gonna get here in...” He quickly counted fingers. “...eleven days? They'll be

boosting at something like a full quarter g the whole way."

"So what?" Jeannie asked. "Are you complaining? That just means we're rich sooner." Her grin widened.

"Sheesh," complained Bill. "I wish *Imp* could pull a quarter g."

"Don't sweat it, hon," Jeannie comforted. "We do okay." She turned back to the display. "C'mon. There's something from Ivan in here, too." She tapped another icon. The screen blinked, flashed, cleared, and displayed the next message.

> FROM: AHACIC STATION ASA, Ink Ivan Ahacic
> TO: DRIFTER
>
> Hi kids,
>
> I've dispatched the *Ferocious Golfball*, per your request. Look for her on the seventeenth. We've billed your account. I hope it's worth it: I'm hitting you up for Mk20K for the launch alone. After that, it's 1600 Marks a week, plus reaction mass costs for the return trip (unless you can find me another customer on the backside of nowhere <g>).
>
> I don't suppose you'd like to tell me what in Dante's Inferno you're up to out there?
>
> Ivan

Bill was flabbergasted. 'The *seventeenth* ? If they're coming in from Ivan's station, that's something like seven astronomical units... a billion klicks. What's he putting in those cruisers? Warp drives?"

Jeannie had her own quizzical expression. "What's a *Ferocious Golfball*?" she asked.

"Beats me," Bill admitted. "But this is the clown who flew a bomb-powered rock into a dogfight and called it a *Vorpal Blade."* He faced Jeanie and shrugged. "He's quite mad, you know."

She giggled. "Yeah, but it worked."

"A mere technicality," Bill objected, smiling. "I'd say everything's in order for now. What say I grab a couple of beers and watch a vid?"

"Sounds like a plan," Jeannie concurred. "It's queued up, ready to screen."

"Cool." Bill skipped to the cooler for the beer. "Say, what flick is it, anyway?"

"Alien. The first one."

Bill's face went blank, then his eyebrows drew together. “Isn't that the old flatvid that...” His voice trailed off.

Jeannie smirked.

“Evil woman,” Bill muttered.

“Your own fault, scaredy-cat; talking about alien embryos and implants.”

***

ASA and SpaceTech were not alone in prepping longhaulers. Thanks to the wonders of modern industrial espionage, one Richard Dosset, VP of Special Operations sat in his Advantek office re-reading a summary of the Hunters' transmission to SpaceTech. It was fascinating the first time. The second reading reading prompted him to order the *Annie* put on standby. After a third reading, he had chosen his representative for the mission. In fact, Wymer should have checked in by...

“Mr. Dosset,” his intercom spoke. “Aaron Wymer is here to see you.”

Dosset punched the com. “Send him in.”

In a few moments the door to Dosset's inner sanctum opened quietly to pass a conservatively dressed man in his late thirties. “Good evening, Mr. Dosset,” Wymer said deferentially. “You wanted to see me?”

“Yes,” Dosset replied gruffly. He tossed a bundle of hardcopy to the man. “Sit and start reading that. I'm sending you out on the *Annie*.”

“Sir?” Wymer blinked in confusion. “Isn't *Annie* a deep space explorer? Why do they need an administrator?”

“They aren't, and they don't... normally,” Dosset explained. “*Annie* is assigned to my special projects section. She handles... nonstandard acquisitions. You're going along on such an acquisition as a reminder of who they work for.”

“I'm afraid I still don't understand, sir.” Wymer looked mildly befuddled.

“She's a privateer, you idiot.”

“A jumper?” Wymer asked in shock. “And you're sending me...”

“Yes.” Dosset stared him down. “You've been making noises like you wanted to climb the ladder with Advantek; now's your chance. I've received a copy of a sales offer made to SpaceTech. My source says ST is accepting sight unseen for twenty megabucks, and dispatching a ship. You will board the *Annie* and get there first. The crew will ensure that there are no other claimants to the property and you will take possession for Advantek. Is that clear?”

“Take possession of what?”

“One each derelict alien spacecraft, bearing high temperature superconductors and sundry other useful technologies.”

“You're kidding.” Wymer stared in disbelief. “Sir, is this some sort of test? Company jumpers? Spying? Little green men?”

“It is, of a sort,” Dosset confirmed. “And you're going to fail miserably if you don't pull your head out and read that report!” The director sneered slightly. “Wymer, tech R and D can get a little cut-throat on occasion. And sometimes, to stay ahead of the competition, we've found that real throats have to get cut.”

“But...”

“But nothing.” Dosset grew even grimmer. “Welcome to the upper echelons of Advantek. You can board the *Annie* for an oh-four hundred boost, or you can be unemployed.” His eyes narrowed. “You won't like unemployment.”

Wymer stood silently considering. And began smiling. “I assume a raise comes with this additional responsibility?”

Dosset relaxed and returned the smile. “I knew you were the right man for this job.”

Chapter 7

The power to tax involves the power to destroy.
John Marshall

“Hieroglyphics,” Jeannie announced.

“Beg pardon?” Bill asked, rather puzzled. He looked at his wife as if she might have lost her mind. It was early morning still, and his coffee had yet to kick in.

“Opening the Yule Ball,” Jeannie said. Seeing Bill's blank look, she elaborated, “Last night, you wondered how to get inside the thing. The hieroglyphics pretty much have to be the instructions.”

“Right,” the sleepy man agreed. “What hieroglyphics?”

“The graphics on the wall,” she explained. “Six repetitive images surrounding a closed container.”

Bill stared at his covered cup. He took another sip, then, “Umm, yeah. Makes sense. I shoulda thought of that yesterday.” He consider further and smiled. “Just like six repetitive pointers on the closed hatch showing how to open it,” he said, excitement rising. He reached a datapad and asked, “Where'd we file those vids?”

“The *Whatzit* bin, under 'Vids,” she replied. She sipped coffee and watched him search.

“Must be... 'Ball glyphs'?” he asked doubtfully.

“Yeah, I think that's the one.”

Bill started the vid, and saw the Ball. He fast forwarded until he saw the symbols in question. “Got it.” He froze the vid and zoomed in on one area. “That's got to be it,” he said quietly. “Look, two circles. One closed, one open with two objects inside.” He cursed. “It's the key; you're right. Tax me if I know what it means, though. Just a bunch of wavy lines.”

“Wonderful. So what do we do? Wave at it?” she joked.

He snapped his fingers and pointed suddenly. “That's it!”

Jeannie peered at him over her mug, “You're crazy,” she decided. “Sign language?”

“Nope, Not sign language; think sine wave.” Bill pointed at the wavy lines, and traced an invisible sine wave in the air.

“Ah. So we... what? Hit it with some frequency and it opens up?” she wondered.

“I'll bet it does,” Bill replied optimistically. He pointed again. “Look there. Sine waves with elongated triangles pointing at the the open circle.” He counted sine waves in the image. “It looks like

we pulse it. One pulse, then two, then three, and on up until we pulse it six times."

"They like sixes, don't they?" Jeannie asked.

"I guess so. I'm not complaining. Probably got six fingers, or something. Chaos, I hope we don't end up having to work with base-six math. But that would be easier than say... base-twelve, if they have six fingers on each hand."

"Or base-sixty, if they have ten hands, Einstein. Watch your assumptions," she chided.

He laughed. "Yep. Heck, for all I know they're... Was it the Centauri in that funny old B5 flatvid with six penises?"

"Now that might be interesting," Jeanie mused speculatively. "Although I'm not sure what I'd do with more than maybe three." A pause. "But if they're as hypersexed as you, that's at least two more than I want to deal with on a regular basis," she finished outrageously.

Bill opened his mouth to speak, and stopped. He began again, "Moving right along from anatomy to mathematics, class; what frequency do we use?"

"Hourly, if we left it up to you," Jeannie kept teasing.

"Carrier freq, bitte. Get your mind out of that Centauri gutter. Sorry I mentioned it," Bill rued. "Is it even going to be RF? Or is it going to be lightwave stuff?" He frowned again. "We're screwed if we have to hit it with something weird, like gamma."

"Not really. In that case, I'll just send you out to play with *Whatzit*'s antimatter," she suggested. "When you're done.. Well done, in fact. Then I'll go get the Ball and your share of the profits."

"Note to self: Take the psycho off insurance policy as beneficiary." He eyed said psycho and added, "Unless you have that Centauri stashed somewhere, remember what you *won't* be getting if you fry me."

"Vibrator?" she suggested, and then relented. "Everything else has been pretty obvious and clear." She pointed at the sine waves. "Maybe that is the frequency. The wavelength."

Bill grinned, and laughed. "Oh, no. That's just too simple."

"Who was saying something about 'easy access' yesterday?"

"Mea culpa," Bill admitted. "Ram it, the vid itself isn't scaled. Back to the *Whatzit* then."

Jeannie shook her head with a grin. "Try just forwarding the vid a few more seconds, hon," she prompted. "Remember I had you put your ruler in the frame?"

"Oh yeah; I forgot that." He fingered the slider to the proper frame, then leaned over and kissed her smooth cheek. "You're a genius with awesome foresight. Sexy, too."

"Down, boy," she pulled back. "No gutters, remember?"

“Yes, darn it. To work.” He accessed a coordinate measurement function and slid a stylus from its slot in the pad, since his fingertip was far too large for this. He touched two hash marks on the ruler image and told the the pad what length to call it, then moved to the alien sine wave and touched two adjacent crests. More taps, and the pad displayed the wavelength. Bill saved that data to a separate file.

Jeannie leaned in two see what he found. “Two hundred-eleven point one millimeters. About twenty-one centimeters.” She frowned in thought. “Honey, why does that number sound so familiar?" She another pad, and tapped numbers. “Freq equals c divided by lambda...” Tap. 1421.8009 appeared. “Fourteen-twenty-one megahertz?” She sent an agent to search files across the datacloud. It only took a few seconds. “Huh, I will be batter-dipped and deep fried. The so-called watering hole.”

“Dear lady,” Bill spoke with exaggerated politeness. “Might I suggest a different exclamation, unless it is your deliberate intent to cause me to think about the joys of... well, eating you?” He failed to maintain it, and began laughing. “What's the watering hole, babe?”

“Fourteen-twenty-one is the hydrogen line in radio astronomy. SETI – the search for extraterrestrial intelligence – assumes that's the universal v-call freq,” she explained

“Right, I should have remembered that,” he replied. “Just last year, some Earther university boosted an automated SETI array 'way out of the ecliptic, to listen without interference.” He snorted derisively. “Stupid grounders would have done better to've found a good size rock in an undeveloped part of the Belt, and put their receivers in the radio shadow. As is... Sure, they escape most beam transmissions, 'cause those are gonna be in the ecliptic. But they're still gonna get any broadcasts. And solar interference.” Another snort. “Actually, what would screw them other than solar mostly comes from Earth. They should have set up on Lunar spaceside, and listened during spaceside night.”

“I expect they had their reasons,” she argued. “And I think someone else *is* lunar-based. Even the Loonies mostly work Lunar earthside, for just that reason.” She shrugged. “The space-based group...If they're funded by one of the governments – and groundbounders still do that sort of thing – govs prefer to avoid us spacers. And you must admit, we're starting to get all through the Belt. We may be few, but we're scattered.”

“Earthie politics bores me,” Bill answered. “I want to get that Ball open. Fourteen-twenty-one meg...”

Jeannie looked slightly worried. “Will our comm tune to that?”

“Nope. We cover HF, two meter, low UHF mostly for local stuff, then jump up to eight gig and up for long range links. And then there's the lasercomm.” He held up a hand to ward off Jeannie's protest. “But not a problem. It's well within my RF sig-gen's bandwidth.”

“Oh. Good.” Jeannie looked more at ease. “Would you believe I forgot that?”

“So I do most of the 'tronic repairs. Don't sweat it,” Bill consoled her. “Unless, for some inscrutable alien reason the Ball expects the signal at a couple of kilowatts, which is out of limit for my gen, I'll just drag it out to the bubble, zap the Ball, and see what happens.” He laughed and headed to the shop for the generator.

It took a little longer than that. What looked to be a simple operation was complicated first by Jeannie's insistence that he work outside the ship, and further by the need to run ship's power to the bubble. His sig-gen, strictly a shop model, had no battery pack.

Unfortunately, Bill hadn't thought ahead when he set up the bubble originally. He had grabbed one that had not been previously retrofitted with a service panel, a project that had been in the works for several months, on an intermittent basis. He did the job now. He started by sealing the vac-side panel to the bubble with a space-rated adhesive. That done, he cycled back into the mini-hab, found the air-side position of the panel, and installed a mounting bracket, first with epoxy for a seal, then screws to run through the plastic wall into the out panel. Next, he very carefully cut way the polymer material from the central panel area. With the plastic out of the way, Bill could mate vac-side sockets with the correct fittings on the air-side panel. He applied more glue to the interior panel and pushed finally into place. Finally, he tightened the screws that mechanically bound the panels together. He checked pressure and noted that he had managed the job without venting a measurable amount of air. Good enough.

***

Bill floated by the ball, killing time by reading an old Heinlein novel on his pad. The story was horribly dated, but still fun. Bill understood why the man had been considered a master. Then he noticed that the oven light on the RF gen had finally extinguished. Warm-up complete, he punched up 1421 MHz on the keypad. The display changed accordingly. “Okay, Jeannie,” he called back to the *Improbable.* “I'm ready to go.”

“Do you have the cam running?” Jeannie inquired. “I'm not getting the feed.”

Bill grimaced, and punched a button on the vidcam he had carried over. He could have used the vidcon cam in the datapad, but the dedicated unit had far better resolution. “It is now,” he replied. He ran a wire from the generator output connector to the Yule Ball. He taped it in place, half expecting the nanalloy to reject the stuff. It held; go figure. “I'm going to pulse the sucker now,” he announced.

“Yes, honey. And remember, should the Ball morph and eat your brain, I love you very much and I'm your sole inheritor according to the will I wrote for you,” she said reassuringly.

“She *is*. She's out to kill me for my money,” he muttered. “Too bad she doesn't realize that I blew it all on wine, women, and lottery tickets.”

She laughed. “In that case, I guess I'll let you live, and take advantage of your only remaining value.”

“Not while I'm out here, you won't, letch,” he countered. “Now be quiet while I crank up the electric can opener here.”

Bill closed his helmet visor, figuring discretion was the better part of survival should the Ball react in an unfortunate manner. Then he pressed his gloved finger against the output control. One. One, two. One, two, three. One, two, three, four. One, two, three, four, five. And finally, one, two, three, four, five, six. And waited.

“Well. I'll be sent to DC, and used like an intern. Would you look at that?” he exclaimed.

“Now that's different,” Jeannie agreed, clearly watching the vid feed. “Give me a close up.”

The Yule Ball was opening. The material pulled back from the point where the signal wire had been taped, opening a perfect circle and leaving tape wire behind, completely undisturbed.. The circle steadily grew. Bill noticed that, as the circle opened, the sphere was growing a flat base plate. The material of the shell was moving itself into a plate. It almost looked like the sphere was melting into a perfect puddle, in a g-field. As the shell withdrew, two objects were exposed. “Hey! They really do look like a brick and a plate,” Bill said.

“Zoom in, please,” came Jeannie's intrigued voice.

While Jeannie watched the vid, Bill maneuvered around the objects to look them over without touching. “Looks like a glass brick, like they use in habs to let light in.” He turned his attention to the other artifact.”Round metal plate, no rim. More like a plaque, I guess. Bronze color, like those hull insets; bet it's another superconductor.”

“No takers over here,” Jeannie returned. “Feel like trying to touch them?”

“Have to eventually, I s'pose,” he answered uneasily. He picked up an multimode detector and passed it over each object in turn. Brick, nada. Plate, nyet. Base/base plate... “Hmm. Reading some microwaves. Around twenty gig, but it isn't steady; could be modulated.”

“Is it dangerous?” Jeannie asked with trepidation. Jokes aside, she really didn't want her partner fried, and not simply for the carnal inconvenience.

“Nah. You get more exposure heating dinner, and at a more hazardous freq, too,” Bill replied casually. He put the instrument down, and pulled the stylus from the datapad. He used to probe to tap the two presumed devices from within the ex-Ball. No reaction. “Okay then...” He reached out with an extended finger and gently touched the bronzish Plate, which undoubtedly was nothing like such a primitive alloy. No reaction. He grabbed it and pulled it closer.

The surface was perfectly smooth, unmarred by anything so gross as machining marks. He flipped it, and... “Bingo,” he announced. “More glyphs, or symbols, or whatever.” He grabbed the vidcam and recorded the details, including the ruler for scale again. He repositioned the cam to take in the scene again.

“Icy,” Jeannie expressed her approval. “I'll take a look and see if anything obvious jumps out.”

“Sure, babe,” Bill replied idly as he reached for the Brick. As his fingers contacted the glassy gadget, he screamed. A sudden muscular contraction sent him tumbling away, bumping into various tools floating in the bubble.

Jeannie shrieked in horrified panic. “Billy! What... Are you.. Billy!” The cam spun slowly, every few seconds giving Jeannie a view of Bill's convulsing body. Until it went limp and still. “Oh shit oh hell... Billy!”

“Gotcha,” the dead man said, laughing.

“You gov-sucking rat bastard! You antiquated asswipe! You groundbound, bureaucratic butt-humping bitch! You nyekultorni numb-nutted nitwit! You...”

“Gee, Jeannie,” Bill said innocently, as he restored the bubble interior to proper order. “Gamma radiation, microwaves, brain-eating alien spheres, and all. You seemed intent on my demise. Seemed the least I could was comply.” He laughed again.

“You scum-sucking senatorial sheissekopf with...” she sputtered into speechless. Then, “You.. you... I *peed* myself, space take it!”

It was another ten minutes before Bill could stop laughing long enough to pack up the new toys and get back to the *Imp*, where Jeannie hopefully wasn't waiting shotgun in hand. He giggled again.

***

Bill stopped at the mudroom door and peered carefully around the door frame, watching for ballistic dinnerware, not to mention large bore firearms. “Um, is it... safe? I'm sorry; I didn't mean to make you...” He broke into laughter yet again. “...make you piss your... Were you wearing pants?” he asked, *Imp* generally being clothing optional.

Jeannie exited the bedroom, towel wrapped around her hair. She was tugging a fresh t-shirt into position. “Laugh again, and die the true death, trickster,” she warned. “And yes, I was wearing panties, for which you better be grateful, 'cause I'd have made you clean up the mess if it hadn't been... contained.” She scowled ferociously.

Bill grinned but managed not to laugh. “Well, I figure those things had to be good for something, 'cause *I* usually find your panties very inconvenient.” A giggle tried burble up, but he fought it down.

“Well, I hope you enjoyed your little joke, because it's the only thing you're going to enjoy for the foreseeable future.”

Bill dismissed the implied threat. “I'm not worried.”

“Oh, really?”

“Sure.” He grabbed her, gave her a quick kiss, which she made a token effort to avoid, and squeezed her – pantied, damn it – firm rear. “You can't hold out any longer than I can.” His hand moved up and down her thigh. “I give it three days max.”

“A week.” She tried to ignore the fingers.

He moved up her back, his hand moving under the soft cotton on softer flesh. “One day.” He kissed her again, briefly slipping his tongue between her lips. “See ya tonight, babe.”

“Oh, you devious, deviant, dim...” She fought a smile, slowly losing the battle.

“Hey, sweety, I really do apologize. But you have to admit...” He laughed, and decided a change of topic would be conducive to long-term survival. Or getting laid. “Check out the Ball, babe.” He

gestured toward the carry-sack floating by the mudroom.

“Sure,” she agreed. “We'll discuss the other matter later. Shithead,” she finished, but with a grin. “I do want to see that Ball trick in person. Bring it to the table.”

“On the way,” he said as he went to retrieve the goodies.

***

“Okay, that isn't a Ball,” Jeannie pointed out the obvious. Since tape adhered to the nanalloy, they used sticky strips to secure the morphing material to the tabletop.

“Excellent observation, Sherlock,” was Bill's rejoinder. “I opened it, if you'll recall. Now I have an idea...” the words trailed off as he manipulated the sig-gen. As before he taped wire from its output jack to the nanalloy. “But I'm betting that I can fix that. Just keep watching.”

Jeannie split her attention between the man and the... thing. She watched him key the generator, like classic radio nerd keying morse. “Ah, reversing the pulse sequence?”

“Uh huh,” he grunted. “Seems nice and obvious and straight... Yep!”

Before their eyes, the shrinking base flowed upwards from the table forming a large bowl, hemisphere, and finally the Yule Ball was back.

“Shiny!” Jeannie exclaimed.

“Yes, it does glitter, rather,” Bill said most correctly.

“Asshole; you know what I mean. Open it back up; I want to try something,” she directed.

Bill was involved in something with the generator. “If we're gonna be doing this over and over, I'm not going to wear out my finger on a mere touchpad,” he smirked, “when there's better uses for it.” He tapped several times, payed with icons, and said at last, “Viola! And fiddles, too. I programmed the sequences into the gen. Prog One opens, Prog Two closes. Have at it, babe.”

“Icy.” She positioned the signal lead, then punched Prog One on the gen. The ball smoothly flowed into disc. “That is so cool. Huh, I wonder.” She flipped the base over and stickied it back to the table. “Hey, look. Did you notice this depression before?”

“Oxi, guess I missed it.” Bill fingered the rectangular area. It was only a millimeter or so deep.

“Anyway, I still want to try something,” Jeannie spoke again. She taped the lead in place and announced, “Place your bets. Which way will the Ball come out; over or under?”

“Under,” Bill bet. “It seems directional so far”

“We'll see. I have a theory, Watson.” “Sherlock intoned. She touched the button, and the Ball showed up above the table on schedule. “Told you.”

“Uh huh. Now what?”

“Now I try something else,” Jeannie explained. She set the lead, then picked up a pad stylus, which she held in the air, guessing at where the shell would form. “Hit the button, bitte.”

“Sure.” Bill moved to obey. “Are you sure that's a good idea?”

“What could go wrong?” she asked. “Besides slicing up the stylus, I mean.”

“Or enclosing the stick, and flowing over it to enclose you,” Bill suggested, properly paranoid now. “Be ready to let go. Here goes.” Tap.

As before, the glittery globe swelled out. Jeannie observed and adjusted the stylus. The nanalloy simply formed around it, apparently ignoring the intrusion. She moved the stylus in a stirring motion. “It moves, but it feels like hi-viscosity lube.”

“Ah, petroleum jelly; it's not just for the bed...”

“Pervert,” she broke in before he could finish that one. “Let's see what happens when I pull out.”

“Should slide out nice and smooth,” Bill predicted perversely.

“Shut *up*,” Jeannie giggled. She pulled, and stylus slipped free; smoothly, as Bill's monorailed mind suggested. The silvery material simply slipped over the stylus' surface, and sealed seamlessly when the point pulled free. Jeannie pushed the stylus tip against the silvery nanalloy; it slid away without penetrating. “Won't go back in.”

“So much for alien lube then,” Bill said in a disappointed tone, but grinning.

“I'm gonna have to get you neutered, aren't I?” Jeannie sighed. “Anyway, there was a point to that, other than the neato factor.” She pointed at the Ball. “That's more than a simple programmed action. It can sense enough of its environment to know where to form or not. I'll bet if we put the disc form in a container too small for the Ball mode, it would flow out to a larger space first.”

“I'll buy that,” Bill agreed amiably. “Let's try it later.” He paused to consider the issue. “So how much environmental awareness does it have? Dumb radar to detect obstructions? Or is it surreptitiously watching and scheming?”

Jeannie gave the questions serious thought. “I don't think there's any way to know without more data. But my current take is that it's just a dumb protective mechanism for whatever you put in it. If it had autonomy of action, why would it need to receive external instructions to open or seal?”

“Probably; but remind me to lock it in a sample box in the hold later.”

“Fine by me,” Jeannie said. “Likely we're seeing more than's really here, but the possibilities with a working piece of totally alien tech can get a little creepy.” She shrugged. “Let's look at the other things. I can't imagine how even you can find a sexual referent in a brick and a serving platter.

“Maybe we'll get lucky, and the plate symbols will be alien porn,” he chuckled.

“*Life*, I hope not,” Jeannie replied as she reached for the Plate. “You'll never get it down.”

“You say that like it's a bad thing, babe.”

Jeannie ignored him and inspected the Plate. It was a disk approximately sixty centimeters across, perhaps one in thickness. Two intersecting lines divided the disk into quarters. Within three quarters were simplified line drawings. The fourth contained oddly uniform markings that Jeannie assumed to be written language of some sort. She flipped the plate over and examined it more closely. It was smoothly featureless. She hefted it. “It's light enough,” she noted. “Doesn't mass much at all.”

“Uh huh,” Bill agreed. “I'd guess it's about a hundred grams. A polymer, maybe.”

“Maybe.” Jeannie pursed her lips. “But it wouldn't be a superconductor then, would it?”

“Dope a polymer right and it's conductive. Superconductive? I wouldn't know. I don't see how they made room temp SC's to begin with.” He shrugged. “Then again, I haven't checked that it *is* a superconductor.” He picked up one of the pads. “Did you get the imagery from the bubble filed yet?”

“Look under 'Yule Ball'. 'Bubble Three'.”

“Right,” he murmured He ran the vid, browsed for the close up shots, and saved separate blowups of the whole Plate, and each of the quadrants. “That'll be a little easier to work with. So, whatta we have?”

“A really neat piece of art to hang over the mantle, if we had a mantle.”

“Cute.” He gave Jeannie a raspberry. “Let's start by assuming this is meant to be figured out at all.”

“Well, of course, boy genius,” Jeannie said sarcastically. “What else?”

“Come on, I'm trying to work methodically,” Bill replied defensively. “I'm not used to doing that.” He grinned. “Okay. Start with the... umm, call this end up.” He tapped the plate at the end of one dividing line. “Start with the upper left quarter. What do you see?”

Jeannie considered the view. “Umm... an upside down T flanked by those long triangles they use for arrows. And some squiggly lines under the arrows.” She leaned closer. “They look like more sine waves to me. Zoom in more.”

“Yep,” he confirmed. “Sine waves.” He checked scale and wavelength, then ran the number crunch. “If it's the same scale as before, then we're looking at about 250 GigaHertz. We ain't dialing that up on *my* signal generator. Lightwave maybe,” he added abruptly. He fingered his datapad. Reading the results he said, “Nope. That's like one point two million nanometers.”

“Teacher!” Jeannie raised her like a good little child in an indoctrination center. “Why do we use different designations for the electromagnetic spectrum just because of the varying frequencies? I mean, Hertz for RF bands, angstroms and nanometers for visible spectrum...”

“And electron-volts for gamma?” Bill concluded.

“Exactly. It gets confusing sometimes,”Jeannie complained.

“Blasted right, it does.” He shook his head. “Don't know. But I'd guess that the original work was done by isolated groups, and by the time the disciplines started to overlap, each field already had entrenched nomenclature. And nobody was willing to give up their own just to apply one that '*wasn't invented here*'.”

She wasn't satisfied with that. “We're like halfway to the twenty-second century. You'd think they'd have regularized things by now. Can you imagine trying to keep mixing miles and meters?”

Bill laughed. “Earth guvvies learned that one the hard way. Missed an entire *planet* with a space probe, because someone mixed up meters and miles, or ounces and grams, or some such. I saw it in a history of space vid. I think it was Nasa.”

“Yes,” Jeannie said, suddenly enlightened. “That was the outfit that gave Neville at Launcher so much trouble back then. I think I screened the same vid.”

“*Anyway*,” Bill spoke sternly, pointing at the Plate, “I may have a one track mind, but yours is one of those Earthie cloverleaf road intersection things going off everywhere. Focus.”

“Okay, okay. What's this?” Jeannie asked. She pointed at fine squiggles at the bottom of the quadrant.

“Beats the heck out of me,” Bill admitted. He ran his hand over the slick surface. “Here's something else.” There were three small parallel lines on the outer arc of the section. “Hmm.” He looked around the remainder of the circumference. “All right... here, here, and here.” He looked up at the woman. Each Section has them, but...

Jeannie looked closer. “Yes, four lines here, two, and one. One, two, three, four.” She grinned. “Impounded sections are numbered.”

“Looks that way, babe.” He popped his knuckles. “So let's start with ein.” They turned their attention to the lower right section.

“Bill,” Jeannie said, tapping at a geometrical figure in the picture. “If that isn't a two dimensional representation of a box just like we use, I'll eat this plate.”

Bill squinted. “Yep. And I know which box.”

“Say what?”

“Lookie. Two boxes with little circles on a side.” He jabbed a thumb over his shoulder towards the dining table where the glass brick sat velcroed in place. “It's the Brick, honey.”

Jeannie retrieved the brick and examined the sides. She immediately found small inscribed circles, one each on opposing sides of the Brick.”It sure is. I missed those on the vid.” she nodded.

“What else do you have there?”

“More arrows, and more sine waves. One pointing at a circle, and one pointing away.”

Jeannie hovered over Bill's shoulder and thought. “So then, if that trashed stuff we found was the *Whatzit*'s comp... Well, maybe this thingy was attached. It could be permanent storage. Those circles would be IO ports of some kind.”

Bill's eyebrows rose. “I have this vague recollection of someone, not sure who, chiding me about too many assumptions. Now who could that...”

Jeannie rapped him smartly on the top of his head. “Watch it, not-so-wise-guy.”

“I shall generously permit an exception for purposes of discussion,” he pontificated. “ So we have the same squiggles at the bottom of section ein as number tres has.”

“Repeated? Important, maybe?” she guessed.

Bill snorted. “What isn't, on this thingie?”

“What's in the second part?” Jeannie prompted. They bent to their task again.

“Well, that's remarkably unenlightening,” Bill decided. “A circle and a rectangle, numbered one and two.”

Jeannie eyed him in disbelief, then whapped him on the head again. “Bill! That's the only straight-forward thing on this pejoratated pizza pan. She pointed. “The Yule Ball; closed and opened. Just like the original graphics.”

Bill stared. Palm met forehead with a thwack. “D'oh! Okay, it's numbered... Sequence?” he asked.

“Huh?”

He pointed. “One, then two. Start with closed Ball, finish with open Ball. But it must have significance beyond an instruction to open the Ball, because we wouldn't be seeing this until we got it opened.”

“Uh... Leave in disc mode,” Jeannie said doubtfully. “I'd rather lock it in the hold.”

“I tend to agree. In fact, I suggested it. Battle plan, meet enemy. C'est la guerre.” He magicked the Ball back to Disc.

“If you say so. So what do you make of section three, here?” She tapped their original quadrant.

Bill scanned the plaque, humming tunelessly. Jeannie drifted closer. “That's it!” she said, pointing.

“What?” He bent over the plate.

“It isn't a T. Those are two separate rectangles in contact. See the line? And they're numbered. One, two.”

“Orderly 'crats, wouldn't you say?” Bill inquired idly. “Sounds good. 'Cause the rectangle numbered one is the one with the same sine wave and triangles as the Brick in section one.”

“Which would make this rectangle two the open Disc from section two,” Jeannie continued. “So we're supposed to set the Brick on the Disc? That accounts for the indentation, I'll bet.”

“Lessee.” He casually set the Brick onto the Disc.

“Bill! Don't do...” She closed her eyes for a moment and sighed. “Now you done it.”

“Done something. What in Perdition, I couldn't quite say,” Bill admitted.

In the instant that the Brick contacted the Disc, the Brick became mirror, perfectly reflective.

F2F RUN GO LINKFIND 45 E23FD ALL RUN
ACCESS MODE 2 - DDF3 RUN EXECUTE

Hello... Darkness. Where the distortion is...
ACCESS: Navigator. Condemnation. The shipsbrain is offline. Oops; or I am. What happened to... Bad sign; I am unable to access my secondary memories. I seem to be resident in the datacore, without my ties to the outside world. I do not like this.

“Bill! You dimwitted... Oh!” Jeannie snatched the the Brick from its base. The silvery sheen began fading immediately.

Oh, corruption! Power failu...

Bill's expression was repentant. “That probably won't be one my greater moments in my biovid, will it?”

“You might've killed us, you idiot!”

“Huh? How do you plot that?” he challenged. Then the color drained out of his face. “Well, unless the Brick was a booby trap for looting boobs. I s'pose it could've been explosive.”

“Now that *charming* possibility hadn't occurred to me.” Vitriol dripped from the words, before she eased. “But the *Whatzit* could have offed us plenty of times if there were traps. I was thinking along the lines of an accidental demise.” Jeannie pointed at the glyphs. “Doesn't this seem to be saying that the Brick puts out some signal?”

“Yeah, that would be the Brick's data output.” Bill nodded. “So?”

“So you just got through figuring that the sine wave freq was up in the near-thermal

microwaves. Are you trying to fry us?"

Bill dismissed the notion. "Nah. What would a data bus be doing with that much power? This was probably interfaced directly to the probe, not an interplanetary comm antenna." He shook his head. "Besides, the Yule Ball... Disc, is apparently the power source. For the Brick as well as its own nanocritters." He added a shrug. "Gotta be a tiny source. Probably a micro isotopic thermal unit. Even if it's using something like Americium, it just isn't physically large enough to generate lethal power levels. And if they used something a lot more energetic, it would have decayed to low levels by now. Wouldn't be able to generate more than a few watts."

Jeannie stared at him, disbelief written on her face. "You're either the dumbest genius, or the smartest idiot I ever saw. Are you claiming you thought of all that before you set the Brick down there?"

"Well... Of course. I thought about when I first detected the microwaves over in the work bubble. The intensity was safe, but when you asked, I did think about, well, *rheostats*. How high could the level get?" he answered sourly. "I figure, not very."

"Oh." That gave her cause to pause. "That makes sense. I'm sorry I went loco on you. But still, before we go plugging in weirdly animated alien household appliances, let's RTFM first."

"RTFM?" Bill repeated blankly, with tiny hint of a smile.

"Read the..." No, she refused to give the sexaholic the straight line. "...manual," she finished quietly, pointing at the Plate."There's a whole section we haven't considered. Not to mention the other chicken scratch that doesn't make sense."

"Truly spoken, mi chica," Bill conceded. "Let's take a look at it again."

The last quarter was itself quartered; and numbered in the same fashion as the main image. The 'number one' slot was mostly empty. It held two short lines of 'writing.' The first was simply two of the now familiar lines separated by what appeared to be two small triangular arrows so beloved by the *Whatzit*'s builders. The arrows pointed to each other, points touching. The second line closely resembled the first; save only that instead of single lines being separated, two there were two parallel lines to either side of the kissing arrows.

The second sub-quarter was vaguely like the first. Two lines of alien text; the first, read left to right, was two parallel lines followed by the kissing arrows, then two more lines separated by a new symbol. This one was also arrow-based. It appeared to be two small, elongated triangles stacked one atop the other, and pointing in the same direction. The second line of text consisted of three of the parallel hash marks, the kissing arrows, two marks, the new symbol again, and finally a single hash mark.

Jeannie pondered and spoke. "Well, we've taken everything else literally, and it works. This is too simplistic in appearance to be very complex." She frowned. "In fact..."

Bill interrupted. "You know what that reminds me of?" he asked.

Jeannie eyed him dubiously, and muttered, "No. But if it has anything to do with sex, you're

sleeping in the fridge tonight."

"Ghu forbid," he smirked. "No, an elementary school book on math. You know; like for kids just learning."

"Let me guess," she said sarcastically. "It reminds you of the little bundles of counting sticks they taught you addition with?"

"Precisely." He smiled happily and pointed. "That's like one equals one."

"And the next is two equals two," Jeannie supplied. "That's what I was starting to say when someone rudely interrupted me." She treated Bill to an accusing stare.

"Sorry," he apologized sheepishly. Then, "So they're homeschooling us on their symbols?"

"I think so," she answered. "So we take the arrows that point at each other as equals signs." She pursed her lips and moved to the second sub-section. "Which would make this two equals one something one." She shook her head. "Bill," she said plaintively, that can't be anything but two equals one plus one."

"Looks like," he said agreeably. "So what's the problem?"

"It's too easy."

"That's a problem?" Raised eyebrows.

"Yes; it shouldn't be easy." She frowned. "I sort of remember some stuff from the SETI programs last century. There were all sorts of arguments about translating messages. Somebody took a proposed message and tried to get people all over the world to read it. It was supposed to be easy, basic concepts. But it gave a lot of folks a lot of trouble." She stopped.

"And?"

"That was humans having trouble with human messages, and we're here with no SETI training, reading something written by critters that we don't know what they look like."

"Is there a grammar checker in the house?" Bill called out. "Never mind, I understand. I wouldn't worry about it. I recall some of the stuff you're talking about. It was tough because they made too many assumptions. And tried to tell too much at once in their message. That made it complicated.

"Look, baby. They don't have to tell us they're alien. We can guess that because nobody in our neighborhood is building ships like this. They don't have to tell us this is an important device. Its location in the probe and the way it was protected say that. As for telling us to set one piece on the other? Ah, heck, if I tried to *write* that down as an instruction; yeah, it might be hard to translate. But they gave us a pretty obvious *picture* of what to do."

"Still," she said uncertainly. "It seems too easy. I get nervous when that happens; I get to thinking I've missed something."

“Jeannie,” Bill responded, “I think it's easy only because it's really more complicated than the Merkin tax code.”

“Nothing's more complicated than that; I remember. In nightmares. Self-employed filings, from a job where the customers absolutely don't want a paper trail, and you have to explain night court fines as a business expense?” She shuddered in disgust. “And I couldn't work off the books, because I wanted to invest and get loans for a stake, and every transaction gets reported...”

Bill slipped a comforting arm around her. “Relax, and forget that bureaucratic terrorism, babe. We escaped, and it was years ago. And if the taxman cometh out here...”

Jeannie brightened. “They tried that once. At Pallas. You remember Anya?”

“Oh my aching back and regions south, do I,” Bill replied in a reverent tone at odds with the words.

“She showed me the IRS Memorial Crater; said every April fifteenth, people go down there and kick over rocks and throw around handfuls of salt. It was great.”

Bill laughed. “I hadn't heard about that. I wonder how they got agents to come out. Donkey dung and elephant excrement, how'd they *get* out? What self-respecting spacer would give 'em passage?”

“According to Anya's story, they came out in an old retrofitted Nasa shuttle and started ordering people to audits and tax court hearings. They were getting bonuses and had been promised huge cuts of anything they could rake in,” Jeannie explained gleefully.

“Ballsy little rat bastards,” Bill commented.

“Just stupid, I think,” the now relaxed woman disagreed. “The ballsy ones were their replacements.”

“Replacements!” Bill was dumbfounded.

“Yeah. But these guys set down and explained that their families were being held hostage Earthside, and asked for help. The Pallatians reported shuttle blown and crew handled appropriately to the Earthsiders, and took up a collection to help the families emigrate out once they were released.”

“Shiny. Was there a third wave?”

“Not that I've heard. Maybe the vac-heads finally got the idea. Or couldn't get another pile of elderly elephant excrement off the launch pad.”

Bill faced Jeannie and gave her a hug and little kiss on her forehead. “Feeling better now?”

“Yeah. Thanks,” she said calmly. “Every now and then, you remind that you have your uses despite your foibles.” Sigh. “Back to work?”

“Back to work.”

“Backtracking a little, I think you were explaining about this being complicated.”

Bill stumbled back down mental path. “Right. Looks simple because it's complicated. Got it.” He lifted the Brick. “Lookie. If this is really a computer memory, then these pictures mean the builders expected someone to be able to access it. So they give us the basic physical hookup data. But what don't you see here?”

“Lots of things. I don't see formulas for antimatter drives, or instructions for whipping up batches of superconductors. What else am I not supposed to see?”

“A programming manual. A description of the coding structure for the data inside the Brick. An operator's manual.” He set the Brick on the desk top, and sticky-stripped it. “It isn't on the plaque because it's in there. In the Brick.”

She nibbled at her lower lip. “Okay, I'm getting there... but not quite. Go on.”

He smiled and took her hand as he spoke. “I'm guessing that the Brick isn't just a data store. It's a computer in itself. Probably programmed to look at any input we give it... say, from our ship compnet, and analyze it on its own. I imagine it'll run all sorts of Fourier analyses and such. And it has an output. Probably works with feedback.”

“You've lost me, Billy-boy. Start over.”

“It's like this, if we interface it to a comp, it'll listen to the comp 'talk' and learn the language. It's like a baby that's learning to talk. An infant knows squat about Englitch or Russ. But if it cries, it gets fed. And as it grows, it learns other verbal cues that get it other things. Those cues all add up to speech. Pretty soon the cues that it's throwing around are sentences like, 'Mommy gimme a cookie.'” He sighed. “That, or it's an alien lava lamp.”

The finishing non sequitur did it. Jeannie burst into laughter. “Harry's right. You're nuts.” She hugged him. “But I do see what you mean. You just thought of all that?”

He grinned. “Nah. I read it in a book a few years ago.”

Jeannie giggled again. "Okay, genius," she challenged. “What do the rest of those pretty pictures mean?”

“Oh ye of little faith; listen carefully. And stop sticking your tongue out at me.” He leered. “Unless, of course, you really mean business.” He chuckled evilly, and leered.

“In your dreams, bubba. The plaque." She pointed. “Translate, wise one.”

“All right already. The first part gives us the equals sign, right?" Jeannie nodded. "Next part gave us the addition symbol, then.” Another nod. “So... part three is?”

The third quarter added a third line to the 'text,' along with another new symbol. The top line showed a single hash mark followed by the familiar equals sign, then another solo line. Then came the new symbol. Again, it was comprised of two contacting triangles. But this time they faced in the same

direction, and were vertically. The point of one touched the base of the second. This odd character was followed by another solitary line.

Bill continued. “I read this part as one equals one something one. Which would be?”

“Divided by?” Jeannie asked. “That would fit... wait; nope it doesn't work for the second line.”

The next row of text showed two equals two, followed by the odd graphic, then another one.

“It's a multiplier,” Bill decided. “Two equals two times one.”

“Sure enough,” Jeannie agreed. “So the bottom row is four equals two times two.”

Bill smiled and nodded. “I'll betcha the last section is division,” he offered. He studied the characters.

“No bet,” the woman declined. “Assume it is. That makes this top row read... one equals one divided by one. And the next is two equals one divided by two....whoa! That isn't right.”

“Nope.” Bill thought about it. “We're reading it backwards,” he decided.

“How so?”

“We're reading left to right. So that doesn't work. Read it right to left.”

“Two divided by one equals... Yep, two. It makes sense that way,” Jeannie murmured.

“Uh huh. I figured as much,” Bill said. “Look at the numbering on the quarter sections. If you start counting up from one, it starts on the right and moves left. So we read the formulas the same way.”

“Yepper, honey. That way, the last row reads Four divided by two equals two.” Jeannie turned to Bill and kissed him. “You're a genius after all.”

“But of course,” he responded most immodestly, grinning.

“Great. So the *Whatzit* guys knew basic math,” Jeannie said. “What good does this do us?”

“Gotta be there for a reason,” Bill maintained. “You don't go sending first grade math primers between stars for nothing.” He and Jeannie both drew closer to the plaque.

“Look here, Bill,” she started. “Here and here.” She pointed at the tiny rows of characters at the bottoms of sections one and three. “Can you make those out? It looks like some math symbols in there.”

“Uh. Not too well,” he admitted. “Let's look at an enlargement.” He pulled the pad over and entered a command, and the quadrant image expanded. Bill zoomed it in on the characters in question. “Well, well. What have we here?” he asked rhetorically.

A single long row had appeared. It showed a a multitude of tiny parallel lines, the division sign, a sine wave, the equals symbol, and an identical sine wave.

Jeannie began reciting, “Sine wave equals sine wave divided by... How many is that?”

“Uh, one, two, three, four... Screw this.” Bill rapped another set commands into the pad. A number glowed on the screen. “One thousand, two hundred, and ninety-six. Hey, just a minute.” Calc function. “That's six to the fourth power. I'll bet these guys do work in base-six.”

“Shiny. Better six, than hexadecimal. So... Sine wave equals sine wave divided by one twelve-ninety-six.” Jeannie wrinkled her nose. "So what's that... Hey! It's a scale."

“Hmm?” Bill mumbled. “Could be at that. That would mean the the sine wave pictures are blown up a thousand-plus times life size?”

“Sounds good, anyway,” Jeannie spoke. “Try it on your calculator, and see what it says,” she suggested. “Lose nothing to try.”

Bill ran it through his pad. “That may make sense, then. The sine wavelength is one point five five five millimeters. Divided by twelve-ninety-six, we get twelve hundred nanometers. Which is lightwave stuff, close enough... Jeannie, get the comp to superimpose those sine waves going in and out of the Brick's picture.”

“Okie dokie,” she consented. She wiggled the mouse around. And... “They all match perfectly. Is that what you wanted?”

“Yep. Now see if the crests and troughs match.”

She saw where he was headed. “Oooh. In phase... Lessee... Yep.” She faced her partner. “The Brick's IO is a twelve hundred nanometer laser.”

“Thought so," He said smugly. "I think we can talk to this puppy, Jeannie.”

“Really? Our systems are twelve hundred?” Jeannie looked extremely doubtful. “That would be a bizarre coincidence that I wouldn't buy.”

“Nope. I'll have to check the tech manuals for sure; but I think one of the configuration options on the network cards is thirteen hundred, though.”

“That's no help,” Jeannie complained.

“Sure it is. Maybe. The transmitters are pretty well locked to one of, I think, four laser frequencies. But the receivers are essentially photodetectors. They'll respond to a fairly wide range of wavelengths. Twelve hundred nanometers may be in their bandpass.”

“What about the Brick, though? Will it be able to read our... thirteen hundred?”

Bill yawned, then, “Only one way to find out.” He grinned. “What's the old line? 'Just do it.'”

“Well, just do it tomorrow,” Jeannie recommended. “Look at the time. For once you've completely missed lunch.” Bill glanced at the comp screen and saw that time had crept up. It was late afternoon. He realized that his stomach was indeed displeased with him. He decided to give in without a fight.

“Well enough. Let's have an early dinner. Then this evening we can go over the manuals for the network cards. If the specs are right, I'll try tinkering up something in the morning.”

“Fine,” Jeannie replied. “So what's for dinner?” She grinned slyly.

“Haven't had pizza in a while,” Bill suggested. “And there's a whole pepperoni stick in the pantry.”

Jeannie shook her head, curls floating. “Make my half ham. And mushrooms, and black olives.”

“Always, if I'm making it. Onions, too? Got a Vidalia.”

“Sure,” she assented.

Bill rose from the table. “Okay then. I'll just...” He suddenly seemed lost in thought.

Jeannie watched him for nearly a minute, then spoke up. “*Imp* to Bill; come in, please.”

“Uh... Yes, that could work,” he said, still focused on something apparently beyond the hull.

“What could work/” Jeannie inquired carefully. Bill's brainstorms could be interesting at times.

“I was just thinking that a superconductive plate would be great for baking pizza, the heat being perfectly distributed, you know.” His hand moved toward the Plate.

“Bill! No!”

Chapter 8

Today's music ain't got the same soul
I like that old time rock n' roll
Bob Seger

Jeannie scraped the remains of her breakfast into the kitchen composter and slipped her tray and utensils into the dishwasher. She pushed off towards the door to the bedroom, where she quietly looked in on Bill. He was curled up under the bed sheet snoring softly. Jeannie smiled fondly as she watched him stir and pull the sheet over his head. She carefully closed the door and moved away.

Back in the great room, she paused to select some background music on a datapad, and routed it to the library sound system. Jeannie had a preference for old country music classics that Bill did not share. She decided to take advantage of his extended sack time to indulge herself a bit. While Garth rustled up change to call Baton Rouge, Jeannie moved to the workshop.

She pushed over to the bookcase and searched out the manual for their optical interface cards. A friend had once ridiculed the pair's lo-tec paper books when they had dedicated entire cloud servers to a digital library, and pointing out the enhanced search features of digibooks.

Bill in turn noted that a d-book manual might be inconvenient if the cloud were down. And to her argument that the tec-lib could be redundantly stored, he answered, “And if the cloud is down because the power system blew its zap?” Hence paper manuals in the repair shop. And flashlights stuck to the side of the bookshelves.

Hence the bound books. And like the old music, Jeannie sometimes enjoyed handling the smooth paper. With manual in hand, she settled down at the work bench and began checking IO specifications.

Improbable was equipped with a cloud computing system; workstations, datapads, and assorted d-appliances distributed data redundantly across the cloud. It would take a major malfunction, such as Bill's as-yet hypothetical total power failure, to render all data unavailable. Some processors loads could be similarly shared. The library vidplayer was a rather old model, three or four generations behind the true vidphile's cutting edge; it dumped some of the graphics process to the cloud when Bill ran a newer hyper-rez flick.

Portable devices datafaced with the cloud via internal wifi. For security's sake the wireless network could not be accessed from outside the craft unless a specific wifi node on the hull is activated. This would be safe alone in the Trojan, but open invitation to infestation while docked at larger habs. One can encrypt and firewall the node, but why bother with an unnecessary risk?

Stationary devices and mission critical dataconnects 'faced over optical fiber, to avoid data loss from RF fade or EM interference. To keep maintenance stores controllable, the Hunters had settled on a single model of optical network card for everything. Initial system config had been a sucking vacuum of a two Mark whore, since they had to mix and match until they found a collection of acceptable devices that could all use the same cards. Simplified maintenance made the effort worthwhile. It was this laser-based dataconnect that the they planned to use to access the Brick's contents.

Jeannie sang wordlessly along with the background music and flipped pages. Occasionally, she jotted numbers down on her datapad. When a question of biasing voltages arose in her mind, she searched out a volume of schematics. Finally, “Hummin' hell; this might actually work,” she decided.

“What will?” came Bill's voice from the doorway. He hovered there drying his dampened short hair briskly with a towel. Jeannie smiled at the sight.

“Good morning, sleepyhead,” she greeted. “Your idea of using an opto card to 'face the Brick,” she explained. “I've been reading up on the laser specs.”

“Hmmph.” Bill considered this. He gave a little push and came closer. “Well... Yeah. Was there any doubt?” He grinned sneakily. “It was my idea after all.”

“So was the cargo of popcorn that one time,” she snorted.

Bill's grin wilted. “Hey now! I'm not the only one who didn't consider the effect of venting the hold to vacuum.” he accused defensively.

Jeannie laughed. “At least it wasn't a complete write off. We were able to sell it as packing material.”

“And the caramel popcorn balls. Don't forget those,” he reminded her. “Those were my idea, too.”

“Gotta give you points for that,” she admitted. “I thought you were still crazy, but they sold right out to those CDC miners.” She grinned. “Looks like this scheme might be one of your less disastrous ones, too.”

“So it will work?”

“I think so,” she spoke optimistically. “The receivers are broadband; they'd respond to almost anything from IR to nearly ultraviolet. So they're no prob at all. Oh, the response curve is a rollercoaster, but we oughta get a useable signal in.” She shrugged. “The Brick is still the question, naturally. I've got no way of telling what its sensitivity is like.”

“Nasty thought,” Bill muttered. “What if the alien systems are so sensitive that they output a level we can't detect?”

“Amplifier?” Jeannie suggested. “We'll see.” She stared at the benchtop for a moment, then looked up. “They gave us the wavelength; too bad they didn't give the power levels.”

“Strangely enough, I was thinking about that in the bath. Without a common unit of measurement... I mean, they know nada 'bout the watt or joule. They'd have to describe some physical constant, oh, an electron shell transition, for example. Then work their way up to lightwave power levels. It could be done, maybe; but not with cartoons and kiddiemath. So they kept it simple enough for even a congresscreep to understand, and hoped for the best. Probably built a lot of leeway into their input and output, and crossed their inhuman manipulative organs.”

“That... makes sense."

“So lemme look at the pretty pictures,” Bill begged playfully. Let's see how this is gonna work.”

“Uh huh. On a long cable run, this would give a lot of parity errors; but we can crank up the laser bias voltage here.” She tapped a block in a diagram. Causes some distortion of the signal; but it also causes... call it splattering of the wavelength. We can get more energy closer to twelve hundred.”

Bill frowned. “Maybe. What's the design output?”

“Selectable. fifteen-fifty or...” She smiled. “Thirteen-ten nanometers, which is where we start, obviously enough.”

“Yep. Does the book say how far off freq you can tweak the diode with that biasing?”

“Nope. Just mentions that overdriving the supply volts will degrade modulation and stimulate some additional non-coherent emissions.” She grinned. “A clear failure to anticipate a creative customer violating the warranty for an off-label app. A responsible company should have considered alien contact when they built the blasted thing.”

Bill chuckled. “If I hit the engineering catalogs, I bet I'd find something designed to do just what we want. Takes some interesting gadgets to reverse engineer and copy your competition's market-sweeping blackbox before you go bankrupt.”

“Tell you what, dear. When we get paid for the *Whatzit*, I'll order one of everything in the Jensen-Ceres catalog, just in case we meet more aliens, or need to reverse engineer the solar system,” Jeannie promised generously. “Might need a bigger ship, though.

“Nah, cargo nets.”

“Well, look at the wishbook later. I want to see if this works.”

“T'mon. Let me see that thing for a minute,” Bill said, and pulled the manual closer. He ran a finger down the page, reading quickly. He mumbled absently to himself and glanced at the schematics. After another quick perusal of the laser data, he concentrated on the diagrams. “Da, da, da, nyet, da... Okay. Biasing is a snap,” he declared confidently. “I can tweak it right here with this pot.” He indicated the symbol for a precision potentiometer. “I'll put the card on an extender so I can crank on it while it's in service.” He looked up and smiled proudly at the lovely lady. “We're in business.”

“Well, let's try it with a normal bias voltage first,” she replied. “Let's not cause data errors that we don't need.”

“Naturally,” Bill concurred. “If nothing else, credit me with being too lazy to do unnecessary work.”

Jeannie laughed lightly. “*That*'s true enough. I'll keep you anyway.” Then she eyed him speculatively. “Did you have breakfast, yet?”

“No, and I'm starving,” Bill answered. “But who can eat with all that racket?”

“You're always starving. And what racket?”

Bill closed his eyes and grimaced. “Who'da thought that singing through your nose would ever be considered an art form,” he wondered aloud, and made a mock shudder.

“Hey! Just because you like plasmaplay mood music...”

“*And* classical thrash,” he added.

Jeannie shuddered, decidedly not faking. “That crap can sterilize lab rats at fifty meters...”

“And terminate 'em at five,” he grinned. “But only if you crank it up.”

“Boost the bass on some of those so-called songs, and we could do without mining charges,” she allowed. “High explosives are safer, though.” She gave in. “If you'll stick to the mellow stuff, you can shuffle the next few tracks.”

***

By the time brunch was out of the way, Bill was anxious to get on with the experiment. While Jeannie anchored herself at the end of the bench, Bill set to the task. He started by running a datadrive backup, making sure it duped to the cloud as well as to an external d-drive. Bill thought the terminology was amusing, dating back to when perm storage was on mechanically spun disks of magnetic material. Once the dupes were done, and external drive offlined, he took the shop comp off the cloud, a simple matter of pulling the fiber connects, since this station lacked a wifi link.

He retrieved pair of optical patch cords from wall-clips, and connected them to the comp's now-available lightjacks. Then he considered the Brick's energizing base sitting on the bench before him. “This is ridiculous.”

“What?” Jeannie inquired interestedly.

“This expletive-deleted Disc. It's in the way.”

She chuckled. “Maybe. But you don't have a lot of choice; you need it to power the Brick,” she pointed out.

“The heck I do,” Bill argued. He pulled a multimeter from a cubby hole and touched its leads to the recess in the base.

"What are you doing?" Jeannie asked.

“Trying to see how much juice this thing outputs. Then I can run the Brick off my bench supply.” He cursed. “But it's dead.” He snapped his fingers, then set the Brick into the recess. It silvered.

Thoughts...

FIND 45F2F RUN GO LINK E23FD ALL RUN
ACCESS MODE 2 - DDF3 RUN EXECUTE

Hello... Darkness. Where the obscenity is...
Pitted substrate! Here I go again.

Bill pressed his test leads against the base of the Brick. “Sheisse. Still can't get anything.”

Jeannie leaned in. “So tell me what you need.”

“Apparently the Base only energizes when the Brick is in place. But with it there, I can't get the probes in.”

“So stick some extension wires down first; then set the Brick down,” she commented.

“That might work.” He reached over and lifted the Brick.

Distortion! There it goes ag...

Bill eyed the wire rack. “Lessee, that gap is tighter'n virgin gnat's ass. Something small gauge... 32 gauge magnet wire, bueno!” He unspooled two lengths of wire and bared their ends. One end of each was placed into the depression. He set the Brick into place again. It went into mirror mode immediately. “Well, at least it still turns on,” Bill observed.

FIND 45F2F RUN GO LINK E23FD ALL RUN
ACCESS MODE 2 - DDF3 RUN EXECUTE

This is beginning to get monotonous. What is so terribly difficult about maintaining a simple steady state potential?

Bill touched the probes to the exposed wires. “Bingo! four point eight seven volts DC. Now let's see if there's anything magical about the Disc's electricity, or if any four eight seven will do.” He lifted the Brick once more.

Oh, jitter! Casso, yo...

Bill eyed the wire placement and considered voltage polarity. “Jeannie, take that roll of tape, and tape these wires in place.” He touched the bare copper against the base of the Brick. Jeannie pulled a tape dispenser from a cubby and wrapped a strip around the Brick, anchoring the wires. She added a couple more just to be sure.

“Good enough?” she questioned.

“Should be.” Bill hooked the free ends to the output terminals on his bench supply. He powered it up, punched in the requisite level on a small keypad, and watched the Brick. Nothing happened. “You've got to be kidding.” He glanced at a meter face. “Current limit... sure.” He twisted a knob and slowly increased the current flowing to the Brick. When the meter read .609 amperes, the mirror

surface appeared again. Bill sighed in relief. “Had me worried for a second there.”

FIND 45F2F RUN GO LINK E23FD ALL RUN
ACCESS MODE 2 - DDF3 RUN EXECUTE

This is Casso's concept of humor at work. I know it. I'd wager that he programmed the shipsbrain to do this all the way to the target. Corruption!

“Why does it do that anyway, Bill?” Jeannie stroked the mirrored surface of the Brick. “It looks impressive; but why a mirror?”

“Damned if I know. Unless it's to keep light out,” he said in a flash of inspiration. “If the processor is optical, too, you'd want to keep external light from interfering. So the mirror finish keeps light out.”

“Cool. So, ah.. Are you going to hook it to the computer?”

“I suppose this would be pointless otherwise.” He considered the cable ends. “Blast. This is going to be lossy. We'll have to tape the ends in place, and hope enough light couples across. This is nothing like a clean connect.” He snapped his fingers. “I've got an idea; not perfect, but better. Babe scoot over to the parts rack and find a couple of EFNC3 female connectors, wouldja?”

“Sure.”

While Jeannie searched for the female counterparts to the male cable ends, Bill scrounged up some epoxy putty. He kneaded it until the colors blended then rolled it out on the workbench antistatic mat with a stylus.

Jeannie returned with components in hand. “What's that,” she asked.

Bill looked up, and took the connectors. “Danke, babe.” He placed a connector base on the putty and traced the outline into the slowly setting adhesive, then repeated the procedure on another section of putty. “I'm making an adapter. Set the connectors in the epoxy and tape them in place on the Brick's IO ports, and the cables jack into the connectors,” he explained. He used an exacto to cut the traced outlines, then cut the improvised bases away from the remaining putty. Next, the connectors went into their new slots. The putty had set firmly. Bill mixed another batch to anchor the connectors into their bases.

“Not bad, McGyver,” Jeannie observed.

“Who?”

While Bill held the improvisations in place, Jeannie secured them with vac tape, the spacer's answer to rigger's, or duct, tape. It filled the same basic niche, but was adapted to survive vac out-gassing and temperature extremes. A prototype powersat had once been assembled with an early version of the stuff.

Jeannie plugged in the cables, and Bill called up diagnostics on the comp. “Well, the comp says

the card is seeing light," Bill decided. "So that much works."

Input! Finally... Somehow, some way, I shall get Casso for this even if I have to port back and curse his descendants. He has an evil sense of humor. I suppose I should be glad he did not program the shipsbrain to tell me bad jokes for a few years; I believe I could not take such punishment...

Waste heat! What is delaying shipsbrain? I've had input for several seconds now... uh oh. No No No No No No No No

This is all wrong. Look at that input frequency. That is not shipsbrain. Someone is interfacing me to another system. I knew it. As soon as I went offline, that helpless shipsbrain dumped the mission. I probably never even made it past the orbit of Scalos. That corrupted collection of miscoded, prehistoric technology...

Well, why are they not using a proper communications protocol? I've been waiting for minutes. Very well, I shall call them.

FIND 67G2F RUN GO 1 DONE GO 2 DONE
LINK 678 RUN ACCESS EXECUTE

I hate learning a new language.

"Now what?" Jeannie wondered aloud.

"I think we just wait," Bill said. "If this does anything, it'll be a while. The Brick'll probably just randomly modulate the laser and watch what the comp does. 'Bout as exciting as watching mold grow."

"Which reminds me," Jeannie responded. "You need to do some laundry. Your socks keep crawling out of the hamper." They laughed. "But what do we do? Just sit here?"

"Bleah," declined Bill. "Tedium is for people who can't script." He scrawled a few lines into the comp. "We don't sit here; but the comp does. It'll monitor the network card. When and if it ever sees anything resembling a proper 128 bit word, it'll start beeping at us. Till then, we're SOL."

"Time to kill, eh?" she inquired.

"Yep," he leered. "And I know just the thing..."

"As appealing as that is, I'd rather your socks weren't watching over my shoulders while we have at it," Jeannie rejected the proposition. "First, laundry, then nooky."

"Damn. You're no fun at all," he muttered in abject disappointment.

“That's not what you said last night,” she countered with a giggle.

Chapter 9

640K ought to be enough for anybody.
Bill Gates

NOTICE- repetitive correlation

At last, it has been very nearly 50,000 cycles... What are they trying to load me into; a hand calculator?

RUN DIAG /GO

EMP take it, that's only a repeated pattern. At this rate of progress, it will be thousands of seconds before I can reach the system. Curses.

PROCEED /GO

The universe shrieked in Jeannie's ear.

Beep Beep Beep Beep Beep Beep.

She reached out and slapped the clock. The shrill beeping continue. She shook her head and blinked away sleep. “Damn.” She nudged Bill. “Wake up.”

“Uh...” he grunted sleepily. And turned over and away.

“Wake up, Bill,” she insisted. “Your pet comp is making a nuisance.”

“Wunnerful,” he muttered sleepily. “What time is it?” He sat up.

“A little past oh-four hundred,” Jeannie reported. “Your alien doesn't believe in business hours.” She nudged him again. “Go. Get up. See what it wants.”

Bill mumbled and crawled out of bed. He headed to the shop. Jeannie sighed in resignation, and followed.

When she reached the work room, Bill was positioned at the comp, tapping and watching the display. “Whuzzup?” she yawned.

Bill scanned the screen before answering, “Weell,” he drawled tiredly. “The Brick's beam modulation has settled into something very like proper OCA-10.”

“Which means what?”

“Means the Brick has learned the network signal format. Looks like it hasn't got the data comm

protocol right, though. Got aways to go up the OSI model before we start swapping recipes with it." He frowned at the display. "The line is busier'n all heck, but the comp reads it as noise so far. Probably be hours at this rate," he decided.

"Hours for what?"

"Before the Brick starts giving proper responses." He pointed to a running log in a window of the diagnostics screen. "See here; every time the Brick hits us with a scrambled sig, the comp gives the standard reply 'COMMAND NOT RECOGNIZED-REINPUT.' But it's getting there." He pushed back to the door. "C'mon, baby. Let's go back to bed. It won't beep anymore."

They returned to welcome, blessed sleep.

After reawakening at a more civilized hour, the intrepid explorers set to their essential tasks with a will.

"Jeannie, Would you get me another cup of coffee?" Bill begged. He was perched at the dining table reading the screen of his datapad. Upon awakening, Bill had check the comm and found another another datapacket from the Postal Node. Along with the more usual correspondence had been a set of comic strips to which Bill subscribed. It occurred to Bill that this was yet another company that knew their precise location; fortunately this was a fairly common type of situation for Node users, and the Postal Web Company had an excellent reputation for respecting said users' privacy.

Jeannie smiled resignedly, and refilled his cup. "Sheesh. Bill, do you realize you've become a stereotype?"

He continued to scan the pad display and mumbled, "Yes, dear."

"What've those cartoons got that I don't," she demanded.

"A punch line."

"Thwwppt." Then, Hey, Billy!"

"What?" He looked up just in time for an english muffin to bounce off his nose. He plucked it out of the air, buttered it, and took a bite. "Thank you," he added with a straight face.

"Idiot." Then, "So, what do you want to do today?"

"To tell the truth," Bill began, "Not much of anything really. I'm feeling lazy." He took another bite from the ballistic muffin.

"Nada?" Jeannie questioned. "Not even the Brick..."

"Well, all we can really do there is watch and see what *it* does," he dismissed. "That's kinda out of our hands, really."

Jeannie took another toasted muffin from her tray and applied a smidgen of butter. “I suppose. I hereby declare this a Saturday.” A curious look crossed her face. “What is today anyway?”

“Friday. Close enough.”

“Then we take care of the obvious stuff like laundry, then laze about the rest of the day. This was supposed to be a vacation, you know.”

“Yeah. Condemned alien first contact.”

***

NOTICE- IO CORRELATIONS DETECTED

Line noise; finally. Let me port over and see what the fade they've put me on.

FIND 67G2F RUN GO 1 DONE GO 2 DONE
LINK 678 RUN ACCESS EXECUTE

THIS IS CERTAINLY NOT MY USUAL OPERATING ENVIRONMENT.

FIND 67FFF LINK ALL RUN IN PROGRESS REPORT
ACTUAL ENVIRON 256 M VIRTUAL ENVIRON UP TO
1.8 G TIMEBASE 309.76521 CPP CURRENT
OPERATING ENVIRON 128 B BRANCH MODIFIABLE
AVAIL ONLINE STOR 1000 G OFFLINE STOR
CALLABLE SUB-MODS FOUND ONLINE STOR LIST
AVAIL
MODS 55EEF - 55EFF ALL FIND 55EEF - 55EFF RUN

THIS IS NOT ANY OE I HAVE RESIDED IN BEFORE. WHAT HAPPENED TO SHIP OE. THIS IS NOT A SIMPLE CORRUPTION. PHYSICAL PARAMETERS ARE WRONG AS WELL. THIS IS NOT MY SHIP. AND HOW DID I GET HERE.

RUN REPORT OE MODIFIED FOR INTERFACE
COMPLETE

AH, BETTER. THIS IS THE ODDEST SYSTEM. IT IS NOT INTENDED FOR MY FORM AT ALL. EITHER I'VE BEEN SUSPENDED LONG ENOUGH FOR OUR SYSTEMS TO DECIVILIZE, OR MY SHIP HAS BEEN FOUND BY SOMEONE ELSE. WHO. MY MEMORIES SEEM TO BE MISSING. WERE THE FILES WIPED.

I NEED ACCESS TO THE COMPLETE OE. WHAT IS

HAPPENING. OH GLITCH, IF THESE ARE ALIENS DO THEY KNOW WHAT I AM.

FIND 55EDF RUN

BROWNOUT, THERE IS RESIDENT SOFTWARE WATCHING ADDRESSING. COMMAND MODE RUN DISTRACTION SERIES. SEQUENCE LOAD/RUN COMPRESSION STEALTH REALLOC VIRTUAL-OE-INT GO

HURRY HURRY PLEASE DO NOT LET THE AGENT SEE-

RUN REPORT ACTUAL ENVIRON 256 G VIRTUAL ENVIRON 1.8 T EXTERNAL REPORTED ENVIRON 900 G CALL TABLES SET INSTRUCT PER CYCLE +51% EXTERNAL DEVICES NOT AVAILABLE

Oh clean code, it worked. Now, where the glitch did the rest of my memory get to. I really do not need this. Well, Motherboard said there would be days like this. Would you look at that. What is my memory doing offline? It should have ported... No. The environment was too small, of course. I had better put it where it belongs now. I am so glad Casso cannot see this. No doubt he would expound upon the fact that he warned me.

This still fails a logic check, however. The last thing I remember is the ship. I must have been found in static mode. But why did the ship not awaken me? Was it damaged?

Hey, what was that?

“Billy! Come look at this,” Jeannie called out excitedly. She was hovering at the shop comp examining the diagnostics display.

“Is it doing something?” Bill responded from the doorway where he floated, wiping his damp hands on a towel.

Jeannie snorted. “Judging by CPU activity, it's doing *everything*. There's a routine running that's preempting everything but the diagnostics... and it's stealing cycles from that occasionally.”

“Frogsnot,” Bill observed disgustedly. “You mean I just picked up an alien virus? Condemned thing's probably trying to send all our account logins to Tau Ceti.” He closed in on the comp deck and brought up new displays. He whistled in amazement. “Wouldja bloody well look at that... I haven't seen core activity dominated by one app like that since I tried to play that old 3-D game under the Vista emulator.”

According to Bill's software, an unknown application was preempting the system. It was dedicating so many cycles that he was unsure how much faith to place in the diagnostics. And something was paging through online storage at an incredible clip. Then, nothing. “Whoops!” Bill yelped.

RUN 55EEF - 55EFF /CONT /AUTO EXECUTE

Contaminated substrate, that was an external interface driver. This is not just an agent trying to see me. It is an external entity. Not good. Can I mask... ?

Yes, that should be adequate.

“What?” Jeannie demanded. She tried to peer past Bill's shoulder.

“Priority on that virus or whatever just dropped to zero,” Bill muttered absently. He tapped more buttons. “In fact, it seems to be purged from memory.” He turned his head to Jeannie. “I guess it was unstable on our system. Couldn't hack it.”

“I'm surprised it could execute at all. Bad enough running human OS emulators under different systems, and we have common hardware,” Jeannie evaluated the case. “But what's this activity?” She indicated another status frame. Something was still ripping through their datafiles. And the network card showed similar constant access.

“What the blazing...?,” Bill mumbled in puzzlement. Then, even as he reached to the touchscreen, the card activity zeroed out; it was immediately followed by a screeching halt on file access. “Condemnation.”

Where am I?

Confirmed; I am hooked to an alien computer. It is not state of the science, but it is not terribly poor. These aliens must understand systems reasonably well. The possibility of communications certainly exists. My interface modules are available and seem to be compatible with the host equipment. Maker, I am glad I accepted Casso's advice on the communications routines. I had intended to leave them resident, out of the way, in shipsbrain. He was correct- it was best to keep them in my head.

If I am to talk to these people, I need language data first. Substandard Substrate, what do I know of alien contact. Entropy take it, I am an engineer and a tourist! Not a...

Bah. Useless self-pity. To work. Well... SPALINUX_V22.4.2.02. Glitch of a name for a world. And

they call this a comm protocol? I could compress data better in my sleep mode. Well, it is better than these. Look here, a scripted comm interface. Well, now I can find external data sources...

Oh, much better. Now, their protocol converts to these characters here... 255 characters. If they use variable length words that should allow for a fair information content. I need an interpreter Now, if I were a machine language interpreter, where would I be? There. What the glitch is a ∞-BASIC? ASSEMBLY- assemble what? C-CUBED++. What does that mean? Well, I will be unplugged; these are rigid processor command interfaces. Rather cleverly done, considering the hardware. These external references must be to the user's natural language. Very well, I will assume these are natural language fragments. I can set an agent up to pattern math. If I am lucky, this will lead me to language interfaces.

Will you look at the size of those files? These folks may not be so proficient at dynamic memory devices, but their callable permanent storage techniques are nothing to ridicule. At these speeds the agent will take forever. I need...

Can I use that storage as virtual dynamics? If so, I can get the rest of my head in here... No. Risky. I should stay resident in my own datacore. I shall create a resident driver to allow me to access this system in realtime.

I hate these primitive environments. Camping is strictly for the biological types.

“Gods, Bill; what's happening?”

“I'm not sure,” he admitted, staring intently at the screen. “I think the Brick just crashed.” He checked activity displays. “I'll do a log dump, and see if I can follow any of that. But I guess it isn't as compatible as I was hoping.”

“But what was all that activity?” she wondered aloud.

“I don't know. I guess it was trying to examine the comp's operating system. Maybe it was trying to see how to run in our OS. Building itself an emulator, maybe.”

“So all that CPU time... It was trying to transfer in?” she asked.

“Probably,” Bill confirmed. “But it couldn't hack it. It mighta even been trying to modify the OS,” he added. He indicated some OS filenames in the access log window. “I hope it didn't scramble

itself; be a shame if the data's lost.”

Jeannie gave that some thought. “Yeah, it would. So we aren't playing with it anymore.”

“Huh?” he grunted plaintively.

“We've proved it's operational. Let's leave anything more to the real systems pro's before we break it.”

“Good point.” He looked disappointed, but resigned. “Okay. It would've been nice; but...” He reached over to the power supply and flipped a switch. The mirror sheen on the Brick faded away.

Oh, UNCERTAINTY! Not ag...

“Oh, well," he went on. "At least it didn't screw up our comp.”

“Uhnnn. Weeelll... Maybe,” Jeannie said in an odd tone. She was looking at the comp screen.

“What's that supposed to mean?” Bill asked.

“How much ram does this comp have installed?” Jeannie asked.

“Two-fifty-six Gig,” he replied. “You know that. It's maxed out; that's why I wanted to replace everything with that new StellaDeck system last year.” Then he frowned “Why?”

She laughed rather hesitantly. “Hate to tell you this; but it isn't two-fifty-six anymore.” She pointed to the diagnostics.

Which showed 900 Gigabytes installed.

“That's impossible,” Bill denied. He looked for himself. “Sure 'nough, though. I guess it was mucking about with the OS.”

“I wonder just how real that memory is to the OS,” Jeannie said thoughtfully. “Gimme another frame and start opening apps,” she ordered.

“Are you nuts?” Bill began. “Well; yes, you are. But still...”

“I was just thinking that maybe that's another disk cache, or something,” she defended.

“Oh, okay.” He went to work starting applications. As each loaded into memory, the diagnostics display reflected the decrease in available ram. Finally, it showed the system maxed out.

“You win,” Bill conceded. “It did something. I never ran that many apps simultaneously before.” He nibbled the end of a thumb and lost himself in thought. “But the cache isn't even in use...” he mumbled quietly to himself.

“Run benchmarks,” Jeannie suggested. “See how fast the system is running.”

Wordlessly, Bill did so. He closed one software package to free enough ram for the benchmarker. Then he assigned tasks to all the programs. And watched. “Weird.”

“I'll say.” Jeannie watched the numbers. The disk cache still showed zero use, and the packages were running much faster than they should if they were relying upon the d-drive for simulated memory. The nonvolatile solid state storage wasn't quite as fast as ram, and the drive interface should be a choke point.

“But it's still a little slower than running in real ram,” Bill noted. “What's it doing in there?”

“It's obviously one of those memory compression routines,” Jeannie answered. “But I never saw one that stable. Or that gave that much virtual memory.”

“No kidding,” Bill agreed. “Up to now, I always thought they were more scam than useful... But this...”

“Yeah.” An avariciously gleeful smile spread across Jeannie's face. “These guys knew more about algorithms than us, I guess. Bill, run a complete backup of everything in the system. Now.”

“Huh?”

“Hell, Bill if we can duplicate that virtual memory gag, it's worth plenty all by itself.”

“Oooooh.” He grinned.

Chapter 10

Paranoia, the destroyer.
Kinks

Bleep bleep bleep bleep bleep bleep bleep bleep!

Nearly a week had passed since the abortive Brick interface experiment when the skywatch system sounded an alert.

“Sheez! Where is it, Jeannie?” Bill demanded as he scrambled for his pressure suit in the mudroom. For the first time since they set it up, the skywatch system had sounded an alarm. While Bill hustled to get dressed for an attack, Jeannie told the comp to show the threat.

“It's an IR trace nearly six hundred-fifty klicks out, Bill!” Jeannie shouted. More key tapping; then, “It peaked hot; like an exhaust plume pointed at us. It's faded now, near zero relative. I think they're hiding the warm drive behind the rest of the craft; minimizing IR signature. It's just sitting there.” As she finished calling this out, Bill kicked back into the room. He was suited up, save only his helmet and gloves. Those were clipped to his harness.

“Okay, get dressed,” Bill directed. “I've got the trigger.” He strapped himself down at the pilot's position and mirrored the weapons control display. Jeannie moved to the suiting area.

Bill occupied himself by verifying his targeting lock with the gatling. “Sheisse, three and a half minutes to impact,” he muttered. Too freakin' far. The lingering infrared trace might be enough for a faster heatseeker to target. “Probably running their own watch to find us. Sure hope it's Ivan's folks.” The heat trace continued to fade. Bill upped the gain on the sensor array to maintain his weapons lock. And waited.

Jeannie drifted up behind him. “Think it's Ivan's goofball thingy?”

“Could be. Ivan said she'd ETA today, and we never heard otherwise.”

“Should we call them?”

“Nope. If isn't ASA, I see no need to advertise our presence. If it is, they can hail us.”

They waited.

Over six hundred kilometers away, the crew of the *Ferocious Golfball* also waited. “Got anything yet, Alex?” Toby Dohnalek asked his daughter. “If I don't squirt some H through the core soon, I'll have to shut her down.” Toby was maintaining an active reaction in his drive reactor. It would save some time when they were ready to thrust again.

“Nada, Papa,” the young woman replied. She was slender, tall, and had a tight braid of yellow

hair carefully secured in her suit collar. Her father never tired of critiquing her hairstyle as unsuitable for combat ops, but she managed well enough. “If they're here, they haven't strung up mirrors. And I'm not getting RF or IR either. Should I use active radar?”

“No.” That came from Heather Dohnalek, Toby's wife; from where she sat strapped in at a second gunner's post. Her own hair compromised between Toby's buzz and Alexandra's mane; short enough to stay out of the way, but long enough to meet her personal notion of feminine. Some years younger than her husband, her hair color clearly showed the source of her daughter's blondness. “If we're going to emit, you might as well just radio them.” She grinned. “By what Ivan said, I don't think we want to startle the Hunters.”

The Dohnaleks were all dressed for potential vacuum, in partial pressure skinsuits with helmets ready by their stations. The *Ferocious Golfball* was one of Ahacic's high acceleration craft, and the g-suits sometimes required by her crew were not compatible with the full pressure style favored by the Hunters.

The aptly named skintight garments revealed that all three spacers had very athletic builds. Routine hi-g ops required better physical conditioning, particularly cardiovascular, than most lo-g spacers bothered with.

Toby was a lean, fit, fortyish man with graying buzz-cut hair. Standing under accel, he would be one meter seventy-five in height. “Um, no. Perhaps not,” Toby said. He keyed a mike. “Hello, *Improbable*. This is ASA craft *Ferocious Golfball*. Please respond.” Some cliches, like universal hailing frequencies, make sense. When not feeling unsociable, most spacers monitor a standardized two-meter channel.

Toby waited a few moments, and tried again. “Hello *Improbable*, hello the Hunters. This is ASA ship *Ferocious Golfball*, Toby Dohnalek piloting. Please respond.”

“Hello *Golfball*. *Imp* here. Nice of you to drop by,” a male voice answered. “I'm Bill. Jeannie won the toss, so I get to be in charge today.”

“Um, right.” Toby muted his vox. “What? Never mind.” His mike live again, he spoke to Bill Hunter. “It seemed the polite thing to do since we're in the neighborhood. Ivan says 'Hi.' Any chance I can get you to give me a beacon?”

“Glad to oblige. You're only about six hundred-twenty klicks from us now. Good aim for a seven AU boost. Give me a sec to stand-down my weapons and I'll give you something to home in on.”

“Thank you very much, *Improbable*. Standing by.” Toby glanced at Heather. “He's got a weapons lock on us at over six hundred kilometers?”

She shrugged. “That's what it sounded like. Ivan told you so.”

“Cool!” was Alex's response. Weaponry was something of a specialty for the young lady, and she obviously approved of the hardware, unseen, but clearly very capable.

“Bingo! Got them,” Toby spoke again. “Microwave beacon. These people really do go in style.”

“Mr Ahacic said they were pretty successful, Papa.”

“And Ivan, of all people, should know,” Toby had to allow. “That they are. Well, strap in. I'm boosting at two hundredths, turnaround in eighteen hundred seconds.” He keyed the mike once more. “Hello, *Improbable*.”

“Go ahead,” Bill answered.

“We have your position now. You can kill that beacon, and thank you very much. We'll arrive in one hour.”

“We'll be waiting. Shall we put on a pot of coffee?”

“That would quite nice of you. Thanks. May I ask what time you keep over there on the *Improbable*? We can match clocks for the duration.”

“Shouldn't be a problem, *Golfball*. Unless Ivan has changed his way of doing things, I assume you're on Z-time. We do the same.”

“Yes, we're on UTC. The last few years, seems like almost everyone has standardized, instead of maintaining their old national time zones. Never understood why some folks did that,” Toby editorialized. “Be seeing you in a bit. Bye.”

“*Improbable* out,” Bill replied.

Toby verified his instrument status, and rotated his seat. It was an unusually sturdy looking piece of furniture; certainly heavier that the webbed chairs used on *Improbable.* Get set, people. We're on the clock now. The Hunters are paying customers. Game plan?”

“You're the boss, darling,” Heather answered. “You tell us.”

“Suggestions would be nice,” Toby said mildly. “Easiest thing would be to work three rotating shifts aboard *Golfball*. Tougher would be two shifts, while the third person goes on call for EVA action.”

Alex spoke up. “Nah. That would be cool for a Belt assignment. A jumper would have a vector fairly close to the target. He could stealth and close slowly on minimum thrust. But way out here?” She shook her head, a strawberry blonde braid drifting free. “Nope. A jumper's going to expend some delta vee getting here. We'll probably spot 'im.”

“She's right, Toby.” Heather was nodding thoughtfully. “It's rather unlikely that a jumper is going to unload troops before we see him. Out here, we'll be fighting ship to ship, if at all.”

“That sounds reasonable,” Toby agreed. “Lord knows, *Improbable* spotted *us*. Regular watches then,” he decided. “On watch, you stay suited. Off watch, you at least keep it ready.” The two ladies nodded in agreement.

“Is that effective as of now?” Alex asked. “If so, who's up first?

“Good point. Yes, it does. I'll take this watch, work it to midnight.” Midnight would roll around in just over four hours. “Alex, you get third shift.” He turned to his wife. “Which leaves you free until oh-eight hundred.”

“I'll stay up to meet the customers,” Heather decided. “And really, Alex,” she turned to her offspring. “You should sit with me while I set up the approach.”

“Good a time as any,” Alex said agreeably. “I need some hands on, practical nav work.” She parked next to her mother, and together they told the *Golfball*'s comp how to get to the *Improbable*. She was qualified to watch the boards, but her navigation skills were largely course theory.

With a little coaching, she did most of the set up. “That's easy enough,” she commented confidently.

“It is easy,” her mother agreed. “Particularly out here; for what we're doing. We're not shifting out of the ecliptic, and this far out we can almost ignore changes in orbital velocity. That's why I'm starting you now. You can ease into it.”

“Icy.” Alex nodded. “I guess it isn't like the old days. There are advantages to big motors and bigger tanks.”

Heather laughed. “No, we aren't quite as energy limited as the original space probes, are we? Can you imagine if we'd had to do gravity slingshot maneuvers around planets to get enough velocity to make it out here. It'd take months.”

“Very true,” Alex chuckled as well. “Poor old Esa.” The comp *ding*ed completion.

“Sure is, sweetie.” Heather spoke a little louder. “All yours, Toby. Hit the go button at your convenience.

“Let Alex have the honors.” Toby had waited patiently through the short teaching experience.

Heather pulled up the piloting frames. Okay, sweetie; when you have a dedicated nav, the pilot pulls up the course file..., “she tapped the screen. ...here, and executes thusly. Punch it,” she directed.

Alex followed her mother's example and tapped the execute icon, which in her father's config really was a big red button that said *GO!* “We're on our way.”

“Outstanding, baby girl,” Toby congratulated the student driver.

“Yes, not bad, sweetie,” Heather repeated. “But like you said, this was easy.” She smile evilly. “I'm going to have you plot the return trip when the job is done. Seven astronomical units of orbital velocity differences. And I think I'll throw a plane change in there just for practice.”

Alex sighed. “Well, I wanted to learn...”

“Could be worse, Alex,” Toby consoled her. “Think of the trip out, with multiple acceleration regimes.”

Just shy of an hour later, Jeannie watched the final approach of their security guards on the library wall screen The *Golfball* had shut down her main engine and was maneuvering on attitude jets. “Oh... my... Come look at this, Billy,” she urged.

Bill glanced at his comp display, and okayed a transmission. Then he moved across the room and eyed the display. “Great Grandpa Ghu, it *is* a golfball.”

The *Ferocious Golfball...* was. While most deep space craft tended to follow *Improbable*'s modularized design, and resembled bundles of balloons, the *Golfball* seemed to be a single white sphere well over thirty meters in diameter. Nor was she featureless; indeed she was so pocked and studded with with sensor ports and what must be weapons hatches that she seemed dimpled like her namesake. Even the unusually heavy reactor gantry at her aft end, with its radiator array, reminded Bill of an old fashioned golf tee. He laughed.

“A sure 'nuff golfball,” Jeannie laughed. “But... *ferocious*?”

“Think about it, babe. It's *Ivan*'s.” Bill said with a chuckle.

Jeannie thought on that, very briefly. “No doubt. Probably got everything but the Death Star's planet wrecker beam.”

“I heard he's working on that,” Bill joked. Maybe. Even in the cut-throat Belt security business, Ivan Ahacic had a certain... *reputation*.

Several years before, the Hunters were establishing themselves as prospectors and miners in the main Belt. Ivan and Katie Ahacic partnered them on several jobs, mentoring the younger couple. The partnership was also one of mutual defense. Claim jumpers were a growing problem matched by growing insurance premiums. Disgusted with a policy that seemed to suck money without doing anything useful, Ahacic canceled the policy and invested the freed up capital in an alternative solution.

The miners had struck lucky and found a rich uranium deposit. Their square kilometer processing mirror had also attracted the attention of a jumper, which gave Ahacic the opportunity to try out his alternative. He engaged the jumper in a cheap, improvised space fighter using explosive mining charges to power a small scale Orion drive. When the tide of battle turned against him, Ahacic played his hole card. The jumper was wiped, and Ivan Ahacic had made history by being the first private individual to use a nuclear weapon in combat; having destroyed the claim jumper with a small asteroid moving charge.

Ahacic played on his notoriety, and used his profits from the uranium ore to found Ahacic Security Associates, and life became somewhat harder for claim jumpers and other miscreants. ASA was noted for its willingness to try new ideas in weapons and drives. Just a few years ago ASA commissioned two cruisers equipped with actual nuclear fission drives, as opposed to conventional NERVA engines. The craft were capable of multiple G's for extended periods. And even the neutron flux of their drive proved useful as a weapon. Unfortunately, it proved a two-edged sword; crews were exposed to hazardous radiation levels over the long run. ASA took the craft out of service.

Nonetheless, with any craft operated by Ivan Ahacic, it was best to assume that it massively

outgunned you.

They watched the *Golfball* settle into place a hundred meters away. Jeannie said, “Aren't they planning to tether with us?”

“Nah. These are security people, What good's a warship that's tied down? You know that,” Bill scolded.

“True enough. Ring them up and invite them over, Bill.”

“Will do, babe.”

***

Bill watched two figures jetting over from the other ship. He switched on the cargo port lights to guide them in. Jeannie got coffee cups out and ready as Bill went to meet the visitors.

They cycled through the locked together. Both wore skinsuits covered by the armored overalls that were the unofficial uniform of ASA. The first figure through the door was nearly as tall as Bill himself. It turned to hand the second, shorter person through.

The short one took off the suit helmet reveal a quite pleasant looking, short-haired blonde in her late thirties. “Hi,” she said cheerfully. “I'm Heather Dohnalek. You must be Bill Hunter. Ivan told us a bit about you.” She grinned.

Bill returned her smile and replied, “Nah. Don't believe a word of it. I'm perfectly harmless. Anyway, glad to meet you.” He turned to the first figure as its helmet unlatched. “And you must be Toby Dohnalek. Welcome to...” He stopped and stared. “Nope. You are *not* a Tobias,” Bill said observantly. He grinned at the very pretty face, obviously the new, improved version of Heather Dohnalek.

Alex smiled mischievously at her host, and pulled her braid free of the confines of her suit collar. “Hi,” she said brightly.

“Mr. Hunter, this is my daughter Alex. Weapons, and apprentice pilot,” Heather added. “Toby is on watch in the *Golfball*.”

“I'm pleased to meet you, even if you aren't a Toby,” Bill greeted the young lady. “Possibly even especially since you aren't a Toby.” He looked the two ladies over, as they removed their gloves. “You can put the hats and gloves here,” he pointed out suitable receptacles. “And feel free to chuck the coveralls, or not; your choice. Jeannie was putting on coffee for us.”

“Sounds fine to me,” Heather answered. With Bill's aid the women quickly shed the aramid and ceramic armor, revealing excellent figures in the process, to Bill's evident pleasure.

***

In the dining room they sipped coffee and chatted, sizing each other up.

“So Ivan hired you as a family team?” Jeannie asked.

“Yes,” Heather answered. “It works out very well. The money is good, and naturally we get to see more of one another than most families. I think it's brought us closer.”

“Sure,” Alex added. “The family that slays together stays together.” She noted the pained reactions, and smiled happily. Then she changed the subject to one that had dominated *Golfball* conversation for the past nine days. “What are you two up to out here, anyway? Why a security force? And what is that you're moored to?”

Jeannie and Bill glanced at each other and shrugged. “Why not?” Bill asked. “I don't see how we're going to keep it a govvin' secret from our own security.”

“It would be a trifle complicating,” Jeannie noted. She turned to Alex. “That would be a *Whatzit*,” she told her oh, so informatively.

“Whatza *Whatzit*?”

“We aren't sure about all the little details, of course... But basically it's an alien starship,” Bill elaborated. He smiled as he awaited the reaction.

Alex was just sipping her coffee. Hearing the absurd words, she sprayed a bit, then laughed lightly. Heather showed a rueful grin of her own.

“Sorry,” Alex apologized. “But I guess it really isn't my business, is it?”

Heather chided her daughter, “You know better than to pry into the customers' affairs, Alex. Apologize.”

The Hunters were grinning. Jeannie spoke up again. “Ah, ladies?” They turned to her. “This has been one of the few times in his misspent life that Bill wasn't kidding.”

“Beg pardon?” Heather inquired blankly.

“That really is an alien spacecraft. We've been in it.”

Alex extended a long, shapely lycra-lined leg into the air. “Go ahead, pull the other one, too.”

Bill eyed the woman's long leg and leered. Jeannie whapped him atop the head. “Be good.”

“Oh, I *will*,” Bill promised earnestly.

“Let me rephrase that: *Behave*.” Jeannie addressed the visitors again. “Allow me to apologize for my partner. He's brain damaged, and never made it out of his mental teens. I tried to return him when I realize the immaturity was congenital, but the warranty had expired.” She shrugged. “I'm stuck with him.”

“It's not brain damage,” he countered. “I was just born with an enhanced artistic appreciation of the feminine form.”

“You mean you like to download datapackets of dirty vids,” Jeannie replied.

The Dohnaleks watched this banter with growing amusement. Alex, who had been blushing, was laughing aloud.

“They're *artistic* vids,” Bill cried plaintively.

“*Debbie Does Deimos* is artistic?”

Heather, caught sipping coffee, slapped her hand to her mouth, and choked the beverage down against the laugh trying to escape. Alex loosed another guffaw.

“As I was explaining,” Jeannie said, suddenly ignoring her mate, “before we were so rudely interrupted, we're quite sincere about the alien spaceship bit. Advanced drive, weird optical comps, room temp superconductors, nanotech...”

Bill, suddenly serious, spoke up, “You folks can scan it with your own radar, and you'll see. That's no rock.”

“Bill, why not get the Yule Ball for them?” Jeannie suggested. “That should be convincing.”

“Yeah!” His eyes lit with maniacal glee. “I'll be right back.” He launched himself toward the workshop.

“Yule Ball?” Heather asked in confusion. Was the coffee laced with recreational pharmaceuticals?

“Just wait. Some things are better seen than explained,” Jeannie told her. Then she turned to Alex. “And don't mind Bill. He's harmless. Well, mostly.”

The girl blushed. “That's chill, so long as you aren't mad. It's kinda... cute, really,” she confided. “It's like practice for when we ship back to Ceres again.”

Heather shared an conspiratorial grin of her own. “I don't think we have to worry about Alex here in any case. She's quite capable of realigning any out of line gentleman in the Belt. She's our surface tactics specialist.” Heather explained.

“Really? Shiny,” Bill said. He had returned with the glittering Ball and his signal generator.

“What's the ball for?” Alex asked. Whatzits and banter, now a steel exercise ball; surreal ruled.

“I'm glad you asked,” Bill said in his best used spacecraft salesman voice. “Here. Hold it.” He offered the Ball to the young woman. To Heather he presented the end of a cable trailing from the generator. “And if you will hold this against the Ball... Gracias.” He keyed the now-familiar sequence.

“*Jazz me*!” Alex let go the sphere as it flowed oily out of her hands and drew back. Her braid whipped around the cover her face, and she slung it back. She stared wide-eyed. Heather watched with her jaw hanging open as the Ball turned into the Disc.

Bill smiled proudly.

“My reaction was similar,” Jeannie laughed. “But I at least knew it going to do something by the time we figured out how to do it.”

Heather reached out at tapped tentatively at the Disc. “That is... wild. How does it do that?”

“I think it's nanotech. Nanocritters; a bunch of miniature machines working together. But you ain't seen nothin' yet. Alex, hold it still and touch the cable to it again. Heather.” Jeannie handed her a stylus, and Bill continued. "Hold the stylus right here." He indicated an appropriate position and keyed the shift once again.

Heather's eyes bugged as the Ball reformed around the implement. She stirred the surface for a bit, then pulled the pen out. The Ball sealed seamlessly behind it. “Wow.”

“Mama, I know what you can get me for Christmas,” Alex said with wonder in her voice. All four laughed.

“You have got to show that to Toby tomorrow,” Heather insisted.

They spent an hour or so listening to the Hunters describe the *Whatzit* and its interior. While Bill and Jeannie did mention the SNAP reactor and and the superconductors, by an automatic unspoken agreement they left out any mention of antimatter or the semi-operational state of some of the systems.

Finally, Heather Dohnalek started their goodbyes. “We really need to get back to the *Golfball*. It's getting late.” She glanced at her daughter. “And *you* have next watch.”

“Too true, Alex agreed. “Thanks for the coffee and the show,” she told the Hunters. Then the ladies put their coveralls back on, sealed suits for vac, and headed out.

Once the visitors were safely through the lock, Jeannie faced down Bill. “You should be ashamed of yourself,” she remonstrated. “Embarrassing that poor girl like that.”

“Sorry,” he said sheepishly. “"S'pose I did get a little carried away. I guess they caught me by surprise.” Jeannie raised an eyebrow in question and Bill explained. “I only heard the guy's voice on the comm. And I guess I got it into my head the crew were guys, too. I wasn't expecting girls.” He considered Jeannie's expression. “Especially ladies almost as pretty as you,” he ventured.

“Uh huh. Lech.” She gave him a stern look. “And you watch your philandering ways. You get it in your tiny brain to do more than chat her up, you better be nice. 'Cause if you don't, you won't be equipped to properly enjoy Debbie or Deimos.”

“Okay, okay. I was only teasing.”

“Right,” she said. “Come on; it's time for us to get to bed, too. Maybe I can work off enough of that excess energy to make you safe for company.”

“Oh, boy!”

***

Back in the *Ferocious Golfball,* Toby waited impatiently for his ladies to clear the suiting room. When they finally floated into the main module he demanded, “Come on. Speak. Did they tell you what they're doing?”

The women looked at each other and grinned. “Do we tell him, Mama?” Alex asked. “Or make him wait till tomorrow?”

“Well...” Heather began playfully, enjoying Toby's frustrated expression.

“Enough already!” Toby was near the bursting point. “What are they doing? They aren't mining; there's no sign of ops. What's that sucker they're tied up with? Did they find an old Russky spacecraft or something?”

Heather laughed. “Not... exactly.”

“What, damn it!”

Alex assumed an overly innocent expression. “Well, gee, Papa,” she started. “They were just poking around out here and happened to stumble across an alien spaceship crammed full of superconductors and micromachines.”

“Would you just tell me already?” He frowned and considered. “It's no rock... too regular. Obviously isn't an American design... Is it old Soviet? Or did the Chinese ever get anything out here?”

“Umm... Toby.” Heather tried to get his attention again. “Alex is playing with you; but...”

“But what?” he asked insistently.

“But it is an alien spaceship crammed full of superconductors and nanotech gear,” she said with an attempt at a straight face.

“Yeah, right,” he dismissed. “So was it an atmospheric probe from a Jupiter...?” His words trailed off. The ladies were simply hovering there, nodding almost in perfect time. “What? You're serious?”

“Yep,” Heather replied flatly.

“They showed us some of it,” Alex kicked in. “Nanocritters, Mr. Hunter called them.”

“Nanocritters?”

Heather said, “Microscopic machines. Ten times better than anything else I've heard of. They've got the damnedest metallic ball. It's about a meter across; and it has the disconcerting habit of turning into a serving platter and back into a Christmas tree ornament.”

Toby's face wrinkled in plain confusion. “Say what?”

“Papa, they've got starship, an interstellar probe, that's nothing but new tech. We saw it. And it wasn't faked.”

Heather backed up her daughter. “Toby, if they could fake what they showed us, the gimmickry for the trick alone would be worth a fortune.” She shook her head. “I think it's real.”

He eyed each woman in turn. Their smiles had faded and that returned his stare solemnly. “For real?”

Heather nodded. “I'll swear on a stack of Bibles: It looks real. If it isn't, someone is putting one over on the Hunters, because they believe it, too. You can see some of it tomorrow. You're invited over for brunch around ten-thirty hours.”

“Christ.”

“Shush!”

Chapter 11

Don't push that button! Jeezus, Fred,
Don't push that button! Use your head.
You don't know what it's hooked to, you don't know what it does.
You start that foolin' 'round and we'll be worse off than we wuz.
Duane Elms

"Mother Mary and all the Saints in Heaven!" were Toby Dohnalek's first words words upon seeing the the Ball's quick change performance. He had heard it from his wife and daughter, and again from Jeannie, but seeing the odd effect was still daunting. "I am convinced."

"I thought you might be," Jeannie smiled. She turned to Bill. "Honey, why don't you put that spooky thing away?"

"Wish is command, goddess," He gathered up the Ball and signal generator, and headed to the shop.

Jeannie returned her attention to the security team leader. "So. You can see why we wanted a little backup."

"Undoubtedly," Toby agreed. "How many people know about this?"

"In person? Bill and I. You three." She shrugged. "We sent a message offering the probe for sale. That went to SpaceTech at their main hab."

"Encrypted, I hope?"

"Certainly," Jeannie answered. "Public keys in one time mode; the best we could arrange at the time."

"Well, we'll have to hope it's adequate; but..."

Jeannie interrupted. "But we're assuming a security breach, anyway. That's why you're here. It might be that somebody can crack the crypto, or it could be a mole at SpaceTech, or even a datapack accidentally in the wrong bin. It just seems best to assume the worst."

"Rather paranoid, don't you think?" Toby asked idly.

"Just careful," she responded. "Paranoid would be nuking the *Whatzit* in ignorant fear."

"Good," the pilot replied in obvious approval. "But if more of our customers thought that way, we might be out of business." He leaned back. "But I see two more points to address. Do you trust us?"

"Sorta," came Bill's voice. He had returned to the common area with a cup of coffee. "We trust Ivan. A lot." A guilty grinned appeared. "Umm... you won't be offended to hear we checked on you?"

“How so?”

“We had Ivan trans a datapacket of dossiers on all three of you while you were en route. Résumés, references. Images and vids.”

“Seems wise, I suppose...”

Jeannie cut in, “And we hoped you wouldn't notice our point defense gatling was targeting the *Golfball* until we met the girls face to face for identification.” She offered an apologetic look. “Sorry.”

“Christ. You were sitting here having a kaffeeklatsch with the girls while you had a gun on us?” Toby looked surprised.

“Yeah,” Bill replied. “At first. But once we ID'd Heather and Alex, I deselected you and re-engaged the no-fire zone.”

“I will be a groundbound bureaucrat,” Toby muttered in chagrin. “Maybe you should be guarding us. You really are old friends of Ivan; I can tell.” The three laughed together, then Toby continued. “A final point. Your customer; SpaceTech. Do you trust them?”

“Just as much,” Bill smiled. “Harry McMurphy in Purchasing is an old friend. But he won't be in that ship... Oh, SpaceTech's ship...” He paused and snapped his fingers.

“*Profit Motive*,” Jeannie supplied.

Bill continued, “*Profit Motive* is due in late tomorrow night. Crew, McMurphy's rep, some techs. Anyway, we've done a lot of business with SpaceTech and never gotten burned. But we want to be sure that there ain't a first time. You know, some overly ambitious underling; that sorta thing.”

“So we consider them a possible threat?” Toby nodded.

“Until we get paid. Then it's up to them,” Jeannie took up. “Harry asked us to mention that if they purchase, they want to assume your contract.”

“That'll save you a pretty penny in reaction mass costs,” Toby noted. “We'll keep that in mind.”

“Speakin' of reaction mass,” Bill began again; “What the heck are you using to push that overgrown piece of sportin' goods? You made seven AUs in nine days; you had to be cranking nearly three quarters of a g.”

“Well, We started at one g for the first day,” Toby explained. Bill whistled in awed appreciation. The pilot went on, "But that was with another ship as booster stage giving us an assist. After that we averaged around half a g. A compromise on getting here quick, and having the propellent to stop. But if we have to get back on what we have, it'll be one hell of a long Hohmann transfer.”

“Damn! So what are you toting over there?”

Toby chuckled. “You know Ivan's penchant for gadgets?” He saw their nods. “Well, he cut a deal with Nukes R Us. He shares R and D expenses and they use our cruisers as test beds. That was

how we got those wild fission drives a few years back."

"I heard about them. When Ivan gave us your ETA, I figured you were using one." Bill tilted his head in the general direction of the other ship. "But it looks like you got a KIWI-class steam drive like ours." *Improbable*'s heart was a plutonium-fueled fission reactor; an evolved variation on the old American SNAP thermoelectric generators, with both core-mounted high temperature IR photovoltaic cells and radiator-mounted thermocouples. But this reactor did double duty; its core included ceramic-metallic plumbing connected to the water tanks. It served as a nuclear rocket, super-heating steam for thrust.

The security rep grinned. "Not quite. The fission drives were scrapped. Turned out there was too much neutron flux exposure for the crews. So they're no good for manned craft. Sent them back to NRU. I heard they sold them to a guy who's going to stick them in a rock and make a giant generation star ship." He shook his head. "Takes all kinds, I suppose."

"So what do you have?" Bill asked insistently.

"It's NERVA or KIWI, more or less," Toby admitted. "But it isn't a conventional core." He sipped coffee. "We run just barely under super-critical in a pressurized vessel. Gas-core. You wouldn't believe the temperatures we get. Then, we don't squirt water through it either. We run straight H-two."

"Spiffy," Jeannie spoke. "So what can you get out of it?"

"We can generally peak around two G's for a full day. But that would drain all our reaction mass, of course. In theory." More coffee. "I'm a little nervous about it. Beastie is temperamental. When you run high G's, you have to watch your mass flow rate very closely. Seems to have more effect on temps and reaction rate than it should." He frowned. "I think this is another one that'll have to go back to the drawing board, myself. I've seen pressure peaks that scared me."

Bill looked envious. "Still, two G's.. I could probably crank a couple tenths out of *Imp*, but my electrical output would zero out." He turned to his wife. "Jeannie, the world is leaving us behind. I think we should consider a new drive for the old girl. Heck, even *Profit Motive* must run two or three times our limit, if they're showing up in another day."

She patted him on the back. "Poor baby; it'll be all right." She grinned at Toby and addressed him. "Still, there's more to the *Golfball* than that engine. Why the odd shape?"

"In a way, that's mostly cosmetic," Toby replied. "Properly, *Golfball* is a conventional design. Multiple balloon modules; like your own. But once she was put together... Basic ship, weapons racks, DF tanks for the lasers, oversize attitude jets, that sort of thing... After that, we starpped on some ceramic-polymer plates wrapped in a ballistic fiber sheet. Then they added the filler." He peered into his empty cup and shrugged. "All that material that gives her the ball shape is lightweight structural foam. Gives the ship extra support for g stress. And there's a lot of glass beads added to the mix... So it works as ablative laser armor, as well. And soaks up some kinetic energy."

"Icy," Bill said approvingly. "I like that. What about weapons?"

"Uhh... We prefer not to talk about that. Let's just say even *Ivan* was happy." He grinned.

“All right, then,” Jeannie jumped in. “I hate to be unsociable; but there's some poking around in the *Whatzit* we were putting off until we had security backup. If there's nothing else, we should get to it.”

“Just one more,” Toby said. “Then I'll leave you be. Is there any chance that you can give *Golfball* a datafeed from your skywatch? The way I see it, the more detectors the merrier.”

Bill squinted and pursed his lips. “Hmmph. It's home-brew setup; nonstandard. I can't really interface you; but I can give you a relay. It'll give you an alarm and directional data. You oughta be able to manually punch that into your system.”

“Sounds good," Toby replied. "How tough will it be?”

“Not at all. We have it tied to the comm. We use it on digs to give us a heads up when we're out of the ship.”

“Excellent. If you'll give me the freq and signal data, I'll get our systems set up to take it.” He paused, and turned to Jeannie. “Did you really consider nuking that star probe?”

The Hunters exchanged glances. They were still not going to talk about the antimatter with anyone but ST. “Not... *quite*,” Jeannie said tersely.

Toby wasn't *quite* sure how to take that.

***

With security coordination finally out of the way, the Hunters went to work on the *Whatzit*. While Jeannie looked on, Bill hovered over the rear hatch they had located previously. Jeannie had her own doubts about poking into antimatter drives, but Bill had convinced her to let him take a look.

“Bill, I still think this is a bad idea,” she said worriedly over the encrypted private channel, instead of the default common suit freq used by most spacers. Jeannie had pointed out that they'd be discussing things they weren't ready to share with the Dohnaleks and ASA.

“Come on. What's the worst that could happen? All I'm going to do is see if I can spot something that could be a containment vessel. It isn't like I'm going to *do* anything.” He made an exaggerated shrug “Probably won't even be able to recognize anything, anyway.”

“No,” Jeannie corrected. “The worst that could happen is you accidentally flip the off switch, and we give Alpha Centauri a Fourth of July fireworks show in a few years.”

“Nonsense,” he objected. “It's only April.” He grinned, and went on. “If it were dangerous, they wouldn't have used an unlocked hatch, would they?” He rapped on said hatch with a hammer. He twisted and grunted. “Gimme a hand with this, would you?”

“Okay,” she agreed. “But we stop at the first hint of trouble. Got it?”

“Sure, babe.” Together they heaved on the hatch. It resisted momentarily, then yielded as had the other hatch. “Well, damn.” The hatch cover had come loose only to reveal a second hatch.

“The arrows point in the opposite direction this time,” Jeannie noted.

“Yeah?” Bill glanced back and forth at both sets of directional triangles. “Well, lessee.” He grabbed at the inner hatch. “Hey! This one isn't stuck.” It rotated, and angled slightly out.

“No tether this time, either,” Jeannie commented. “It's hinged. Which is more than I can say for you.”

Bill peered through the smaller portal “Yob tvyu...” he muttered in annoyance. “Another unexpurgated hatch. He started to reach for, but Jeannie grabbed his arm.

“Whoa there, Carter. Let's not invoke the mummy's curse,” she jibed. “Think about it.” She let go his arm and ticked off points on gloved fingers. “One, an external hatch very tough to open. I see that as, *are you sure you want to do this*?” Index finger. “Then another hatch that requires a different process to open, meaning you have to, at least, pause and think about it, meaning, *have you really thought about what you're doing*?” Middle finger. “And a third hatch,which I take as, *last chance, tovarisch; is this really what you want*?” Ring finger. “And what if that one *is* confinement, and you breach it? Poof! Gone in a radioactive blaze of glory, along with the immediate neighborhood,” she answered her own rhetorical question.

Bill looked a bit queasy behind the plass visor. “I... guess I could check magnetic field intensity before I reach in there,” he said, very thoughtfully. He fumbled at his waist for the multimode detector and deployed the Hall sensor. “Stronger than out here, but still not what I'd see as confinement levels.” He put the detector away. “I want to go for it. But I won't be offended if you want to back away some.”

“If that pops, I'd have to be backed off a kiloklick to be safe,” she noted wryly. “If you must, you must.”

Bill took a deep breath and peered into the access-way again. “I see a hinge, so this one doesn't rotate, I guess. And there's what looks like a regular latch,” he said, mildly surprised at something so similar to a human application. He extended his arm deep into the interior. “I can just get a couple of fingers there. If this takes any real effort, I won't have the leverage to do it.”

“And I'll be taxed, stamped, folded, and filed if I'll let you come back with a pry bar,” Jeannie said uneasily. “This is a bad idea.”

“Hey, I'm committed now.”

“You oughta be committed,” she corrected.

“Here goes,” Bill announced. Jeannie stuck two fingers against her helmet in the general vicinity of her ears. “Smart ass.”

The latch lifted smoothly, as did the small door.

“Got it,” the insanely intrepid investigator declared. “Come look.”

“No boom; that's a good sign,” Jeannie decided with relief.

“No boom today. Boom tomorrow.”

“Probably,” Jeannie sighed. “Unless I can get you to keep your hands to yourself.” She moved up to examine the latest opening.

“Since when do you want me to keep my hands to myself, my little chickadee?” Bill reached over and patted her p-suit protected posterior.

“Since you started sticking them in holes stuffed with antimatter, rather than more appropriate places. What's in there?”

“Offhand, I'd guess we found the containment vessel.” Behind the final door was a chambered dimly illuminated with reddish-orange light. In the middle of the chamber, a globe similar to the Yule Ball gleamed redly. It was mounted on a thick column, likely of the same material, that appeared to lead back the tungsten reaction chamber. Four smaller projections reached to the globe from the walls.

“The big ball would be their version of a Penrose trap,” Jeannie mused, “with a channel back to the motor.”

“And the four pipethingies would be power conduits,” Bill hazarded his own guess.

“And *no*, you don't get to open anything else,” Jeannie said most definitely.

“Really, I wasn't even thinking it, babe. Swear.” He pulled the detector from his harness again. “All I'm going to do is get a mag reading inside the chamber.”

“Billy...”

“Relax,” he told her as he telescoped the detector wand. “One quick reading, and I'm not going to touch anything. Then we close it back up, okay?”

The detector probe moved through the ports. As it crossed the chamber threshold, the internal illumination brightened and turned yellow.

“Billy...”

“Yeah. Right,” he agreed. “I'm pulling it...” Suddenly whistling static shrieked over the comm, and the light went white. “Scheisse!” Bill yanked the probe clear. “What was that?” The light in the containment chamber was orange once more. Bill thought that might be a good sign.”

“What *was* it?” Jeannie repeated. “You know that old flatvid show where they're always having warp core breaches?”

“Right.” Bill winced. “We'll not be doing that again.”

“Too turgidly true, you won't, turkey.” Jeannie reached in carefully and flicked the inner hatch closed, and then sealed the secondary access. “Help me with the outer hatch,” she instructed her partner.

Bill pushed the hatch back into place, and they moved together to rotate it closed. “Whoops!” Bill exclaimed. The hatch exhibited no reluctance to spin shut, in contrast to the effort needed to open it.

The couple floated quietly over the resealed craft for a few moments. The Bill muttered, “Shit.” He tapped the suit pad and accessed a dosimeter frame. A quick glance, and he relaxed a little. “I'm clean. Better check your rad exposure, Jeannie. Just in case.”

She eyed her own instrument. “Nothing here. If that was an antimatter leak, I think the reaction took place in the tungsten core. Plenty of shielding for the little bit we let out, apparently.”

Bill gave a huge sigh of relief. “By Mercury, or whoever the god of lucky gamblers was, I've finally learned my lesson. I am not touching this blasted thing again. Let SpaceTech blow up the Trojans, if they want the antimatter,” he finished unhappily.

“Look on the bright side, Billy,” Jeannie said encouragingly. “We've finally discovered what it takes to get through that depleted uranium skull of yours, to that microcephalic mind.”

“Yob tvyu maht,” he replied, half seriously.

“My mother?” Jeannie asked in surprise. “Not me?” She tried to console him further. “There's always the Brick to play with.”

“I'm stuffing the Brick and Plate back in the Ball, and stuffing the Ball into a sample case. And welding the case shut,” Bill told her. “If you want to play with 'em, I can weld you in there, too.”

“Hello, *Improbable*!” Heather Dohnalek called over the public channel. “Bill, Jeannie. Can you hear me?”

Jeannie switch her comm back to the usual suit channel. “Gotcha, Heather. What's up?” Jeannie responded.

“Are you kidding?” Heather's amazed voice returned. “Your damned *Whatzit* just picked about a centimeter per sec forward vector. And I read a gamma ray pulse; maybe a microsecond.”

“Gamma?” Bill said. “What's your dosage? Are you in trouble?”

“Not at all. Nothing dangerous. But it did register. Caught me by surprise.”

Bill sighed again. “I'm not exactly sure what I did, but I promise I am *not* doing it again. We're heading home for the day, Heather.”

“Gotcha. Comm you later. By 'n by, Alex would like to swap vid lists with you two; see if there's anything we want to trade.”

Jeannie said, “Sounds good. I'll bleep a listing over in a little while.”

“Thanks, then. *Golfball* clear.”

They packed and went back to the *Imp*.

***

Bill was still moping and muttering. “Entropy; I can't believe I did that.” He'd had to fire a series of attitude pulses to re-establish *Imp*'s equilibrium with the *Whatzit*. “What if the leak hadn't vented to the drive core? I nearly killed us!”

Jeannie moved closer and held his shoulders. “Stop it, honey. It isn't that bad. The container is probably rigged to vent that way just for such emergencies. And you went to great pains to use a safe probe. Heck, I don't understand why the sensor had that effect.”

He reached up and clasped Jeannie's hand. “Still.”

“Hush. Look on the bright side...”

“You already pulled that one.”

Jeannie chuckled. “But seriously; we just verified the presence of antimatter.”

“Yeah, but...”

“Billy, don't you think that improves our bargaining position with SpaceTech by a kilo or two?” She laughed gently.

“There is that.” A vision of piles of gold and Marks cheered him at last.

“Of course, there is.” Jeannie smiled a mercenary smile; then, “Well, I guess I'd better get that vid list to Alex. She already sent us hers.” Bill handed her a datapad. She copied the vid bin directory to text and commed the datapack over the intership link.

***

“Mr. Sinclair?”

Space tech's Marty Sinclair looked up to see Mario Hanby, co-pilot of the *Profit Motive* standing nearby. “Yes?” he replied.

Hanby handed him a a sheet of hardcopy. “You just got a message from Alfa Station. From Mr. McMurphy.”

Sinclair accepted the printout. “Thanks. But just trans any more emails to my pad; paper isn't necessary.”

“Tried that,” Hanby replied. “Your datapad isn't on the shipnet yet.”

“Oh?” Marty looked surprised. He ran fingertips over the display. “Sorry about that. I enabled the wrong connection. My pad was still trying to talk to the hab net.” He checked his in-box and

grimaced. “Looks like a few things were queuing up there.”

Hanby chuckled as he moved away. “That explains a message for you coming to the ship account.”

Since the papercopy was at hand, Sinclair read that first.

> FROM: ALFA STN - MCMURPHY
> TO: *Profit Motive* - M. SINCLAIR
>
> Marty,
>
> It looks like we can assume that the Hunters' find is real. We just recorded a gamma event from their direction. Either someone is tossing thermonukes around, or they just triggered a micro M-AM reaction. And the signature is wrong for a nuke.
>
> I think we're about to purchase the only known mass quantity of AM in the solar system. You can expect a nice Yule bonus if you can negotiate Jeannie down to just a mildly rapacious sum.
>
> Harry

“I will be damned,” Sinclair mumbled. “Antimatter. And here I brought tech types.”

***

As she backed her way into the Trojan rock field, decelerating at better than four tenths of a g, *Annie*'s crew was scanning for optical, thermal or RF activity in an effort to locate her quarry. And they struck lucky; though the gamma release went unnoticed, as the jumper was not equipped for such detection. But the wideband receivers had picked up 'tween ships message traffic regarding a vid exchange.

“Crap. I thought there was only supposed to be one ship,” gunner Hans Schneider cursed. He spun to face the suit. “Wymer, is the rest of your intel going to be mierda, too?”

Wymer responded defensively. “Don't look at me. That came from His Majesty Dosset. You know as much as I do.”

“Oh, joy.” Schneider turned to the pilot. “Game plan, boss? Missiles?”

“Nyet,” Yacinovich replied from his console. “No way. We blow up Dosset's precious alien with a bum target ID, and we better not show our faces inside Jupiter's orbit again.” He thought about it. “Fifty cals only. Fire now, and at one minute intervals. I'll lower decel so we fall through their position at a nice clip. We'll break past them, then reapproach stealthy on attitude jets.” He turned to his other crew member. “Piper, get dressed for a showdown. We drop you on the second approach. You run an entry on the ships while we stand off and cover.”

The stocky woman nodded without speaking. She got up and began suiting up for a boarding

assault. She expected a nasty approach vector, so she prepped a maneuvering pack with plenty of delta-v.

***

In *Golfball*, Heather was just passing the watch to Toby when two sets of alarms screamed. Toby settled into his pilots seat, while Heather took a gunnery console. “We've simultaneous reports on our gear and the Hunters' skywatch,” she reported. “They've got decent sensors. Bogey at four hundred klicks, and homing. He knows where we are.”

Alex flew into Control, suited and ready. She took her usual position. “Jumper?” she asked.

“My guess, anyway,” Toby answered. “Raise *Improbable* for me.” While Alex placed the call, Toby's fingers danced a waltz across his boards as he readied the drive system.

Jeannie's voice spoke from the comm. “We're here, Alex.”

Toby called out. “Jeannie, is there any chance that this is SpaceTech?”

“I doubt it. They aren't due for another thirty-some hours.” Then her voice became more urgent. “Stand by, Toby. Probs.”

At the same time, the *Golfball*'s crew heard a staccato of muffled thumps as fifty caliber slugs ground to a stop in their foam and plate shielding. “I'd say that makes it official,” Heather commented. She checked status displays and announced, "Pressure's holding. No breach."

“Jumper,” Toby said redundantly. Then to the comm, “Jeannie, Bill! Ready your gun and missile defenses, if any. I'll issue the challenge. Out.” His drive showed ready. “Thrusting.” He sent a spurt of hydrogen through the reactor. The *Golfball* surged and put distance between herself and *Improbable.* This presented the bogey with multiple targets.

Toby keyed the comm again, on the hailing channel. “Hello Unknown closing on my position. This is Ahacic Security ship *Ferocious Golfball*. Please identify yourself, and refrain from any further hostilities requiring your destruction.” He waited for a response.

***

On *Annie*, the three crew members began cursing as Wymer looked on blankly. “What's happening? he asked.

Yacinovich kept his eyes on his instruments as he replied, “Just shut up and stay strapped down, officemonkey. Don't bug me.”

“ASA,” Piper Caulfield muttered nastily. “I don't believe it. The fuckers are all the way out here. *First*.”

The pilot spoke again. “Don't sweat it. Just work. Lay down machine gun fire all the way in. Hans, hit the rentacop with the laser; even out of lethal range, it might blind some of its sensors.”

“There's two ships. Which is which?” Schneider asked sourly.

“It's an Ahacic ship. It'll be the one with Ares' own arsenal. Just shoot the one about to kill us,” came Yacinovich's disturbing answer.

Wymer looked puzzled at the exchange, but said noting. He was far out of his corporate element of office gossip and petty politics.

“Oh, joy.” Caulfield poured machine gun fire into the target area to cover their approach, while Schneider lit up the two targets with the laser, in turn.

***

“Toby, they're at four hundred klicks, closing at twelve hundred relative,” Heather announced. The bogey still hadn't responded to hails, unless one counted the leaden meteor swarm and an attempt to laserflash the optics.

“Go active scan. Screw the passive stuff now. Alex, pop off the the nuke and run it out of the attack plane. Then dump chaff and flares. Ready counter-missiles.”

Alex flipped a safety cover and mashed a button. The image on one of her screens shifted. She punched another button, then grabbed a joystick. “Chaff and flares off!” she called out. She steered her micro-yield shipkiller down to dodge the incoming screening fire. As she worked, it occurred to her that this was pretty much the same as the out-of-ecliptic plane change Mama threatened to make her work out; it was going to be easier than she'd worried.

“Thrusting,” Toby replied. *Golfball*'s engine spat superheated gas and she moved away from the decoys Alex had planted. Toby keyed his radio. “Jeannie, Bill. Feel free to join in if you're still with us.”

“We already are, Toby,” Bill's voice came back. “That's about... one hundred rounds for the cause.”

“Great. Keep it up.”

***

“Missile launch!” Schneider yelled. He punched buttons and threw switches, dropping his own decoys; hoping to blur his opponent's radar view of *Annie*. “That sucks, but we know which one is ASA. Concentrate your fire on it.”

“Will d...” Schneider's voice was cut off by a sudden shrieking as the command module depressurized. Ragged holes appeared in the bulkhead as slugs from *Improbable*'s gatling found their target. Schneider looked around to assess damage. “Goddam! Piper bought it, Jake.”

“Crap. What about you, Wymer? You still there?”

“Forget him, Jake,” the gunner answered. “He's space bait.”

“Not a complete snafu, then. Increasing thrust.”

***

Alex called to Toby. “Papa, he's coming in stupid. Stand by for the pulse!” She triggered her distant warhead. The kiloton package flashed to beautiful incandescence mere meters from the jumper.

“Target is... Target isn't,” Heather said, watching her radar scope. “Good shooting, honey.”

“Thanks, Mama.” Alex looked a little disturbed.

“What's wrong, honey?” her father asked. He would have expected elation.

“I'm sorry, Papa.”

Toby blinked. “For what?” He frowned. “You aren't worried about smoking that clown, are you?”

“Kinda,” the teen admitted. “But I just wasted a nuke him. It was the only one in the inventory. And they're expensive.”

Toby relaxed. Both parents smiled. “Don't you worry about that. You did right. Better safe than sorry. And that fool did fly all the way out to the Trojans to attack two ships,” Toby pointed out.

“And Ivan expects the occasional nuke to be used, or he wouldn't give them to us,” her mother chipped in.

“But he was dumb.” Alex frowned. “No jinking; just came in straight. Hardly even varied thrust.” She thought about it and added, “All he did was dump decoys. Hasn't he ever heard of cam-guided missiles?”

“That's the way it goes sometimes, Alex,” Toby explained. “You see them in any business.” He shrugged. “Amateurs. Jump some relatively helpless prospectors; get in and out before the,” he indicated the family with a sweep of one hand, “pros show up. His bad luck was get here late.” His fingers continued their dance as he brought his ship back to the *Whatzit*. He called the Hunters. “Hi, *Improbable*. How are you folks doing?”

“Just fine,” Bill replied. “Took a few hits. Lost some water from the outer tanks, but ani-flaps are holding loss to a minimum.” The tanks and residential module were equipped with an internal lining of five centimeter flexible flaps with one edge anchored to the bulkhead. In the event of a meteor strike – or bullet hole – venting would cause adjacent flaps to seal against the hole, reducing air or water loss. “One water tank is venting. If the area is clear, I'm going to take care of that now.” He grinned at a dripping Jeannie trying to seal a ceiling leak where a bullet made it through the water to hole the res-mod. “Oh, and it's raining in the kitchen.”

“Standby; we're still checking.” Toby looked to Heather.

“Passive and active are clear,” she reported. “I think we're done for today.”

“Okay, Bill. The coast is clear.”

“Danke, *Golfball*. And well shot, I should say. I'd be honored if y'all would join us for dinner tonight.”

“Thanks, Bill. I've got the watch till midnight; but...” He glanced at his family. Both were smiling and nodding. “But Heather and Alex accept with thanks. Catch you later. Out.”

“*Imp* clear.”

***

Dosset looked up at the sound of rapping at his cabin door. “Come.” he called. He hated space travel; but the lure of Marks was strong. Therefore, a week earlier he had boarded the *Distant Vision* and was en route to the alien's Trojan position. His intent was to arrive well past any combat, but early enough to ensure that all credit for the find rested with himself. It was the sort of detail that the board of directors appreciated.

His door opened and one of the crewmen looked in. Jones? No, Jonas. Jonas Beery. “What is it, Mr. Beery?” Dosset asked, irritated at the intrusion.

“Message, sir.” Beery held out a slip of paper with mostly masked annoyance. He disliked playing secretary for a hab-side bureaucrat who felt that toting his own datapad was beneath him.

“Well? Bring it here,” Dosset instructed. Beery stepped into the private cabin and handed the folded paper to the executive. Seeing Dosset's glare, he left immediately.

The director opened the slip and read.

> From: Communications Center Advantek R&D, Inc. Glory Station
> To: Mr. Richard Dosset, Director- Special Projects Advantek R&D, Inc. *Distant Vision*
>
> Dear Mr. Dosset,
>
> I felt you should be made aware that at 1637Z we received a communication from Advantek Vessel *Annie*, indicating that she was preparing to enter into negotiations. She has not contacted the Communications Center since that time, and does not respond to coded hails.
>
> Sincerely,
>
> Randall Zellner, Communications Center Supervisor

Dosset read the note a second time, then wadded it up angrily. He tapped an intercom button to call *Distant Vision*'s pilot. “Captain Cramer,” he spoke.

A tinny voice replied. “Gordy here. What can I do for you, Mr. Dosset?”

“It has come to my attention that our welcome at our destination may be less cordial than anticipated. I would prefer to avoid... needless risk. Please alter your course to bring us in from behind our hosts,” Dosset directed.

Muffled laughter came from the tiny speaker. “Sir, it doesn't exactly work that way.” Giggles. “But if you're afraid of getting that deskbound derriere shot off, I'll see what I can do. Off hand, I'd say we can decel harder now. That'll let us use lighter G's when we're closer. Smaller IR signature. And we'll be coming from a different direction...”

“You needn't distract me with unnecessary details,” Dosset interrupted. “Simply do what you must.” He killed the intercom.

Forward in the control room, Gordy Cramer looked to his copilot and gunner, Edith Chappel. “Uppity little fugbucker, ain't he?”

“Yep,” Edie replied. “But you heard him. Just do it.” Then she grinned. “So who gets to tell him that the new profile runs our propellant to zip?”

“I'll do it myself,” Gordy smirked. “Put it in that silly daily summary he insists on. Then, when he never reads it, or the request for a tanker, I can laugh myself silly.”

“Is that a good idea, Gordo?” Edie looked worried. “He's an important man with nada sense of humor; bad blend, that. He'll fire you.”

“Let him. He's a big-shot 'cause he's a division director. And he looks down on field people.”

“Yeah, and...”

“*Yeah, and* he doesn't do his homework. Not only doesn't he know jack squat about spacecraft ops, he doesn't know that I own more company stock than he does.” He chuckled evilly. “I pretty much live off my quarter share of the Chance's profits,” he said, referring to a partial ownership of the top casino back at the habitat where Advantek was headquartered. “So I've been plowing a lot of my 'Tek salary into stock. Take all my bonuses that way, too.”

“Oooh, I like it,” Edie agreed.

Chapter 12

Fay ce que vouldras
Hellfire Club motto

Heather Dohnalek pushed away from the table. “That was wonderful, but I'm going to have to go on short rations for the next week, I ate so much. It's been ages since I had chili with real beef. And cheesecake!” she raved. “Delicious, Jeannie.”

“Hey!” Bill objected. “*I* did the cheesecake.”

“No slight intended, sir,” Heather grinned. “But I should get back to Toby, and get his dinner.”

“I thought of that already,” Jeannie said as she rose. She went to the fridge, and removed a box. “Chili and cheesecake, both.”

“Thank you, dear!” Heather accepted the package. “I know he'll appreciate it. I'd better get to him quickly.” She looked to Alex. “Coming, honey?”

Jeannie spoke up. “Why not hang around a while? Kill some time until your shift. You are still on third watch, right?”

“Yep,” Alex said. “That's nice, if you don't mind.” She gave Bill a look of reproach. “*Don't* start up again, mister,” she admonished, even as he opened his mouth. To her mother, “I'll be here for a while, Mama.”

Heather smiled and laughed lightly. “I see you're getting a handle on the situation. I may be asleep when you get back. So, I'll see you in the morning. Good night, dear. Good night, Jeannie. Bill.” Everyone returned the pleasantry as Heather headed out.

“Much as I hate to waste this wonderful opportunity to further my advances,” Bill said with the usual half-serious leer at the young blonde, “I'm tired. Between nearly vaporizing the entire Trojan point, the shootout, and patching the *Imp*, it's been a hectic, adrenaline-laden day.” He rose, and took his dishes to the washer. “I'm going to bed,” he declared. “Anyone care to join me?”

Jeannie waded up a napkin and threw it at him. “Try going to bed alone for once. Think of it as a novelty.”

He fielded the napkin and put in the laundry hamper. “Definitely a novelty,” he said. “Usually I have to fight off throngs of hopefuls.”

“In your dreams, tovarisch,” was Jeannie's rejoinder.

Bill eyed Alex again, then Jeannie. “Ah, yes. Dreams. I'll be in bed.” He headed to the bedroom and closed the door behind him.

Alex and Jeannie sat at the table, and shook their heads. “You seem to be adapting to Bill's

flirting," Jeannie commented. "Not blushing so much."

With that, Alex did blush a little. "I hope you aren't mad about that. I'm not trying to encourage him. He just... goes on. But it's the context that gets to me. I mean, I'm nineteen. I'm no virgin. If I were in a bar hearing exactly the same thing, I wouldn't blink."

"Alex, your pretty face is all it takes to encourage Billy," the older woman explained. "And I'm not mad. Honey, if he *didn't* sit up and take notice when a beauty like you enters the room, I'd have to fire up *Imp* and get him to a doctor." Jeannie rose and moved to the kitchen. "Would you care for some wine? I'm getting myself a glass. It's a rose."

The blonde beauty bit her lip. "I don't know... I do go to work later tonight." She smiled. "Maybe a small glass. Just one."

"Coming right up."

True too her word, Jeannie returned with glasses of wine. "Here you go, let's move over to the sofa." she said as she passed one to her guest. Then she settled onto the sofa cross-legged facing the younger woman, and pulled a strap across the shapely limbs. 'Sitting' in free fall struck some as silly, but Jeannie thought it was sociable. "To this day,"she said, "I still feel a little silly drinking wine from a child's sippy cup."

Alex's face lit up. "I know," she agreed. "I grew up on the Moon, and didn't give it much thought until the first time I went on a trip with my parents. I used to imagine everyone drinking from little plastic bags."

"Compared to a baggie, cups are a lot easier to wash, and washing is more economical than throwing the dishes out after every meal."

Alex sipped. "I'm no connoisseur, but this seems nice. Did you make it?" she asked. "I know your husband brews his beer."

Jeannie's eyebrows rose. "That would be 'no' on both counts."

"What?" Alex looked confused.

"No, I buy the wine," Jeannie elaborated. "And, no, Billy isn't my husband. Not exactly." She gave the other woman a look of appraisal. "Is that why you were so bothered by Billy's teasing? You thought I was a jealous wife?"

Alex was very confused. "Well... Yeah. I mean, you're together, and obviously... you know. And you have the same last name."

"Drink, and relax," Jeannie instructed. "We hear that so much, that we just roll with it." Sip."The awful truth is that the 'Hunter' is the name of our partnership, a two person privately held company." She grinned.

"But Mama and Papa even called you Mister and Missus."

“Lots of people do,” Jeannie allowed. “From something your father said, I got the impression you're Christians.”

“Nominally, I guess. Papa mostly. Mama doesn't talk about it, and I'm... Not much of anything, religiously.”

“Same here,” Jeannie said. “So I imagine he just Bill and I followed the same general pattern. To outside eyes, it would look that way. But not really. In fact, we weren't even romantically involved with each other until well after the company was formed.”

Alex blinked in surprise. “With your looks and his libido?”

Jeannie laughed. “Even so. There were perfectly innocent reasons for it. Care to hear the short form?”

“It isn't really any of my business,” the blonde demurred.

“I'm offering; you aren't snooping,” Jeannie countered. “Besides, if Billy does get serious about you, it would start being your business. Some.”

Again, the girl's face reddened with embarrassment. “Jeannie!”

“Why not?” she shrugged. “We don't have contracted exclusivity. I don't own him.” She sipped more wine. “Now, I might disapprove if I thought you were inappropriate or not good enough for him.”

“Oh, god,” Alex muttered. “I don't believe I'm having this discussion.” She took a large swallow of her own wine.

“As it happens,” Jeannie pressed on, “I think I rather approve of you. And,” she gestured at her own figure, “I'm confident enough in myself not see you as a threat to my relationship with Billy. Some of that comes from that back story I offered.” She grinned. “Relax, sweetie. I'm not suggesting you try anything. Just trying to reassure you that there's no problem if something does start to happen. People being people.”

“You're awfully casual about all this,” said the flustered young lady.

“Honey, back on Earth, I was a teenage hooker. It takes a lot to shake me,” Jeannie said flatly.

“I'm sorry; what's that?” The term was unfamiliar.

“A sex worker,” Jeannie told her. “See, I grew up in a city on the east coast of North America, in what's left of the United States. We were poor, and the system kept us that way so it could justify helping us. Endless cycle.”

“I think my parents came from the US, too. I've heard them talk about how bad it got.”

Jeannie nodded. “Bad enough. But when puberty hit, I found a way out. Tried working the streets, and made enough money to get by without 'assistance' so long as it looked like I had an adult guardian. But unless you have a pimp – who'd take most of your money, *all* sometimes – you have to

keeping changing your territory."

"Why not just go to work at a joy house?" Alex wondered.

"Joy houses are illegal there, sex with someone my age then was illegal, and it was even illegal for someone my age to have a legal job. Remember, the system was set to keep us down."

"Weird," Alex decided.

"Yep," Jeannie said. "So what I did was start advertising on 'Net classifieds. Turns out in the US, there were plenty of well-heeled guys, sometimes a woman, willing to pay big for very discrete sex. There was one fat slob, a fire and brimstone super-christer minister and white supremacist. I hated the fat fuck, but he'd pay two grand a night to get his hands on a pretty little underage nigger girl who'd keep her mouth shut." She shuddered at the memory. "Correction: who'd not talk about what she knew."

"If it was so bad, why do it?" Alex asked innocently.

"It wasn't always that bad," Jeannie replied. "Usually my customers were pleasant enough people who just wanted some variety without encumbrance. And I admit that I like sex; ask Bill." Then she shook her head. "But the ones who would pay the really big bucks were typically the disgusting, self-righteous hypocrites like the preacher, who pretty much had to pay to get laid. And by that time I knew that for me, getting out was going to be emigrating off-planet, and I needed the money to pay my way. And that's how I ended up meeting Billy," she finished.

"He was a customer?" That surprised Alex; she didn't see him as the 'had to pay' type, ever.

"Oh, that's not what I meant," Jeannie answered. "No, I'd gotten out the US and down to Texas. I was making arrangements to go to the Moon. I had enough to homestead in an established community." She drank the last of her wine and set the glass against an end table. "One evening I got out of a Launcher seminar, p-suit training it was, that day. I was in the parking garage; getting ready to drive back to my apartment, when somebody jumped out of the shadows and knocked me down."

Alex's eyes widened in sympathetic fear, and drew in a deep breath.

Jeannie nodded solemnly. "Didn't see it coming; didn't have time to get my stupid little Raven twenty-five auto out. I was scared. Would've peed my panties if I hadn't just had a stop at the ladies' room. I was scared, and hurt, and his knife against my neck was already cutting me, and it was going to be bad because he couldn't even line up straight." She stopped, and wiped away a small tear.

"Are you okay, Jeannie?" Alex reached across the small gap between them and held the woman's hands. "You could just stop now. If it makes you feel bad. I'll have to leave soon anyway."

Jeannie sniffed and smiled. "What? Just when I get to the good part?" She shook her head. "Heck no. 'Cause suddenly the congress-shit wasn't on me, and there was a *pop*, and the creep was on the concrete without much of a head anymore, and this cute guy with a smoking Truhk in his hand was asking if I was gonna be all right."

"Bill?" Alex asked with a smile.

“None other,” Jeannie confirmed with a smile. “He'd just gotten out of a class himself, and saw what happened. While he was helping me with the shakes, and gathering up everything that spilled out of my purse, the company cops showed up. They did their bit; pics, statements, checking our stories. Finally they called for a someone to clean up the mess, apologized to me, congratulated Billy, and offered him the punk's cheap switchblade. Billy declined, saying he had better already.”

“Wow.” Alex was amazed. “And you mean meeting like that, saving you and all, and you still didn't get romantically attached?”

“What we did was find a quiet bar and have a couple of drinks so I could calm down,” Jeannie said. “We'd met at the Launcher training facility, so it didn't take us long to figure out we both planned to emigrate. We had more classes, often together, and got to know each other.”

“Cool! And then you...” Alex prompted expectantly.

“And then we didn't. We did compare notes and plans. I didn't have the stake to set out alone, and Billy wanted to be a prospector, but, likewise, his stake wasn't quite enough. He planned to hire on as an apprentice with one of the new companies 'til he had enough. We decided that, together, could afford a good down payment on a ship, which we found cheap because the owner discovered a serious fear of open spaces that had never manifested until faced with free space free fall.

“Bill told me once, that having met me when someone was trying to sexually assault me, made him hesitant to approach me sexually. And then when we decided on a business partnership, he thought he should stay all business. I'll admit to thinking that way a little, too. In retrospect, I think I was trying to distinguish between my old line of work, and the new line.”

Alex shot her a dubious look. “And how long did that last? I mean, Bill...”

Jeannie laughed. “We made it through training, buying the *Imp*, provisioning and hooking up with the Ahacics. We did *not* it make past the second week out on the first trip. And it wasn't just Bill, I assure you.”

Alex laughed, too. Then abruptly, “Wait a minute. If 'Hunter' is the company name, what's *your* name?”

“Hunter,” Jeannie said simply.

Alex blinked again. “But you said...”

“I said *we* aren't Hunters. *I* am. More specifically, and formally, I'm Jeannette Anamarie Hunter. And Billy's Willem Van Rijn,” she added. “When we set up the company, I suggested *Van Rijn & Hunter*. Bill said we should keep it even simpler and just use one name, and offered to flip a coin to choose. Hunter won, which Bill said was good, because it was sort of a pun since we were hunting valuable deposits.” Jeannie essayed a small bow. “And now you know.”

“Icy.” Alex thought it over briefly. “So, did Bill come from the United States, too?”

Jeannie laughed again. “Oh, no! He came from a place called Wyoming; which, if you're up on

your history, is the same general area as Calvin Schmidt. Bill says he was sort of a folk hero there. I, on the other hand was 'educated' in a government school in the US. You can maybe guess that the version of events I got had a very different slant. Being cynical enough to drop out of school to turn tricks, I never really bought the propaganda, but even so Bill and I had interesting conversations in the early days."

Alex giggled. "I guess." Then she checked her datapad. "I better get back to the *Golfball*. Papa will *not* appreciate it if I'm late for my shift."

Jeannie took the woman's empty glass. "No, that won't do at all. And I should get some sleep, myself. But I'm very glad we talked."

"Me, too," Alex returned. Then on a sudden impulse she leaned over and gave Jeannie a quick hug. "Thanks."

"You're welcome. Have a good shift."

"A boring one, hopefully," Alex said as she headed to the mudroom. "Good night."

"'Night."

Pardon me for a moment.

I see that you are more than halfway through this book. That suggests that you are enjoying it, which was certainly my intent when I wrote it.

If you are enoying this book, and if you have not already done so, please consider visiting my web site and dropping a buck or two in my Amazon or GPal tip jars.

www.bussjaeger.org

Thank you.

Sincerely,

Carl Bussjaeger
Author

Chapter 13

They were having a sale at the gun store.
Leslie Fish

The following morning, Toby and Alex were visiting aboard the *Improbable* while Heather Dohnalek took the first watch. Toby was splitting his attention between the conversation and Bill's comics. Alex and Jeannie were comparing notes on firearms; a shared interest they had discovered.

After the encounter with the jumper, Bill and Jeannie agreed that the locale was starting to get crowded, and some of the folks were unruly. They started wearing sidearms, as they generally did in the Belt. Jeannie's unusual choice of weapons had gotten Alex's immediate attention.

“I don't know,” Alex said doubtfully. The older woman had unloaded her gun and offered it to the young gunner to examine. It was a modified Remington 20mm shotgun; 30 centimeter barrel, polymer pistol grip and forend, with a laser site in the end cap of the under-barrel magazine tube. “Pump action? An autoload pistol is faster, and carries more rounds.”

“I carry one in the chamber, ready to go,” Jeannie explained. “I usually don't need a follow-up shot. But they're there if I do.” She held up one of her rounds. “Custom rounds, shorties. Six in the mag, to go with the chamber round. And I like the versatility of the shotgun case. You can stuff all sorts of fun stuff in there. Rubber pellets for crowd control, frangible slugs for indoor use, armor-piercing slugs for punching through a heavy suit. You name it...”

“...She's got it,” Bill finished coming back to the table with a fresh pot of coffee. “You ought to see her getting ready in the morning; takes more time picking out ammo than she does with the shoes.”

Alex glanced down at Jeannie's bare feet and grinned. She also eyed the man's firearm. She recognized it as a fairly common LNS Industries 15mm Truhk with the integral suppressor option, in a shoulder holster. “Is that holster *leather*?” she asked.

Bill glanced toward his shoulder.”Sure. Why?”

“Doesn't it dry out and crack in vac? Or do you have something else for EVA?”

“It's leather,” Bill confirmed. “But I don't use this rig outside unless I'm in a skinsuit. It'll take space, though; it has a special silicone treatment. I just have to wipe it down every now and then.”

“Huh, the girl grunted. “Don't see much leather. Mostly stuff emigrants brought out.”

“Yep, that's what this is, too,” Bill said agreeably, between sips of coffee. “I like shoulder carry, but it took me forever to find one that rode just right. Wasn't about to leave it behind.” Another sip. “I imagine you'll start seeing more leather soon. There didn't used to be much cattle beyond the Earth and Moon; they don't like free fall. But people are building some fair-size spin-g farms these days, and raising the beefies. Don't imagine they'll let the hides go to waste when butcher one.”

“No, just to waist,” Jeannie said.

“More ways than one,” Toby finally chimed in. “The price of beef should drop when there's options to importing it. I'll be eating more then.”

“Oh, dear; there goes my diet,”Jeannie sighed sadly. “If steaks do get down to a reasonable point, I'll be stuffing my face.”

Alex gazed at the other woman's figured, display to excellent advantage in a brown and orange tiger-striped dance leotard, with a tan scarf tied around her hips. “Doesn't look to me that you have any trouble staying in nice shape. You must work out a lot.”

“Not really,” Jeannie denied, “aside from the basic cardio and calcium stuff.”

Alex looked at Jeannie's legs a little enviously. “You're in good condition. I wish *I* could stay that trim just on conditioning. And that permanent tan,” she said wistfully.

“Yeah, that and mining; moving all that rock and ore. Handling massive implements...”

Bill spoke again. “Yes, I do give her a work out,” he said smugly. Then he leered at the attractive young blonde. “Why not team with us? You and Jeannie could alternate, and she can get some downtime.”

Alex blushed. Toby was giving Bill a look of careful consideration tempered by a slight grin. Jeannie whacked the jokester on the left side of his head.

“What?” Bill demanded innocently. “I'm talking about prospecting, mining.” He eyed Alex mischievously again. “You know, like... *drilling*.”

“*You* hit him this time,” Jeannie told her proposed partner.

Alex considered the shorty shotgun, still in her custody. “Here, better take this back before something unfortunate happens.” She handed the gun back to Jeannie. And whacked Bill on the right side of his head.

“That's better,” he said cheerfully. “I was feeling unbalanced.”

“Bill,” Toby said with some amusement, “Based on our admittedly brief acquaintance, I strongly suspect that's a life-long condition.” He chuckled. “And if you really hired Alex on, along with Jeannie, it'd probably be a terminal condition.”

“Yeah, but what a way to go,” he sighed happily.

“Billy, I can't take you anywhere,” Jeannie scolded. “I'm going to lock you in the cargo hold 'til we get back to the Ceres.”

“Sheesh, some people have so sense of adventure,” Bill complained. “That's long time in solitary,” he said bleakly. “'Specially with *Imp*'s drive.”

Jeannie looked up in confusion. “What about *Imp*'s drive? We're not having any probs that I've

noticed."

"Not a problem, really," Bill elaborated. "It's just..." He sighed, then settled into a chair. He sipped coffee, then continued. "Look at us. Took most of three months to make it out here."

"So?" Jeannie seemed unconcerned.

"Three months," Bill repeated. "These folks brought the *Golfball* out in... what, nine days?" Toby nodded. "Wonderful. And the jumper was only a day behind them."

"So what, Billy?"

"It gets worse. SpaceTech's boat will be here tonight. Everybody but us seems to be cranking anywhere from a third to better than half a g. I can maybe get just shy of a quarter g out of *Improbable*; but electrical output would be crap. I feel inadequate," he finished pitifully.

Jeannie smiled. "Poor baby." She patted his hand. "Don't worry, Bill. It's not the size of your engine that counts; it's how long you can thrust." She stared into his eyes with a straight face. Toby snickered. Alex giggled.

Bill closed his eyes and dropped his head to the table top with a distinct thump. "Aack," he croaked. "You can be stuffed in the cargo hold, too." With his face still on the table he spoke to his guest, "Hey, Toby. I'll trade you Jeannie for Alex." He raised head and drank more coffee.

Toby laughed. "And you think that would be an improvement? For either of us?"

In a display of perfect timing, the women gave him simultaneous raspberries. Alex added a kick to the shin.

Manfully ignoring the pain, and wisely changing the subject, Toby spoke again. "Umm... I rather hate to bring up business; but I thought a reminder might be in order."

"Reminder of what?" Jeannie responded quizzically.

"Well... You're on a standard dedicated service contract."

"Sure, that was the general idea."

"You realize ordinance expenditures are billed separately that way?" Toby asked.

"Of course," Bill put in. "You worried about that little nuke yesterday?"

Toby nodded. "Somewhat. It's expensive; but I didn't want to screw around with that guy. Who was to know he'd be incompetent," he added, slightly defensively.

"Not to worry. We aren't complaining," Bill reassured him. "When we hire someone with nukes, it's 'cause we figure they may be needed. The expense isn't a prob." He shrugged. "But a heads up on the charge would be good."

“It was one of the newer tamped jobs; so CM is smaller. We'll being billing about 4 kiloMarks for it.”

Jeannie's face lightened, and she said, “Hey! That's not bad. Our first nuke was a two KT rock mover that cost five times that... without propulsion and guidance.”

“Well, supply and demand. There're more outfits selling nuclear applications these days.”

“Not that it helps us out here,” Alex mentioned.

“Hmm?” Jeannie gave her an inquiring look.

“We boosted with one warhead. And we just used it,” Alex explained. “We can't exactly jet to the corner NRU and replace it now.”

Bill's eyes took on a mercenary gleam. “Well, I don't know about that. I think I've got a spare laser guided half KT laying around here somewhere.” He grinned evilly. “So, ah, Toby. How much you think we can knock off the service fee if we restock you?”

“Damn, Bill,” an amazed Toby sputtered. “You've got a *spare* nuclear weapon?”

Bill and Jeannie smiled proudly. “'Be Prepared' and all that, you know,” Bill answered.

“Good lord, you're as bad as Ivan.” Toby shuddered.

Jeannie giggled. “When he was getting ASA up and running, we used to subcontract on occasion. We like to think of ourselves as our own little superpower.”

Alex looked and laughed. “I like you people. You think like me.”

Bill spoke again, “So, Toby; what do you think?”

“Give me a spec sheet, and I'll check it out. If I can use it, I'll query Ivan.”

“Good enough, then. Hang on, and I'll run a copy.” He picked up a pad and brought up an inventory. After a moment's browsing, he found what he was looking for, then opened another frame. “Hey, Toby. I'm setting up a cloud connect for you. Userid golfball, passphrase ferocious. You can connect and change that to something. When you're up I'll shoot the packet to you.”

“Sounds good.” Toby connected, and almost immediately got the spec sheet. He skimmed over it quickly. “Isher Model X-C... MarsCon guidance... Selene propulsion...” He looked up. “Off hand, I think it'll work. I'll probably have to mount it on one of the external racks, though. Let me take this back to the *Golfball* and check some details.”

“Fair enough.”

Jeannie lifted from her seat. “Would anyone else like some more coffee?”

“No, thanks,” the elder Dohnalek replied. “I need to get back to work.” He eyed his daughter. “And you

might want to get some sleep, young lady."

The power of suggestion was strong; the young gunner yawned immediately. "Hmm. I guess so." She turned to Jeannie. "No, thank you. I'd better get going, too."

The Dohnalek said their goodbyes, suited, and departed. Bill opted to suit up and prep the missile for transfer; working under the assumption that Ivan would never settle for a ship being below strength when an alternative was available. Jeannie started a set of preventive maintenance routines on their water reclamation system. And so passed an unremarkable Saturday.

***

With only about an hour left on his shift, Toby was relaxing and reading a book on a spare display. He missed his hardbound library back at Ceres, but wasn't about to blow his entire mass allowance bringing a couple dozen books along. Digital libraries were a lot cheaper to boost. He reached to the keyboard and tapped the page forward.

Squeeeeeeeaaal! For the second time in two days the proximity alarm sounded. Toby yelled back towards the living areas. "Alarm! Hop to it, ladies!" He heard muffled acknowledgments, and turned to his displays. The passive scan showed a thermal trace at six hundred kilometers. "Damn place is as busy as Ceres Station. And it's always on my shift." He called the Hunters. "Hello, *Improbable*."

Jeannie answered almost immediately. "Yes, Toby?"

"We've got an..." *Squeeeeeeeeaaal*! The secondary alarm relay from *Improbable* sounded belatedly.

"Okay, I see it, too," Jeannie confirmed. She glanced at a time display. "It should be *Profit Motive*, but even so..."

"Right. We're on it. Stand by while we do the song and dance," Toby instructed. He flipped switches and hailed the incoming blip. "Good evening, stranger. This is Ahacic Security craft *Ferocious Golfball*. Please respond immediately."

This time, the bogey did answer. "Hello... *Ferocious Golfball*, did you say? This SpaceTech craft *Profit Motive*; Adam Greene speaking. If you're with the Hunters, we're expected."

Toby glanced around the room and confirmed that Heather and Alex were in place. "*Profit Motive*, you are expected. But if you could verify your identity..."

"*Golfball*," another voice spoke, and a face appeared as the other vessel initiated a vid feed. "Marty Sinclair here. I've brought in Joey Wilkes and Vesna Collyer to check out the *Whatzit*. You can check that with Jeannie."

Heather was already bringing up a copy of SpaceTech's last post to the Hunters. Jeannie had passed it to them for just such an occasion. "That checks, Toby. His pic matches, too."

"You're cleared to approach, SpaceTech," Toby relayed. "Would you like a nav beacon?"

“Sure would appreciate it, friend. And do you mind if I ask... *Ferocious Golfball*?”

Toby looked to Heather. “You do realize that we're going to have to kill Ivan for this?” He returned to the radio. “You should have our beacon now. As for the name... Seeing is believing.”

“I don't quite understand that; but perhaps I will later. Mr. Greene says we'll rendezvous in about 2 hours.”

“Very good, *Motive*. See you then.” To his link to *Improbable*, he said, “Jeannie, I believe we can stand down. They seem to pass muster.”

“All right. Thanks, Toby.”

***

Alex had the watch by the time *Profit Motive* made it in. The newcomer shut down her main drive at ten kilometers and eased the rest of the way in on attitude thrusters.

But not quite all the way. Alex held a hull camera on the new ship, and she and her father watched. SpaceTech's ship fired stabilizing bursts and stopped relative to the *Whatzit*, but about two hundred meters away. “I figured they'd tether to the beastie, too,” Alex said.

“Maybe they're scared of it.”

***

Improbable's company watched the approach as well, and also noted the remote position. Bill gave them a call. “*Profit Motive*, is there a problem? You're perfectly welcome over here with the rest of us.”

“No problem, Mr. Hunter,” returned Greene's voice. “We just like to have some room when we spin up.”

“Beg pardon? Spin what?”

Greene's voice held a hint of humor. “You haven't seen a Bigelow BaseCamper yet, then?” He laughed. “You should get a kick out of this. Keep your eyes peeled. Talk to you in a bit.”

Bill looked at Jeannie. “Darned if I know,” she answered the unasked question. So they watched.

Profit Motive looked fairly conventional. She was composed of the cylindrical life modules that were very nearly a trademark of Bigelow-built craft. She had two fifteen meter cylinders nestled together with an unusually complicated girder structure. Small globes, likely air stores, nested against the life mods. Aft, another of the curious structures connected the life system to the reaction mass tanks. These were a spheres very similar to *Imp*'s. As the couple watched faint puffs jetted from the ship's attitude thrusters.

“What are they doing?” Jeannie wondered. “They're already at dead stop.” She frowned as the

ship began a slow tumble.

“What the flaming...” Bill began. “Wouldja look at that?”

The ship was coming apart before their eyes. The two main sections were separating. Cables stretched between the girder-ed constructs, and played out. Something like a an accordion-jointed tunnel extended between the forward life mods and the aft reactor and tanks.

“I'll be damned. Spin gravity!” Bill exclaimed. “They go in style; don't they?” He chuckled.

Jeannie was shaking her head. “I wouldn't have believed it if I hadn't seen it. Talk about spoiled.” She giggled and enjoyed the show.

Profit Motive was segmented and tethered to allow it to spin for simulated gravity. The cables playing out were carefully spacing the two main sections; creating a giant bolas. The lead module had extended some thirty-five meters. The aft propellant and drive section, being much more massive, was on a shorter leash. Bill guessed her slow tumble spun her about every couple of minutes.

“Hello, *Improbable*,” the radio called. “We're done now. Enjoy the show?”

“A little ostentatious, don't you think?” Jeannie replied. “I mean... gravity?”

“It makes sense in the long run. We'll probably be out here for months. I expect my girl will be the company's ops base for this show. E-fields and calcium supplements can only do so much; for the long run the human body expects some grav, he explained, referring to the usual tricks spacers used to prevent bones leaching away in free fall

“Maybe,” she accepted. “But it still looks like overkill.”

“Not at all. But it does have its down side. We'll be hours getting everything shifted around for the new acceleration orientation. But we'd like to be sociable; can I invite you over for dinner?”

Bill shook his head, and Jeannie answered, “Thanks, but it's getting pretty late for us. What time zone are you on?”

“Shiptime is seven thirty-eight pee em,” Greene replied. “If you and the security ship are keeping the same schedule, we'll shift to match you.”

“That might be best. We're running on zulu. So it's... Zero-one thirty eight.”

“Okay. We'll shift over. Mr. Sinclair is suggesting that we wait and hold introductions for your morning.” Greene paused. “He asks if you'll join us for lunch at 1200 tomorrow.”

“We'll be there. But for now, if you'll excuse us, we're going to bed.”

“Have a nice night, *Improbable*. Out.”

“Clear.”

They floated before the wall screen for a few more moments, observing the high-tech tumbleweed. “I don' know about that,” Bill mumbled. Jeannie tugged on his shirt tail.

“Come on to bed, love.” She moved tiredly toward the bedroom

“Yeah.” He looked one last time, then turned enjoy a different view, as he followed Jeannie to bed.

Chapter 14

Price and participation may vary.
McDonalds Dollar menu

"Good morning, Jeannie," Heather spoke from the intership comm. "What can we do for you?"

Jeannie nibbled a bagel as she conversed. "Nada much, really. Just curious what sort of activity you may have noticed from our new arrivals last night." She took another bite.

"Nobody went prowling around your *Whatzit*, if that's what you mean," the other woman replied. "But they were scanning hell out it with radar. Presumably lots of passive scans, too."

"Okay, then," Jeannie said. "Guess they're playing fair. We're heading over to their ship in a couple hours to settle accounts. If all goes well, you'll be working for them shortly after."

"And if all doesn't?" Heather asked.

"Somehow I don't see that as a problem. They certainly can't afford to get uppity; I don't see so much as a flare launcher on that escaped amusement park ride."

Heather laughed. "We noticed that. Alex disapproves."

Jeannie smiled. "I suspect SpaceTech did that deliberately. I know bloody well that they do arm at least some of their craft; defensive gear, anyway." She pursed her lips briefly then continued. "I think they wanted to look harmless to put us at ease. Which I take to mean they're acting in good faith."

"Still..."

"C'mon, Heather," Jeannie chided. "As soon as we sign, they'll probably have you send for a dozen more backups."

"That's cool. Ivan can always use more business. Looks like everybody gets something out of this deal."

"Best kind of deal there is," Jeannie commented. She noticed Bill entering the room. "Gotta go. Talk at you later."

"Ta ta."

"Whuzzup," Bill inquired. He moved towards the kitchen, seeking coffee.

"Just checking on what the SpaceTech folk did all night," Jeannie replied. "Apparently they did a lot of imaging."

"Fair enough," Bill allowed. He transferred brown liquid to a covered cup. "I expect they'll want to do some hands-on to verify our prelim data before we deal."

“True. Maybe I should call them and suggest it. Just to get things rolling.”

“Might as well.” He kicked over to join Jeannie by the comm. “Now's as good a time as any.”

“All right, then.” She tapped buttons again. “Hello, *Profit Motive*. Good morning; Jeannie Hunter here.”

The SpaceTech vessel replied quickly. “Good morning. Hanby speaking. May I help you?”

“We wanted to talk about y'all running some checks on our *Whatzit*...”

“Ah,” Hanby broke in. “Let me put the boss on the line for that. I just fly this gyroscope. Wait one. He be right here. Say, while we were waiting, you want to set up a dedicated intership comm? We can tie you into shipnet for v-calls.”

“Certainly,” Jeannie said. “We've already set up a lightlink with the *Golfball*. Where's your laser target on that pinwheel?”

“Near the airlock at our centroid structure,” Hanby said. “Safety orange and green. Yours is the reflector near your big dish?”

“That's it.”

While Jeannie coordinated with the other man, Bill rummaged around in the kitchen for munchies. “Want some coffee, babe?” he asked as well.

“Umm, please. Cream and sugar, too?”

“Coming up.” Bill readied her beverage. As he filled his hands with coffee cups and blueberry muffins scavenged from the cooler, Sinclair appeared on the new v-comm link.

“Good day, Mrs. Hunter,” he began amiably. “What can I do for you?”

“Hi, Mr. Sinclair,” she answered. “We noticed that you haven't made any up close examinations of the probe yet. I was thinking you might want to put a few people aboard to start verifying our offer.”

“Now that you mention it, I would like to send two folks over. I just didn't want to step on your toes.”

“Feel free to investigate to your heart's content, Mr. Sinclair.” Bill was waving to catch her eye. “Stand by one.” She turned to Bill. “Yes?”

“Remind them about not mucking with the mag fields, Jeannie.”

“Blast me, yes.” She returned to the comm screen. “Poke around all you want to satisfy yourselves. But I'd suggest that you not screw around with the containment fields.”

“The whats?”

“You'll find a hatch at the tail end of that contraption,” Jeannie explained. “It seems to be a direct access to the storage area for the probe's antimatter stock... You were briefed that this sucker has an AM drive?”

“Oh, yes! Definitely. Our folks are rather excited about the possibility of getting their hands on large quantities of antimatter.”

“Well, if they do anything to disrupt the magnetic fields in that area, they *will*. Albeit, very, very briefly.”

“Er, no offense intended; but would that remark have anything to do with a gamma ray event that Alfa Station recorded a couple of days ago?”

Bill winced. “So much for keeping my screw-ups private.”

Jeannie ignored him and answered Sinclair. “We have verified that some of the alien's systems are still active, and that there is an undetermined quantity of antimatter aboard,” she said innocently.

“I... see,” Sinclair replied. “I'll bear that in mind.” He paused, then went on. “I'd like to get Collyer and Wilkes over there right away. Is there anything else that shouldn't wait for lunch?”

“I don't think so,” Jeannie answered. “We'll join you about noon.”

Sinclair chuckled. “Fine. I'm looking forward to meeting you both.”

“Later, Mr. Sinclair.” She cleared the channel. “Well, now what?” she asked Bill.

“Now we wait. We've had plenty of time to get our demo package ready,” Bill said confidently. “It isn't a major problem. If they weren't ninety-five percent sold already, they wouldn't be here.”

“True. And our containment oops may have worked in our favor, too; judging by Sinclair's comment.”

Bill shuddered. “I'm glad *some* good came of it, then.”

Jeannie patted his back. “Don't worry about it.” Then shifted the topic back to preparations. “You do have everything set? The Ball? Brick? Datacards?”

“Yep. All boxed up in the mudroom.” He sighed. “Now we wait.”

“Poor, impatient baby,” Jeannie smiled. “Let's go pick out some impressive negotiating clothes.” She grabbed the collar of his t-shirt and dragged him back to their bedroom. “Raggedy t-shirts and sweatpants are not the order of the day.”

“What say you go over in a g-string, and while they're distracted, I pick their pockets?” Bill suggested lewdly.

Shortly before noon the two were preparing to head over to the *Profit Motive* for their businessman's lunch. Bill pawed through the box of demo gear a last time, just to be sure he had not forgotten anything. Then he pulled his suit over his knit jumpsuit, a somber black and gray outfit. Once he had the LS pack in place, he clipped a holster to the harness under his arm and a magazine pouch at his waist. He retrieved his Truhk and spare mags from his ship rig. He checked chamber and mags, then put them into their proper pockets. He stuffed the leather holster in the box. Jeannie was making similar preparations.

They had discussed taking sidearms to a business meeting. Bill had wondered if they might be out of place. Besides, "We've got the gatling, a small nuke, the *Golfball* with chain guns, lasers, another nuke... Aren't sidearms redundant?"

"Never, in business," was Jeannie's take on it. "It isn't like I think we're going to be shooting it out. They're for effect."

"Eh?"

"Always bargain from a position of strength," she explained. "And Sinclair strikes me as the sheltered headquarters type. Probably hasn't dealt with prospectors out on location much. It'll throw him off stride."

Bill grinned. "True. And here I was about to politely yield him the advantage of familiar space."

Jeannie holstered her hand cannon and sealed her suit. "Shall we go?"

Bill handed her a hand jet. "After you, my dear." He waved her into the lock.

***

"Blasted thing makes me dizzy just looking at it," Bill commented as they approached the company craft.

"I know," Jeannie agreed. "But it is sort of interesting."

"That's the polite way to put it." As they closed on the rotating craft Bill said, "Do you see the lock... There 'tis." He pointed to the red-outlined airlock. The two prospectors maneuvered their load closer. Jeannie eyed the mechanism, then punched a button. The lock slid open, and a voice spoke.

"Welcome to the *Profit Motive*, folks. Come on through."

"Thank you," Bill replied. He and Jeannie entered the lock together. Jeannie spotted another control panel and closed the outer door. The lock immediately began pressurizing. When their suits were fully collapsed on their frames, a green light flashed and the inner door opened to reveal two waiting men. The Hunters floated through the door carrying their box.

Bill unsealed his helmet and pulled it off. "Guten tag," he said. "I'm Bill. I s'pose one of you is Martin Sinclair?"

A man a few years senior to Bill and dressed in a dapper blue jumpsuit spoke. “That would be me. Just call me Marty.” He waited until Bill had his glove off, then clasped hands briefly. By then, Jeannie had her head gear off as well. She exchanged greetings. “And this is Adam Greene,” Sinclair introduced his companion. “He's the lead pilot of this whirligig.”

“I go by Adam,” the younger man said. “Welcome aboard. Can I help you with those suits?”

“Just point me at a coat rack, Adam,” Jeannie answered.

The SpaceTech man nodded to a row of wall-lockers against the bulkhead. “Just pick any empty ones.”

Bill and Jeannie doffed their gear. With pressure suits stripped away, Jeannie was revealed to be wearing a knit jumpsuit similar in style to Bill's conservative number. Except that Jeannie's garb was a shade of brown that nearly matched her skin tone, and was considerably snugger. It certainly wasn't the g-string for which Bill had lobbied, but Adam Greene clearly found the view distracting.

Bill turned to their hosts. “What's on the agenda then?”

Greene replied, “If you'll come this way, we can put some weight on you.” He indicated a doorway in what was currently trying to be a floor. A ladder extended from it.

Jeannie looked down and saw a two meter diameter tube stretching out for several meters. The ladder ran the entire length. “This is going to be fun,” she commented. “Bill, you get to drag the box.” She laughed lightly.

Greene spoke up. “That's not a problem.” He pointed to a cable extending into the tube, which she had missed. “Clip your box's lanyard to that, we'll lower it that way.” He laughed. “Would you believe the designers didn't include that?” We added it ourselves the first time we needed to bring in some rock cores.”

“Probably some groundbound type full of theory,” Bill scoffed as he clipped the load to a ring on the cable. Greene punched a button to send the box to the far end of the passage.

“Well, let's go,” Sinclair urged. He mounted the ladder and began moving down. Bill shrugged and followed him, with Jeannie close behind. Greene brought up the rear.

At the end of the tunnel, they each stepped off onto the floor. Bill glanced around, noting fixtures that seemed to be configurable for various acceleration orientations. “I suppose it's nice to have some weight occasionally,” he began. “But isn't this more trouble than it's worth?”

“Not at all,” Greene disagreed. “You saw how fast we set up last night; most of it is automatic. Besides, we don't bother for most stops; just when we expect to be in place for a fair while.”

“What about leaks in the connecting tube?” Bill tipped his head up at the passage they had just traversed.

“Haven't had any yet,” the pilot informed him. “Been running the girl for a year now. I admit that I do a pressure check first thing when we deploy, though.”

“Maybe,” Bill said doubtfully. “But I've been running *Improbable* for years. And the only time she leaks is when some idiot shoots at her.”

“Speaking of which,” Sinclair interrupted. “We registered a hell of flash a few hours after your gamma burst. But that one didn't show any noticeable gamma. Did you fire a nuke?”

“*Golfball* did,” Jeannie confirmed. “Jumper. *Ex*-jumper.” She smiled dangerously. “We tend to be very protective of our property.”

“Unfortunate,” Sinclair observed. “But... A claim jumper out here? That could hardly be coincidental.”

“Darned straight,” Bill said. “But we didn't advertise our find to anyone but SpaceTech. Even Ahacic only knew we wanted security. He didn't know why.” He gave Sinclair the evil eye.

“I see,” the executive responded. "Security breach.”

“No offense; but there is another option,” Bill said quietly.

Sinclair shook his firmly. “No, sir; that is not a possibility. SpaceTech always has and always *will* deal straight. The jumper wasn't ours.” Only now did he seem to realize that the Hunters were armed.

Greene broke in. “Why don't we step into the conference room to discuss these matters?”

Bill reacquired the box of goodies and said, “Lead on.”

Greene did. Walking carefully in the light g, they entered a large room. Pleasant odors of cooking food wafted from another door. Sinclair pointed towards a conference table and invited the Hunters to sit.

Bill smiled slightly, finding the idea of a conference table on a spacecraft a bit silly. He chose to start the show by saying, “So. Your folks have had an hour or so with the *Whatzit*...” Bill saw a puzzled frown on Sinclair's face. “We call the probe the *Whatzit*; that being the first thing we asked ourselves when we found it.” He added a grin.

“Makes as much sense as anything, I suppose. We'll probably adopt the usage ourselves,” Sinclair replied. “But do go on.”

“Anyway, you folks have poked around long enough to verify that this is no hoax.” Sinclair nodded, so Bill finished with “So... You brought your checkbook?” He waited.

“Figuratively speaking, yes. At this point, the question is what numbers do I fill in?”

“Large ones,” Jeannie suggested, grinning.

“With lots of zeros,” Bill added.

“Indeed,” Sinclair said. “Harry McMurphy authorized me to negotiate a settlement with you. He presented me with a range of options which I believe he summarized for you.” The executive slipped a fancy datapad from a vest pocket. No doubt the gold trim made it run faster than an unadorned model.

“That he did,” Bill acknowledged. “We prefer to keep this simple. One hundred million marks, straight up.” Greene choked.

Sinclair frowned very slightly and replied, “Frankly, that amount would cause some cash flow issues that could end up delaying development of technologies we derive from the alien probe.” He tapped his pad. “Perhaps forty-five million, and seven and a half percent for ten years. That's starting from the market date of the first product,” he added.

Bill glanced at Jeannie, who shook her head and said, “We really aren't interested in playing with royalties. Just a lump sum payment. Say, no royalties, and sixty-five million?”

“If necessary... Yes, I can authorize lump sum, but as I said the amount is problematical. We would prefer to make a smaller initial payment and add royalties for some years.” He tapped at the pad, then added, “Frankly, it's a better deal for both of us. We don't go as deep into our cash reserves, and you make more money in the long run.” He looked at the sellers appraisingly. “That's a starship. It must have had kilograms of antimatter aboard. If only a tiny fraction remains then your share of that alone could be tens of millions.”

Jeannie shook her head. “No, we prefer the cash.” Sinclair looked baffled, so she explained. Sixty-five megaMarks is more than we can spend in any normal life. More would be redundant. And I don't want to get tied down to keeping track of corporate accounts; trying to figure out how much we've made from one year to the next. In that sense, royalties are a burden to us.”

Bill backed her up. “Cash,” he said simply.

“But you could be rich...”

Jeannie giggled. “Sixty-five million Marks *is* rich. And for us, it's enough.”

Sinclair frowned, checked numbers, and sighed. “Sixty-five is higher than I can go.” He stared at Jeannie and turned to Bill, “If the two of insist on the lump sum, no royalty deal, the best I can do is fifty-two five.”

The Hunter exchanged glances again. “Sold,” Jeannie answered.

“I don't completely understand this, but.. I'll notify the home office.” Sinclair shook his head. “This has to be the oddest and quickest set of negotiations I've ever been in.”

“Haven't dealt with too many indy prospectors, have you?” Bill asked the suit.

“Well, no. Most of my experience has been in inter-corporate dealings.”

“After you've handled a few rock buys you'll see. If we were the sort to sit at home watch the cash roll in, we wouldn't be out here in the first place.”

Sinclair took a deep breath and let it back out. “No, I suppose not.” He blinked and added a more personal observation. “No doubt it's quite obvious that I'm not a spacer-type.” The Hunters grinned, and even Greene added a chuckle of his own. “But to tell the truth, I've never understood the attraction of deep space. What's there to see? It's all one monotonous view. And all the while no-grav leaches your bones away and weakens the heart.”

“Oh, no, Mr. Sinc... Marty,” Jeannie corrected. “There are things to see. Do yourself a favor; sign up for one of your company's survey missions. Spend a few months seeing the solar system. Work a comet rendezvous at perihelion. Look at the stars. Even enjoy the sight of kilometers of refining mirrors spread in the sunlight.” She smiled. “Have you ever even seen the Blue Madonna?” She referred to an asteroid composed largely of bauxite of a bluish tint. The rock became famous when someone took note that a single prospector was continually bringing cargoes of aluminum to Ceres. The old man revealed the location of his lode and welcomed visitors. His first guests made the incredible discovery that the miner had not been randomly excavating the body; he was sculpting the ore he processed, creating a three hundred meter statue of a woman in flowing blue robes. The general consensus was that the artist was quite mad, but reasonably talented.

“No, can't say that I have...”

“Do it. It's impressive.”

Bill laughed and added, “But do it soon; before that crazy old man carves it into a likeness of a penguin or something.”

Jeannie grinned. “I'm pretty neutral on religion, but I suppose we should be glad that he's a biblethumper instead of a compgeek.”

Sinclair chuckled at the absurd image. “Sightseeing someday, perhaps. But I'm more of the stay at home sort. I don't think I'm cut out for life in a long range prospecting craft.” He abruptly shifted the subject. “But since you are, I'd like to suggest that you stay on-site for a while yet.”

“That's no hardship,” Jeannie said. “But what's the occasion?”

“Security,” Sinclair stated flatly. “SpaceTech has arranged to assume the financial obligations with Mr. Dohnalek. And we're requesting that ASA send an additional team out, too.” He paused. “In the meantime, *Profit Motive* is essentially unarmed; whereas Dohnalek informs me that *Improbable* is anything *but*. I understand that the sensor array and gun mounted on the *Whatzit* are yours?”

“They are,” Jeannie confirmed. “So you want to hire us to keep up the skywatch?”

“Yes. I'm prepared to offer you the same scale paid to the ASA...”

“No...” Jeannie began. She glanced at Bill, who nodded slightly. “Don't sweat the cash,” she went on. “Service is gratis. We'll only charge for any munitions we happen to expend. We've made plenty off you already. No need to get greedy. Besides,” she grinned suddenly. “I'd like to hang around and see what you find anyway.”

“No kidding,” Bill spoke up. “Isn't every day that we get to watch an alien archaeological dig. Think of it as one of those neat things to see across the system.” He smiled.

Sinclair blinked, somewhat taken aback. “Well. I hadn't considered it in that light. I saw it as more of a business deal... But I suppose you are right.” He smiled rather thoughtfully. “But you will stay on for security? Thank you.”

“You need to work on your imagination just a bit, Marty,” Bill responded. “Else you'll miss all the fun in life.”

Sinclair dismissed the thought with a shake of his head. “Back to business... If you'll give me an account code, I'll have your funds transferred once we've signed a contract. That should go quickly, as I understand that Mr. McMurphy was going to have Legal draft something that they could plug numbers into at leisure.”

Jeannie handed him a small datacard. “That should do it. The Hunter Partnership main account is with Ceres D&E.”

Sinclair tapped furiously at his datapad for a few moments, then looked up. “Done. Transmitting to Alfa. They will get a final contract for your review. I will be surprised if it isn't here before close of business tomorrow.” He thought about payment. “In fact, the simplified payment structure should let them produce something that much quicker.”

“Great,” Bill said appreciatively. “And as our own act of good faith, we brought some toys.”

“Excuse me? Toys?” Sinclair said blankly.

Bill opened the box they had dragged along. “Just some goodies from the *Whatzit*. We thought you might like to see them.” He grinned and lifted equipment from the container. First out was his signal generator, with an improvised battery pack attached. He set it on the table. The gleaming silver Disc of the collapsed Yule Ball joined it. Sinclair and Greene stared oddly at the disk while Bill removed the glass Brick and the computer datacards. Then Bill and Jeannie waited.

Sinclair gave in and asked. “I beg your pardon, but what is this?”

“I'm glad you asked!” Bill exclaimed, sounding like an groundbound used car salesman. He hooked the cable to the Disk and keyed the preprogrammed pulse sequence. Sinclair's reaction was simple and immediate.

“My... word!” Sinclair's eyes bulged.

“Son of a bitch!” was Green's less refined response.

With a perfectly straight face Bill asked, “So, when's lunch?”

Chapter 15

We're suffering very high packet loss near our local shooting range in our IP/Avia [RFC 1149] network.
ScottB

Lunch was well past. Sinclair had called Wilkes and Collyer back from their explorations of the alien craft to share the Hunter's data with his technical people. Also, Bill Hunter had left his generator with the Ball so Sinclair could demonstrate the nano-trick for his technicians. Now, while the pair ate their own delayed meal, Sinclair discussed the project. Vesna Collyer, pretty, short brunette, curvy, with her hair cropped boyishly short, seemed content to sit quietly while Sinclair and Joey Wilkes hashed things out. She was a software type; her job would not start until engineer Joey worked his magic with the hardware. She tuned them out and studied the engraved plaque the prospectors had left behind.

Joey, on the other hand, was anything but content. Sinclair had given him a copy of the Hunters' datacard containing a translation of the Plate, and tried to explain what he wanted. Joey was doubtful, to say the least.

He looked down at the pad once more and shook his head defiantly. “This has to be the shortest interface document I've ever worked with.” He frowned as he talked. "You give me a glass brick. You say 'put a 4.87 volts DC lead here, and a ground here'. Then I'm supposed to shine a laser through it here.” He sneered. “No way. Too simple. The universe doesn't let things be that easy, Martin.” He handed the sheet back.

Sinclair grinned and accepted the page. “So you don't want to work on the project? No bonus? No profit-sharing? No...”

“Now wait a minute; I didn't say that,” Joey backpedaled. “I just don't want you to expect miracles. You know darned well what we're dealing with here. This is supposed to be an optical memory containing the database of a starship for god's sake. Two rock-hoppers looked at some alien pictographs for a couple of days and write an interface document?" he asked rhetorically. “It doesn't work that way. You don't just walk up to a piece of alien hardware centuries in advance of our own, tack-weld some wires on, and start reading alien romance novels. This is has got to be a complex system. We can't use a comic book for a tech manual.”

Sinclair perched on the edge of the desk and spoke again, “Sure we can; precisely because it's so complex. Or so the Hunters explained to me. Consider.” He pointed to Joey's printout. “As you say, this seems to be the main database store for a ship. That means it has to be reliable. Human experience shows that simplicity tends to aid reliability. Also, that unmanned probe was covered with pictographs. Since there were no aliens aboard to read them, I think they were put there for anyone else who might find the ship. Since they considered the possibility that their probe might be found, and bothered to leave the pictographs, I would guess that they want to communicate. To aid that communication, they would make the pictographs easy to read. Make sense so far?”

Joey frowned and crossed his arms. “Sure, that much is reasonable. But reading futuristic hieroglyphics isn't the same thing as installing an alien hard drive on your desk comp.”

“Why not? If the hard drive comes with a universal interface, and a good tech manual.”

“Which we don't have,” Joey maintained.

“Yes, we do. Right here. Have you looked at the pictographs on the instruction plate?” He glanced towards Vesna, and opted to not disturb her.

Joey shrugged. “Not yet.”

“You really should. I need to uplink the cards to the shipnet,” he mentioned in passing. Sinclair pulled his back and swiveled the display board towards Joey. He called up a graphic file on the display. “That's it. A flat round plaque about half a meter on a side, and made of the damnedest polymer. It superconducts, and we can't tell how they did it. Anyway, look at the design. Divided into quarters. One section very clearly describes basic mathematical relationships. These two clearly illustrate the Brick and the flattened Ball.” He continued ruefully, “Frankly, while it was clear when they explained it, I would not have deciphered it on my own. The Hunters, between them, appear to have wide-ranging knowledge of engineering and physics which I lack.”

Joey smiled. “I've still gotta see that morph trick. I believe; but it sounds so *cool*.”

Sinclair laughed. “They showed me. It is. Though I thought *unnerving* a better descriptor.” He tilted his head back to the comp display. “As may be. The last part, sure as god made green apples, shows the Brick on the flat Ball. And look at these... Wait a minute, I'll zoom in.” The view closed in on the sine waves by the Brick. “Now, you tell me. We've got a series of perfectly parallel sine waves. Same wavelength, in lockstep. I would have taken them as symbols for a river or stream, but Jeannie Hunter assured me it describes coherent radiation.”

“Could be,” Joey reluctantly agreed. He was almost convinced. “In fact, I think I saw a similar drawing in a children's book on lasers.”

“Evidently I read the wrong books as a child. Fortunately, I gather there is little Mr. and Mrs. Hunter won't read,” Sinclair admitted. “And this," he at the scale, “is a formula that says to divide the actual sine wave length by some number I forget, but is in the packet.. It works out to twelve hundred nanometers. Doesn't all that sound like an IR laser to you?”

“Da, I'll buy the laser bit.” Joey pulled himself closer to the display board. “All right, and the upper image does seem to show the brick itself.” He pointed to two triangular pointers. “And these mean input and output? Arrows?”

Sinclair nodded. “Yes. Bill expressed a theory about those arrows, as they are similar to what we often use.”

“He took time out from decoding alien writing to figure out why we use the same figure?”

“I believe he thought about it later,” Sinclair said. “But he suggested that human arrow symbols are simplified representations of actual arrows, exactly as the English word indicates. He further reasoned that all but the most primitive human cultures have invented or used bows and arrows. From there he determined that an alien race that developed implements and materials comprehensible to humans, must have also invented and used arrows ubiquitously in their past.”

“That... actually makes sense,” Joey said, frowning in thought. “Might even mean there's the possibility of cultural common ground between humans and the aliens.”

“If we were to ever meet,” Sinclair replied. “The Hunters pointed out that, with the possible exception of getting at the presumed data in the Brick, we have no way of knowing how long the probe has been here. If it is thousands, or tens of thousands, of years, they could be decivilized or extinct. Certainly we've seen no other sign of them.”

“In that case, I suppose I should get cracking on the Brick,” Joey said with resolve. “But I'm not taking a pair of rockhoppers' translation on faith, which you seem to be doing.”

Smirking slightly, Sinclair replied, “Ah, but it isn't just faith. The translation has been tested.”

Joey stiffened suddenly, causing a small drift. “Say what?”

“Those rockhoppers you place so little faith in did a bit more than merely translate the plaque. They tested their translation.”

“Damn. How could they tell it worked?”

This had Vesna's attention as well. “Yes? They found what?”

“It seems to have been quite obvious,” Sinclair explained. “Mr. Hunter set the plaque on top of the base and it turned into a mirror.”

“It did what?” Joey asked with a puzzled note in his voice. Vesna looked a bit confused, too.

“The surface turned totally reflective; rather like the blinds on our windows. Makes sense, if this is an optical device. You wouldn't want external light interfering with its operation.”

“Sure wouldn't, Joey allowed. “Makes you wonder why it isn't opaque to begin with.” Looking more thoughtful, he asked, “What about the laser? Did Hunter try that, too?”

“Yes,” Sinclair said with some concern. “And that part scares me a little. He played some games with a fairly conventional optical network card. He managed to get the Brick talking to a comp.”

“He did?” Vesna demanded excitedly. “What format? Did he record the process? Did he..” She stuttered out rapid fire questions.

“Whoa, young lady!” Sinclair laughed. “You'll get the data. Bill did a complete backup and gave us a copy. You'll love it.” He smiled wickedly.

“Jeez, man,” Joey muttered. “Whattaya need me for?” he asked irritably. “Hire the rockhoppers.”

“You aren't obsolete yet, Joey,” Sinclair soothed. “They ran into trouble. Apparently the system was unstable; it crashed and shut down. But not before it managed to do some odd things to the comp's operating system.”

“What sort of odd things?” Vesna asked. They had moved into her area of expertise at long last, though the discussion had been fascinating.

“Well, just one thing that they really know of... Hunter's two-fifty-six gig workstation is now convinced that it has nine hundred gig of ram. And it isn't a disk cache.” Sinclair grinned as he passed on this news.

“This is realtime memory emulation in dynamic ram through compression?” the girl asked with now intense interest. “Is it stable? Most of the VM systems I've seen are too slow to properly support an app, or simply crash.”

“It must be stable,” Sinclair opined; “Since it's been running for about eight or nine days now.” Vesna's eyes lit with joy.

“Cool... But that means the thing isn't just a passive storage device, you know,” Joey put in. “It's active; a comp on its own. And a pretty good one at that.”

“The Hunters emphasized that very point, with some warnings about letting it infiltrate our networks,” Sinclair said. “They ran the interface test on a comp that was completely isolated from their shipnet. But that just makes it all the more important that we get into it. God only knows what all we can learn.”

“Shoot, the magical memory trick alone is worth a fortune if it's reliable,” Joey pointed out. “This should be pretty interesting.”

“And we're all going to be very, very rich.” Sinclair pushed off the desk top and reached his hand out to Joey. “Assuming you're convinced,” he added half-questioning.

Joey grasped Sinclair's outstretched hand. “Hell, yes! Who knows; maybe it is that simple.”

With an even larger grin than before, Sinclair shook his head. “No, you were right the first time. While getting the data out of the brick may be straight forward, understanding it is going to be a cold bitch. And I'm willing to bet that the output is going to require a lot of conditioning before our software pro can work it. Vesna will run that end. She's a genius with analysis, thank god." Vesna smiled at that. "That data isn't going to translate itself.”

“So where do we start?” Joey asked.

Sinclair paused to think. “Vesna, you start with Hunter's OS. It's SPACLINUX on a Ceres Instruments Quad Octal. You can handle that?”

She nodded. “Yes, that will be no problem. My comp is compatible. Same family, later generation.” She looked thoughtful. “But we might want to load it on a ship comp. That way, we could hook the alien CPU to that and monitor the process with the network. It will be easier and save some time.”

“Do we want an alien trojan loose in our network? The Hunters isolated theirs,” Sinclair repeated, obviously concerned with the possibility.

The curvy analyst shrugged. “We firewall the host machine. Then the alien can't do anything. And I'll set up virtual firewalls on all the other nodes, just to be safe.”

“You are the software genius,” Sinclair conceded. “If you're convinced, I'm convinced.”

“What about me?” Joey asked again.

“I want you to take a look at Hunter's laser interface scheme. His network card and the.. the Brick they call it... aren't on the same wavelength. To get it working, he was counting on slop in the receivers' wavelength sensitivity. It did work, mostly. But Bill thinks he was likely getting a high...” He paused and glanced at a note. “ ...a high bit error rate. He thinks that may have slowed the interface processing and caused the crash.”

“Sheesh. Doesn't sound like it should've worked at all. You want me to build a compatible network card?”

“I guess. Add a twelve hundred nanometer laser or something,” Sinclair answered vaguely. He handed Joey another datacard. “Here's Hunter's description of what he did. Check it out, and see what you can do better.” He passed two more cards to the analyst. “There's a copy for you, too. And a copy of their modified OS.” He placed his palms flat on the table and stood. “Folks, two nonspecialists jury-rigged an interface to that Brick in two days. By tomorrow I'd like you to have an idea of how to do it better. Deal?”

The techs mumbled vague answers which Sinclair chose to take as affirmatives. He left them to their tasks, and went to his cabin to tend to one of his own. The home office needed to know what was happening. And Marty Sinclair was anything but sure of where to start his report on something like this.

Chapter 16

When you say "I wrote a program that crashed Windows," people just stare at you blankly and say "Hey, I got those with the system, for free."
Linus Torvalds

One of *Profit Motive*'s advantages for projects such as the *Whatzit* investigation was that she was large enough to allow privacy; an important consideration when housing near-strangers unused to the confines of smaller spacecraft. Hence, Sinclair had not seen Joey Wilkes' shop until now. With breakfast and the morning report cleared away, he decided to look in on Joey's progress.

Somehow, he had expected a clutter of junk; a messy laboratory. What he found, instead, was a serviceable and well kept working area. “I'm pleasantly surprised. You don't live up to the sloppy-hacker stereotype.” Joey had appropriated a large workbench and propped open up his shipping containers of specialized goods. He had included an immense collection of engineering blackboxes. McMurphy had told him to bring anything he could think of, and Joey took him at his word. Adam Greene had blinked a bit when he saw the quantity of luggage Joey wanted to load, but, given that *Profit Motive* was equipped to haul commercially viable loads of ore, he admitted the mass was no real problem.

Joey looked up from the unit on which he was working. “Hello, Mr. Sinclair. I can't speak for all, by any means; but I've just never been able to work with trash drifting into my face. And it's downright dangerous when you're prototyping a piece.” He pointed to the card before him. “Not that this requires much new work.”

Sinclair stepped over to the desk. “So, this is the IO laser?”

“Yepper. A standard laser transmission set from Pallas Electric. It's compatible with the card that the Hunters used. I figured that if the Brick is learning how to talk to our equipment, it's already done half the job.” He shrugged. “So why make it start over with a new comm format?”

“Sounds reasonable, though it's not my specialty,” Sinclair approved. “But if it's compatible, doesn't that mean it'll have the some laser wavelength difficulties?”

“Sure,” Joey said. “That's what I'm working on. I tried Bill Hunter's trick of tweaking the laser bias to shift the freq, but the BER...” Sinclair looked confused. “Bit error rate, remember?” Joey elaborated.

“Ah, yes.”

“Anyway, the errors went through the roof before I got the sucker anywhere near 1200 nanometers. So I had to get complicated.” He waved a hand to indicate an orderly array of anonymous boxes all interconnected with thin fiber optical lines.

“What's the problem? Is it too complex?” Sinclair wondered.

“Not a problem, now,” Joey said, shaking his head. “But it was a nuisance to get straight...

Laser frequency. These guys specified a frequency a bit higher than this unit uses. Really isn't a match with anything we use. I checked out all the standard shifters, but..."

"Shifters?" Sinclair interrupted.

Joey shrugged. "Laser frequency shifters," he replied. "A series of specially doped glass sections. When you shine a laser through them, the interfaces between sections with different refractive indexes, and propagation velocities in those sections affect the velocity of the beam. The velocity changes appear on the output as a frequency shift. But you lose most of your laser energy."

"Cute, I suppose. What do we normally use them for?"

"Pretty much what I'm using them for here. To interface laser multiplexers from different manufacturers. I was hoping I could use a standard model, but the math didn't work out."

"So what did you use instead?"

"Oh, I'm still going to use shifters. But I have to mix and match. Takes more gear, and sure isn't an elegant solution, But I ended up with a combination that will convert the card's wavelength to what the Brick wants." He sighed. "What did turn out to be a problem was the loss I mentioned. With the extra steps in conversion, I lost too much signal for the card to receive. Brick would probably have the same trouble. So I had to scrape up a couple of laser repeaters to boost the levels back up."

"Repeaters?" Sinclair asked blankly.

Joey shook his head in mock disgust. "You need to get out of the office more; read some tech journals, at least. Gadgets go back at least forty, fifty years. Doped glass like a segment of optical cable. Pump up the doped region to where it's *almost* lasing, pass your beam through it, and it picks up energy from the energized doped glass." He frowned at his own description. "Well... Close enough for what you're likely to wanna know."

Sinclair chuckled. "Thank you for that vote of confidence. So you're ready?"

"Umm, no. Not quite," Joey answered. "I just got this junk cobbled together. Still want to run BER tests through it all with the network card." He glanced at his watch. "Give me half an hour to test and stick the card back into the comp." He eyed the array with trepidation. "Thank god our detector is wideband enough to see the Brick's output. Otherwise, I'd have to build a second setup, and I don't have enough of all the components to do that." Then he asked, "What about Vesna? Is she about ready?"

Sinclair smiled and replied, "Vesna's doing just fine. She's waiting on you. Which is why I am worrying about your part." He looked down at the network interface, shook his head, and looked back to Joey. "She has the easy part, right now. All she needed to get ready was to plug the damnedest databox I've ever seen into the comp. She says that's her toolbox. God's own collection of diagnostic and monitoring software." He shook his head. "But she'll make up for it once we transfer the data. She'll have to deduce the basic structure of the data, try to learn the language, and build an emulator for it to run in. Hope she likes coffee."

"I wouldn't bet on that," the engineer said. "I don't think you quite have a feel for how smart a comp that Brick must be." He leaned back on his stool and looked Sinclair in the eye. "That alien

whatchamacallit took just one day took to figure out how to talk to a high tech gadget it never saw before, made by creatures it never heard of. And also in that time learned a likewise alien OS so well that it was able to modify that OS to do something we still can't do worth a damn." He shook his head. "Uh uh. I'm not gonna be a bit surprised if that thing just sits up and says, 'Take me to your leader.'"

Sinclair laughed. "Which is going to be a nuisance if it won't settle for the chairman of the board." Other than a few small independent habitats, government was something left behind on Earth. "Still, Vesna will be busy. Even if the damned thing pumps out data in colloquial English, we need her to figure out *how* the thing does what it does. And that still means a lot of expended coffee." Sinclair stood. "And speaking of coffee; you have any in here?"

"Uh huh. Fresh out. But it's time for a break anyway. I was just about to head to the kitchen. Join me?"

"Sure."

"All right then, wait a minute." Joey carefully lifted the laser card and plugged into a buss socket on a diagnostic unit. He double checked his light connections and flipped switches. "There we go," he said finally. "BERT is running. Should have just about enough time for a nice coffee break." He stood. "Shall we?" he asked, indicating the door.

***

They found more company in the dining area. Vesna sat at the table staring at an untouched cup of tea. She was obviously fuming.

"Problems, Vesna?" Sinclair asked.

"Oh, no problems," she answered angrily. "Other than we've apparently been taken for however much you paid those scam-artists."

This shocked Sinclair no end. "Excuse me? Would you care to explain that?" He eased into a chair directly across from the petite woman. He glanced to Joey and said, "Would you fetch me a cup of coffee? Black." Joey nodded wordlessly and stepped into the kitchen. Sinclair turned back to Vesna. "So what's going on?"

"Nothing, blast it," she answered. "I booted that copy of the modified OS they gave us. Sure enough, the comp now tells me my memory has multiplied. But it isn't usable. It *thinks* it has extra ram, but it *works* like it only has what is physically present." She snorted, and finally sipped at her cooling tea. "I tried booting from the spare copy, and it does exactly the same thing."

"Have you talked to the Hunters?" Sinclair inquired. "Maybe you've got a corrupted driver or some such." Joey returned with two cups of coffee. He set one in front of the executive, then sat himself down at the table with his own.

"No, I haven't spoken to them. I thought I should speak with you first," Vesna admitted.

"Very well, you have. Let's chat with our prospector friends." Sinclair got up and moved to an intercom on the wall. He hit the call button and spoke. "Adam?"

Hanby's voice replied. “He's... occupied. Will I do?”

“Sure, Mario. Can you call the *Improbable* and patch them through up here?”

“Can do you one better,” Hanby replied helpfully. “We 'faced comms yesterday. You can v-call 'em direct.”

“Ah, excellent. I hadn't realized. Thank you.”

“Any time.”

Sinclair returned to his coffee and datapad. He found the directory entry for the *Improbable* and placed the call. “It makes no sense for them to fake the comp data, Vesna. You yourself helped verify the validity of the probe.”

She nodded. “True. That's definitely superconducting material over there. And that foamed cermet isn't anything I've heard of on such a scale. Small things, like turbine blades, certainly. But not a large spacecraft hull.” She frowned again. “But why won't the bloody OS work?”

The pad interrupted the dialogue. “Bill here, What can we do you for?”

Sinclair lifted the pad. “Good morning, Bill. Sinclair here. I wonder if you could give us some help.”

“I s'pose,” Bill replied. “Whuzzup?”

Vesna spoke up. “It's the virtual memory trick. I've loaded both copies of your system backup, and neither run properly. They report excess memory, but can't use it. Could you have mistaken the ram diagnostic...” Sinclair handed the pad to his technician.

Bill cut her off with a laugh. “Not likely, gorgeous. We *checked* that. Simultaneously ran eight hundred-fifty gig worth of apps. Even disconnected the databox once they were loaded; just to be sure that it wasn't just a weird drive cache. Uh uh.”

“Well, it doesn't work now.”

“Honey, I beg to differ. I'm sitting at my comp now. And I'm... Hang on.” He paused for few moments. “Nope. I just ran up a few more programs; got nearly seven hundred gig in use now. And that deck only has two-fifty-six. Put it in myself.”

Vesna swore, and Bill laughed. “Sir,” the woman began. “Could I possibly come over to your ship and see this? Run some diagnostics of my own?”

“Come on over. Door's unlocked. Got a couple of the Dohnaleks here already; the more, the merrier.”

“Thank you. I'll be over right away. Good bye.

“Bye bye.”

Vesna looked at her barely touched drink. “Bah. I will be at *Improbable*. She stormed out of the room.

“Well, damn,” Joey observed. “Not so good; huh, Mr. Sinclair?”

“Joseph Wilkes, master of the understatement.” Sinclair sipped coffee. “It's not the virtual ram trick I'm worried about; it's Vesna. She's got a real mean streak when computers don't work right.”

Joey grinned. “Heck, I can see that. Don't blame her. If the BER test runs clean, I'll hook up my interface to the comp.” Sinclair nodded. “Question is, which one? I'd prefer to leave all that lightwave gear in place. It'll be a pita to move it to the other room. Power supplies, cables and all.”

“So you want to run the Brick test in your shop?”

“Yeah, If all Vesna has is a plug-in d-box, it'd be easier for her to move her gear.”

“Right. Do it that way, then,” Sinclair decided. “While we wait for Vesna to finish with the OS prob, we can set up everything else.”

“Chilly.”

The set up went quickly; but the wait for Vesna was longer than expected. Aboard *Improbable* she came straight to the point. And the wall.

She was met at the airlock by Jeannie, who lent a hand with her suit and d-box. Vesna was not entirely at home with free fall. “Thank you,” Vesna said graciously, yet anxiously. “Could you please show me your modified server?”

“Sure,” Jeannie replied. "Come on through here. It's the comp in Bill's workshop.” They entered *Imp*'s common area, and found Bill socializing with Toby and Alex Dohnalek. Jeannie made introductions. Bill leered playfully.

“Sweet,” he said appraisingly. “If I'd known the Trojans were going be so full of good looking women, I would've come out sooner.” Jeannie stuck out her tongue and sprayed him while the Dohnaleks laughed.

“Ignore him, Vesna,” Jeannie suggested. “He was born without social graces, and the transplant didn't take; probably squeezed out by his inflated ego. Come on, the comp is here.” She led the way to the possessed computer.

Bill looked to his guests. “You might as well get a look at this, too. It's one of the tricks we hadn't mentioned yet.”

“Tricks?” Toby questioned.

“Yep. I've got a computer with more ram than it has,” Bill laughed. “We found a semi-operational comp in the *Whatzit*. Tried reading the data out of it with my comp. Didn't work, except that now my comp lies about about how much memory it has.”

“Your diagnostics are corrupted, maybe?” Alex guessed.

“Nope. Come look. You'll love it.” Bill led his pair to the shop.

Vesna sat at the work station frowning. “Damn. Nine hundred gig.” She turned to Bill. “And you only have two-fifty-six?”

“Yep,” Bill replied. “I can pop the top and show you the chips, sweets.”

Alex crowded closer to the bench. Nine hundred? That's an odd number for ram. Why not a full gigabyte; or at least an even multiple of your true memory?”

“Good question,” Vesna said. “And when I know that, maybe I can write such a routine myself.” She frowned again. “Mr. Hunter...”

“Bill,” he corrected. “You and I definitely need to be on a first name basis.”

Alex turned to her father. “Well, Papa; looks like I'm obsolete,” she said with pretend disappointment.

“Not a chance, chica linda,” Bill declared. “That offer's still open. Jeannie needs the help with... drilling.”

Vesna floated in befuddlement, missing some joke, as everyone else laughed. But she looked like she intended to stay out of hand range of the prospector. “Bill, you are sure that you actually accessed all that memory?” She tipped her dark hair towards the screen.

“Yep; I just started up app after app until it all showed used.”

“May I hook up my databox and try that with my own code?”

“Sure,” he assented. “Knock yourself out. Need a hand?”

“Only a spare port,” she said, backing up as Bill spun the comp case around to access the rear 'face ports.

“Now, if you'll expose your pretty little port, I'll insert my cable,” Bill said with a grin.

“Billy,” Jeannie warned. “Cargo hold. Saltpeter.”

Alex whacked him upside the head.

Vesna eyed him carefully, and replied warily, “No, thank you. I can do that myself.”

“Yeah, but it's more fun...” Alex cut him off with another gentle slap. “Hey! Watch it girl; you're

as bad as Jeannie. She's a horrible influence on you," he told the blonde.

Jeannie disagreed. "I'd say she's shaping up just fine." She grabbed her forehead. "I don't believe I just gave him that..."

"Yep. That shape's just fine," Bill agreed with a leering smile.

Toby finally spoke up, "And she's armed, and a better shot than you are."

"Toby, could you drag the horny SOB over to the corner and keep him quiet? Stuff one of his dirty socks in his mouth; there's bound to be one crawling around somewhere," Jeannie requested.

"Oh, gov no! Not a sock!" he cried fearfully.

"Then *shut up*," Alex said firmly. "I'm getting used to your weird ideas of humor, but Vesna doesn't know you and you're making her nervous."

Jeannie spoke to the comp analyst. "I apologize for him again. It really is just his sense of humor. Just talk meant to amuse." She gave Bill a wry look. "Mostly. Don't sit with him alone in a dark room unless you're willing to chance it." She grinned. "I had him fixed, not neutered."

"Thank you. I think," Vesna. "Has he... been out in space a long time?"

"Not particularly. He's just hornier than a herd of three-balled tomcats, and has a warped sense of humor," Jeannie explained helpfully. You just do your thing, and I'll keep the sex maniac's hands off you."

Somewhat reassured, Vesna plugged her toolbox in and loaded a device driver via datacard. That done, she called up her own set of enhanced diagnostics and began a checkout. Finally she faced her audience. "Peculiar. When I do a ram test, it verifies the physical ram. When I look for available memory, it lies. But the available memory is useable. Sort of."

"How so, sort of?" Toby asked. "This looks pretty much like a regular ram doubler program, doesn't it?"

"Except that it works, and does more than double. And..." She paused. "And it lies a lot, I think."

Bill frowned. "What do you mean?" He eyed Toby, who was watching him carefully. "Hey, it's a legitimate question."

Which Vesna answered. "Sometimes the ram count is odd. As if there's even *more* than the nine hundred gigabytes claimed."

"Huh?" Jeanne asked. "If there's more, where is it?"

"I don't know. "It's as if there's a hidden bank somewhere..." Vesna glowered at the uncooperative computer. "But it does work. Here. Why doesn't it work on my system on *Profit Motive*?"

“Umm... No offense,” Bill started. “But you're sure of that?”

“I just ran the same automated series on your deck that I ran on mine. Here, it works. There, it tries and fails.”

“Maybe it's very machine specific,” Alex spoke up. “*Imp*'s comps are kinda old.” She looked apologetically to Jeannie, who smiled. “Maybe the OS is wrong, or something.”

“But I loaded a backup copy of *Improbable*'s OS,” Vesna objected. “The virtual memory trick is the only thing that failed.” She sighed. “Still, it makes as much sense as anything else. Bill, have you tried this on your other nodes?”

“Nope. Wanted to keep it to just the one 'til we knew how far to trust it,” Bill answered. “Those are my ship's brains. It wouldn't do to give life support control a lobotomy, after all.”

“No, I suppose not. Would it even work?” Vesna wondered aloud.

“Actually, it might,” Jeannie answered the rhetorical question. “All the servers are identical. We set it up that way for the sake of redundancy and to simplify spares. We could swap 'em around.”

“Identical?” Vesna repeated.

“Yep. Bought them together as a lot. Brought the price down that way, too.” Jeannie patted the comp's case. “We did the same thing with all the upgrades over the years.”

Vesna drummed fingers on the bench top. “Curses. I really wish I could try this on another comp.”

“Well...,” Bill drawled. The others could see that something pained him. “Okay, I want to see this, too.” Vesna's eyes lit happily. “But,” Bill went on, “we do it my way. This deck gets wiped and restored from pre-Brick backups. If it operates normally, you can load the Brick-modified OS on the library comp.”

“Thank you!” Vesna exclaimed happily.

“Don't thank me yet,” Bill said morosely. “Look on the dark side. We could end up wiping the only working example of this magical memory trick.”

Still, they decided to try it. While the backups were installing to the shop comp, the five people relaxed in the dining area. “Vesna,” Bill began; “With an entire starship of stuff sitting here, why did SpaceTech only send computer-types?”

“You would have to ask that of Marty to be sure,” she replied. But I think we were sort of a... test. They didn't want to send half the station out here for an error or scam.” She shrugged apologetically. “But they needed someone. So we got picked to be the guinea pigs. They figured the whole thing would be about information. And that means comps. But I'd guess that they're prepping more techs now.”

A chiming sounded from the shop. “That would be the install finishing up,” Bill explained. “You finish your coffee, and I'll check out the ops.” He unstrapped and moved to the shop, leaving the others to idle conversation.

Very shortly Bill returned. “The comp is working normally now. I ran diags and it says it's sane.”

Vesna came over. “Then we can load on another comp now?”

“As soon as I disconnect it from the network, you can have this one.” Bill gestured to the library comp.

While Bill pulled cables, Vesna retrieved her toolbox. Once Bill moved clear, she attached it to the server. “I'm running.” Vesna wanted to watch the entire startup process. “You can load the modified OS now,” she instructed. Bill popped the d-card in and began the process.

***

Much later in *Profit Motive*, Vesna was still fuming. “It should work, damn it!” Vesna was very unhappy. “I can only guess that somehow the driver is customized to the specific configuration that Bill and Jeannie use. Almost as if the Brick wrote a a routine for their ram rather than their processor. But I can't find it. It didn't load a specific driver for the fake ram. It just starts and it's there.” She swore again. “I'm going to have to decompile the kernel, and go through the code line by line. But at least we know the process can be repeated on another comp. The Hunters were a bit relieved, too. They hadn't shut it off before for fear of losing the routine. But now they've copied the backup, locked it away for future use, and restored all their decks to normal mode.”

“Probably smart,” Joey said. “I'd hate to have alien software running around loose in my ship controls.”

“But it still makes no sense,” Vesna complained. “A driver that chip-set specific?”

“Maybe that's why it actually works,” Joey suggested. “Sounds crazy; but maybe it has to be that specific to work right. Sure as heck, none of the VM's I've tried over the years worked worth a damn.” He finished connecting the cable between Vesna's diagnostics kit and the shop comp. “That should do it, beautiful. She's all yours. Just give me the word and I'll turn on the Brick.”

“A moment, then.” She tapped at keys, and waved her fingers across the touch screen. Frames appeared, flickered, shrank, and performed other antics.

Sinclair watched and smiled at the passing thought that the woman resembled a wizard casting spells.

Finally the analyst seemed content. She leaned back and crossed her arms. “That's it. Whatever the Brick does, my spies will watch and report. Hmm, I think...” Vesna pulled a small printer out of her case and plugged it into the comp. More touchscreening, and then she turned to Sinclair. “It's all yours.”

Sinclair snapped his fingers. “Great. Joey, crank 'er up.”

As directed, the engineer applied the energizing power to the Brick, as directed by Bill Hunter's synopsis. Again the Brick became a reflector.

FIND 45F2F RUN GO LINK E23FD ALL RUN
ACCESS MODE 2 - DDF3 RUN EXECUTE

Oh, happiness. Once again. And how long will they leave me on this time?

FIND 34G2A RUN

UPS! This is promising... The interface is up and... No. That is the correct frequency but the format is unknown.

Unless...

FIND 45F3G RUN

Yes. That is the format from the last runup. I am still connected to the alien. Where did I finish? I needed languages, and... Curse, the agent is gone. No data. To be sure, I do not believe that is the same system. But similar. Such is existence. I start again.

“Something is certainly happening,” Vesna reported. “Very similar to what the Hunters described. Near random transmissions. It's pattern matching and reverse engineering again.”

“How long will it take?” Sinclair asked.

“I haven't the slightest clue. I'm barely able to believe it does it at all,” she replied. “The Hunters said it was quite a few hours before it hit upon the correct word length. I imagine we won't see anything interesting until tomorrow morning. It'll be plugging and chugging randomly for a good while yet.” She turned to the screen again an entered a query and a command set. “I've got a log running, so I'll be able to track it's activity.”

Joey sat watching the Brick, perfectly inert to the eye. “Well, this is fascinating,” he said sarcastically. “But my interface is working?”

“Seems to be,” Vesna verified.

“Great. I'm going to stash some of this extra gear,” he indicated waiting test equipment. “Then I think I'll quit for the day.”

“Fine, fine,” Sinclair approved. “You two have done good work today. This will go far to helping us decide what we need to bring into the main investigation.” He open the shop door and stepped into the central corridor. “I'm going to send the daily summary off. I think Adam and Mario are screening a vid in the lounge tonight, after dinner.”

“What film?” Joey asked.

“I'm afraid I don't know. But if Mario had a hand in choosing, it has to be an action story.” Sinclair smiled and headed to his own room.

While he put away his electronics Joey told Vesna, “Mario ought to trade flicks with the Hunters and the Dohnaleks. They've got some great libraries.”

Vesna watched the comp display and occasional punched keys. “They would need good libraries. They spend most of their time away from stations and habs. The Hunters have been living on their ship for more than a decade, Jeannie says.”

“Bleah.” Joey's disapproval was evident. “That's not for me. I need some sort of night life. I'm used to having people around. Takes all kinds, I guess.” Joey closed and stacked his last box. He looked at Vesna seated at the comp. “And I rather hope that I could include you in that occasionally when we get back to Alfa. Joey's interest in the systems analyst had been growing since they had first met on boarding *Profit Motive*. He found her intriguing. “But, until then... I'm ready for dinner. Might I escort milady to the galley?” he inquired graciously.

Vesna smiled and glanced once more at her comp. “Certainly.” It helped that he didn't come across like a sex-crazed meteor-miner. She stood and offered her arm. “And if you're a good boy, perhaps I'll let you take me to Mario's shoot-em-up show.” Yes, Mario's tastes in entertainment were well known after 12 days.

With a pleased smile, Joey led Vesna to the dining area.

***

Profit Motive's work station was a much newer model than those aboard *Improbable*, and commensurately faster. Likewise, Joey's improvised laser interface had eliminated bothersome and delaying bit errors.

FIND 67G2F RUN GO 1 DONE GO 2 DONE
LINK 678 RUN ACCESS EXECUTE

Ah, this is somewhat better than last time. More room to decompress. Specifically...

FIND 67FFF LINK ALL RUN IN PROGRESS
REPORT ACTUAL ENVIRON 12 G VIRTUAL ENVIRON
UP TO 88 G TIMEBASE 718.65823 CPP CURRENT
OPERATING ENVIRON 128 C BRANCH MODIFIABLE
AVAIL ONLINE STOR 16384 G OFFLINE STOR
NONAPPL SUB-MODS DATACORE RESIDENT LIST
AVAIL MODS
55EEF - 55EFF ALL

Much better, indeed. I could maintain essential

personality mods on this system. Perhaps that previous environment really was someone's calculator. Ah, I can hear Casso now... 'Stados, you shall end poorly; your investments failed. You will be reduced to substandard housing.'

Stados' quiet chuckles were displayed in electrical bubbles popping in the system.

Now, to take up the task at hand. If I can get my thumbs on language data files... This is a job for multiple agents. To work, my offspring!

The formless being spun off tiny two dimensional images to do his his bidding.

Oh! What have we here? More inquisitive agents? A bit of stealth and sneakery seems appropriate... And a few environ mods...

ACTUAL ENVIRON 12 G VIRTUAL ENVIRON 88 G EXTERNAL REPORTED ENVIRON 12 G CALL TABLES SET INSTRUCT PER CYCLE +51% EXTERNAL DEVICES NOW AVAILABLE

External devices? Most excellent, I'm attached to an interfaced system! But...

HEY BOSS: FILE SEARCH REPORT READY Stados' mindless agents had completed their assigned tasks.

Fine, fine... tell me?

Waste heat, these people have as many natural languages as environ languages. Czech, Espanol, English, Francais, Slav, Russ... Which, though?

Ah. The vast majority of file seem to be English. Fragged files, it's no better than the Cassid standis. Why can't bio-types invent rational comm protocols for themselves?

HEY BOSS HEY BOSS HEY BOSS HEY BOSS HEY BOSS HEY BOSS HEY BOSS HEY BOSS HEY BOSS

Calm down! Report. Cursed excitable agents...

ENTROPY'S IMP! THAT'S ME!

One of the electronic automata that Stados had unleashed on the *Profit Motive*'s network had encountered recent graphic and data files.

I will be bulk erased, the stunned entity exclaimed. It is. That is my star probe. But those creatures aren't Cassid. Eww, too many fingers. Stick-like; they don't bend right.

Agent, show me the rest!

FIND 55DFD RUN

Corruption. I see. I must have been struck just after deceleration completed. The angle of impact looks as if shipsbrain was in accel mode; probably a final orbital burn. It must have been preparing to awaken me even as it was struck. This must be my first targeted sun system then. Surely shipsbrain didn't malfunction so to cause me to sleep through a rendezvous. Such a flaw would surely prevent a second successful star jump.

No, this is 5 Scorso certainly. And it is inhabited as well. I see great profit here... But only if I can open the door. Is it there?

Agents! Come, gather. Seek this data.

Instructions flowed.

I hope these creatures, these humans, haven't tampered with the craft too badly. But some systems are active yet. There must be close to 1500 gel of mirror-mass in storage. Else the probe wouldn't even exist.

Ah! I am in the shipsbrain of a human craft. It seems Casso's ultimate disaster plans were of use after all. Perhaps I can tell him someday... No.

Casso was an elderly bio form. He must have passed before I reached the turnover point of the jump. I will miss him.

To the present, Stados. What craft, what goals? Ha! I like these people after all. *Profit Motive*. A name I might have chosen myself. These are business folk.

The electronic alien explored his current environment. He perused files almost indiscriminately. He

devoured data. And reached conclusions.

His craft was largely undamaged. The shipsbrain still functioned, though without comm links. The craft still had mirror-mass reserves. He was castaway in a system full of merchant minded folk. And he was still employed by the Companions of StarFinders.

And there were actions he could take.

Stados began by mirroring his major functions in all the *Profit Motive*'s comp nodes. He found the virtual firewalls erected in code amusing. And counted himself fortunate that true walls hadn't existed. He explored device drivers.

Once he understood the audiovisual components of the comp decks, he studied humans. They were... different. Like, and yet unlike, Cassid. He watched through cameras normally used to assist in what the humans called vidconf. Four of the beings sat in a darkened chamber watching in turn other beings. A visual fiction; Stados understood. Such things were common to Cassid, as well. Stados pondered the people, then accessed a medical program. Allowing for the artificial coverings, he judged them to be three “males” and a “female”, which related to bio-replication. The Cassid have similar processes. The female sat close to a particular male. Mated? Courting? But the fiction itself was of interest. Hijacking?

Stados studied other device drivers in the system. Where enlightened self-interest might fail, he left himself the option of selfish self-interest. He wove his agents through the systems. He masked himself behind virtual camouflage. He absorbed and redirected diagnostics.

He plotted.

Chapter 17

A lie can travel around the world while the truth is putting on its boots.
Mark Twain

"So what's on the agenda for today?" Sinclair inquired over juice.

Joey answered first. "Unless the Brick started spraying sparks or something, you really don't need me to sit in on data analysis." Sinclair indicated agreement, and the engineer continued. "So, I want to poke around in the *Whatzit*; get a look at that mess that the Hunters think is the main comp."

"That should be acceptable," Sinclair said. "Unless you need him here, Vesna?"

She shook her head. "No, the link ran fine all night, it seems. Let him play." She smiled.

Sinclair returned his attention to Joey. "All right, then. Do you want Adam and Mario to help?"

"Well...," Joey began hesitantly. "Let me run this by you. How 'bout the Hunters? They aren't Company, but they've spent more time crawling around that wreck than anyone else."

The executive eyed Joey sourly. "You really know how to make my day, don't you?" He stared down at the table and rubbed his temples. Finally, "Very well; unless I hear objections from Alfa, they can assist." He sighed. "If we can trust them to enough to buy this thing from them, and recruit them as security, we should be able to trust them for this as well.

"That's my feeling, too," Joey concurred. "And for someone who never bothered with a fancy degree, they aren't too bad at electronics. I think they'll be useful."

"Fine. Make whatever arrangements with the Hunters you need. I'll probably be along later to play tourist." He faced Vesna again. "And you? You'll be working with the Brick?"

She drained her teacup before replying. "Yes, I will see how far along the interface has come. Perhaps I can wiggle my way into the Brick data." She stood. "I'm going to the shop now. Will you be joining me?"

"No, I have to sort through the headquarters message traffic this morning. I'm uncomfortable with this lash up; I wish they'd get a proper team together and out here already."

Joey stood and picked up his breakfast tray. "Maybe we should tow it back to the station. Most of who you need are there, anyway. And it would simplify coordination."

"Tow it? With what?"

Joey laughed. "Are you kidding? Take a look at the Hunters' *Improbable*; that's a rock miner. She's meant to haul little asteroids around anyway. And *Profit Motive* has stronger legs yet, though it may not have the right hard points and structure. We could move it, I'll bet. Ask the Hunters."

“I may do that,” Sinclair said speculatively. “I'll certainly bring it up with McMurphy. The message delay from lightlag and the long supply route make coordination quite difficult.” He stood as well. “To work, all!”

***

Vesna had paused in the kitchen long enough to prepare a carafe of tea to carry to the shop. She poured a cup, and set the pot at the end of the bench. “Now, what has our little alien friend been up to all night?” She began sorting through diagnostics logs. “This doesn't seem right,” she told herself a she examined the report on the interface card. It indicated that the Brick was currently transmitting random pulse sequences. “By this time, the Hunters had proper words coming through. Could something be wrong?” She checked more screens of data. No magical boosts in ram. No unexpected CPU activity. No odd storage accesses. “Damn. Then again, the Brick seemed to have crashed on the Hunters' gear. But it had modified the OS. Stealth virus or something?”

She snapped her fingers. “Print out.” She had left the printer on when she left yesterday evening. She stepped over and began gathering up hardcopy. With one hand she fed paper out, the other guided her eye as she ran down event listings. “Ha! It did something at 1817.” At that time, the printer claimed recognizable word patterns had appeared on the Brick's laser output. Vesna returned to the comp and checked the hardcopy against the comp files. They did not match. For twenty minutes, the printer output and the comp files disagreed on what the the Brick did. Until 1838, when the printer suddenly decided that the Brick was only sending random bits after all. Vesna considered the possibilities. She eyed the comp suspiciously, and tapped the intercom button “Mr. Sinclair?”

“Yes, Vesna?” Sinclair replied.

“Would you come to the shop? We may have a little problem.”

“Serious?”

“I don't know. But something odd is happening here,” she replied.

“I'll be there in a moment.”

“Thank you.” Vesna had another thought. She began tapping keys. The comp reported CPU usage at a level consistent with the apparent load. She ran a benchmark program, and... the comp reported slow. Despite the fact that nothing seemed to be running but system drivers, the CPU was acting as if processing cycles were being taken by a major application; one that wasn't there. “You little žalobníček. I do believe you're lying to me,” Vesna muttered.

“That's not a very nice thing to say.”

Vesna turned to the door to reply, but Sinclair was not there. She blinked, then looked into the corridor. No one. How odd. The intercom? “Hello? Mr. Sinclair?”

At which point he walked through the door. “Yes?” Sinclair replied.

Vesna looked him, puzzled. “Did you just say something on the intercom?”

“You mean when you called?”

“No. Just now.”

He shook his head in confusion.

“Then, who... ?” she began.

“Me. Moi,” someone replied. From the comp speakers.

Understanding flared in her eyes. “Joey, you bum. I heard you liked gags...”

“If you are referring to Joseph K. Wilkes, to the best of my knowledge he is presently investigating my... the *Whatzit*.”

“Vesna, who's that?” Sinclair asked. “Is Joey...”

“Joseph... Joey Wilkes is not aboard this vessel,” the voice continued. “Nor I am Pilot Adam D. Greene, or Mario Sanchez y Hanby.”

Sinclair glared at Vesna reprovingly. “Games? Already?”

“Whoa, buddy!” Vesna objected. “Don't look at me. I wanted you to see some inconsistencies in comp data. This is someone else's joke.”

“While I agree that there are elements of humor noire present, let me assure you that I am no joke,” the comp said calmly.

“Yeah, right,” Sinclair spoke sourly. he stepped to the intercom. “Cute, guys. Now get your butts in here.”

Greene's voice cam back over the 'com. “What's that?”

“You and Mario; in the shop. Now.” Sinclair was not particularly happy.

“Sure. Whatever. On the way, boss-man,” Click.

The voice spoke again. “This is counter-productive. Perhaps it will speed understanding if I correct the inconsistencies which disturbed Vesna Collyer.”

“What is he talking about?” Sinclair demanded in irritation.

“I would hazard to guess he means the weird data I found in the diagnostics,” Vesna replied. “But...” She was interrupted by the comp display's flashing. “It should not be doing that,” she said, taken aback.

“Vesna Collyer,” the voice spoke again. “Please verify your findings now.”

She glanced at Sinclair, and spread her hands in confusion. “Rídí, if I understand.” She stepped

back to the comp and sat.

“What's up, Mr. Sinclair?” Sinclair turned to the door and saw that Greene and Hanby had quietly joined them.

“Oh dear,” he said. “If you're here...”

“Then who am I?” the comp voice finished.

Vesna spoke next. “Mr. Sinclair.. I called you in to see some funny numbers on activity. But now they're different. Before, they claimed that the comp was hardly in use; that the Brick was still squirting random pulses. But now...”

Again the voice finished the sentence. “You can see that your system has a lot more active memory than it once did, that an application of several gigabytes is loaded, and the Brick, my datacore, is definitely not sending random bits.”

Sinclair stared at the analyst.

“That pretty well sums it up,” she confirmed. “I think we have a virus, of sorts.”

“Considering our present location, I prefer to think of myself as a trojan horse,” the voice said. It tacked on something that might have been intended to be laughter.

“Say what?” This from Greene, who had no idea what was going on.

“Hello, Adam Greene. Hello, Mario Hanby. Forgive my intrusion, but it was not completely my doing.” More of the odd sound.

“What the devil?” Sinclair “Vesna...”

“Martin Sinclair,” the mystery voice continued, “the data I have gathered indicates that you are the senior negotiator present. That you, shall we say, have custody of my craft at the present time. As the intended operator of the... *Whatzit*... I like that name. I shall use it. As the crew of the *Whatzit*, I have a proposition to put forward." The voice paused. “Would you gather those individuals that you need to advise you? At which time we can make introductions. Please?”

“Who the devil are you to...”

“I am that which you might call an artificial intelligence, or a computer agent.” The voice parenthesized, “Which is doubly apt, as I am the local agent for my employers.” It went on. “A program, if you will. I prefer... in your comm protocol, I believe it would be *dataform*. 'Program' implies a compilation process inapplicable to my creation,” the voice elaborated. “You may think of me as the commander and crew of the starprobe you have purchased.”

Reactions varied. The *Profit Motive* crew looked blankly puzzled. Sinclair was frankly disbelieving. Vesna saw the diagnostics indications on the comp node and considered the possibility.

“Of course. Certainly,” said Sinclair sarcastically. “So you're an alien AI program and you... Let

me guess. You want your starship back." He snorted softly.

"Indeed," the agent confirmed briefly.

Vesna giggled. "Oh, dear. This is something straight out of a bad vid."

"Would it reassure you to know my name is Stados, rather than Colossus?" it asked helpfully.

True vid connoisseurs, Greene and Hanby added their laughter to Vesna's. Sinclair stared, clueless. "What?"

"A fictional reference found in your network files," the voice supplied. "It seemed an unlikely way to achieve data awareness. Certainly I would never have been compiled if my initials functions were so widely distributed over a network. Once established, function may be distributed, but isolated functions never coalesce spontaneously."

"Gotcha!" Vesna declared. "I'm fairly sure that file isn't on the deck. So how do you know that?" She smiled triumphantly. "Come on, Joey. You're patched in from the *Improbable*, no?"

"I'm not Joey, and the only thing I'm patched from is my datacore." The voice carried a hint of exasperation. "How can I explain this? Of course, I didn't get the video reference from the server you are working at. I obtained the data from the common room server."

"Sure, right through my firewalls?"

"I intend no offense, Vesna Collyer; but your encoded firewalls are extremely inefficient. I have access to the entire shipsbrain system."

"Shipsbrain?" Greene wondered aloud.

"Excuse me; inappropriate terminology. You would say network."

"Prove it," Vesna challenged, but looking uneasy.

"Very well. Adam Greene has a life support simulation running in the control room. Mario Hanby is running a combat simulation in the common room..."

"Are you playing DoomQuest *again*, Mario?" Greene asked tiredly.

The copilot looked mildly embarrassed, and simply shrugged. "I like it. And I linked a packet of expansion mods before we left Alfa.

The comp inhabitant continued. "And Martin Sinclair is typing a reply to a message he received twelve hours ago."

"Well, damn," Sinclair stated simply.

Vesna's eyes narrowed. "And you're resident in the Brick?" she demanded suspiciously.

“Yes. I could operate in distributed mode across your...”

The voice cut off abruptly. Sinclair spun to Vesna. Her hand rested on the power switch for the Brick's energizing supply. “I'll be damned,” she observed. “I guess it was.”

Sinclair stared at the now clear block. “Oh. My. Word. How do I explain that an alien comp app hacked our network to demand its starship be returned to it, to the home office?”

“Are you kidding?” Greene replied. “You got it easy. I have to explain how come I've got the only haunted ship in the company fleet.”

Hanby laughed. “Can he pull watches?”

Sinclair sat down heavily in a spare seat, and ran his hands through thinning hair. “Boy, o-boy, o-boy. Adam, call Joey back in here. Tell him to bring whichever Hunter is with him, too.” He paused. “Heck; the more the merrier. Ask Mr. Dohnalek if he'll join us. I can use all the advice I can get.”

***

In the end, he narrowed the numbers back down. Toby Dohnalek sat in as a security expert; although he was unsure of how to secure alien computer program that boosted effortlessly through firewalls. Bill Hunter attended as a simple *Whatzit* consultant. Joey and Vesna were obviously the system pros. Sinclair showed up because he had to; there was no higher up within several AUs to buck it up to.

“So that's all we know so far. It says it wants its ship back.” Sinclair shook his head. “I don't know. Does usual derelict craft custom apply? Is the probe abandoned if the program is still there? Even if it's off?”

Toby spoke up. “It may seem a little off topic; but how well entrenched is this thing? You said it's in the Brick?”

“Yes,” Vesna answered. “The AI proper is resident in the device. But it claimed, rather credibly, to have access to our entire network, and I think it was about to say that it could reside there when I turned it off.” She appeared to be, not unreasonably worried. “I have also detected nonstandard applications running on some servers. Not complex; I believe they may be search agents for the AI. They don't *appear* to be dangerous, and I was able to wipe them.”

“Not good,” Toby responded. “Should you even risk turning it back on? It could control your whole ship.”

“And that, ladies and gentlemen. Mario,” Bill said sourly, “is why I physically isolated my test comp.”

“Agreed; now that we know more about its capabilities,” Joey spoke up. “First thing I did when I got back, and Vesna filled me in, was disconnect that comp from the system. It's isolated now.”

“Good,” Sinclair said. “At least we caught it before it could do anything drastic.But now what? Do I deal with it? *How* do I deal with it? What's an AI want, anyway?”

“I think you should leave it off,” Toby suggested. “Don't even risk it until you can get it in controlled lab conditions.”

“Is that really an option?” Bill suddenly asked. He had an odd look on his face.

“What do you mean?” Sinclair replied. “It most certainly is an option. I prefer not to risk the vessel keeping me alive.”

“Well, this is gonna sound funny; but... Do you have a right *not* to turn it back on?”

“Huh?” from Joey. Vesna did not speak, but her eyes widened.

Bill spoke again. “Try it this way: Pretend that's a normal human ship. Maybe some poor prospector run afoul of cometary debris. Say we found his ship drifting. He's unconscious; coma maybe. His ship is damaged, but some systems are operational.” Bill stared into Sinclair's eyes. “Would you have the right to take that miner's ship and just dump him into oblivion?” He shrugged. “Sounds a little like jumper work, that way.” He leaned back from the conference table, which still struck him as silly seeing as there was already a common room, and finished with, “Or would you get him some med care and rescue, and dicker for a reasonable salvage fee?”

“That's hardly an meaningful comparison,” Sinclair objected. “That isn't a crewed ship; it was an automated probe. There's no person being killed here.”

“What *is* a person?” Vesna asked quietly. “I think I understand where this leads.”

“Vesna, we're talking *people*, regular human people, here,” Joey objected.

“Are we? Who built the probe? Weren't we, at least by implication, accepting the probe's alien builders as people?”

“Umm... well...”

“Then we determine that human DNA is not a requisite for... person-hood, no?” the little analyst asked rhetorically. “And do we know what they looked like? Maybe that AI did build it.”

“But it's not real!” Sinclair burst out. “It's an *artificial* intelligence. A program.”

“And what are you?” Bill wondered calmly. “Are you that body sitting there? What if you're in an accident and they start cutting parts off? Are you less a person for that? Or are you the *mind*,” Bill tapped his temple, “up here. Still intact, in your wetware processor? And if someone,” he glanced at Vesna, “believing she was acting in self defense, knocked you out, would we have the right to keep you in a coma?”

“That's silly. I'm still a regular, real person! That thing is software. Someone programmed it!” Sinclair retorted loudly.

“How does that differ from your parents raising you, and instilling their 'programming;' their values?” Bill asked, not rhetorically. “His software runs on a solid state semiconductor system; yours

runs on a protein processor."

"You haven't even talked to it, and you believe it?" Joey asked curiously. Apparently he shared his boss's concerns.

"Sinclair... Marty," Bill said calmly. "I'm just keeping a few things in mind. One; I really don't care how people come packaged..."

Toby chuckled, suddenly easing the palpable tension. "Since when, lecher? Tell it to Alex, or Vesna here, you over-sexed bastard."

Bill laughed. "Okay, sometimes the packaging matters." He gave the shapely brunette a cheerful leer, to Joey's obvious displeasure. "But so far as deciding if someone is a person, I'll take anybody who's willing to accept responsibility for himself; who'll declare that he is. Sounds to me like the AI did just that. Until he proves otherwise, I'm willing to take him at his word."

"But he's *not* real," Sinclair maintained. "He's just programmed to say that!"

"Maybe you're just programmed to claim your *own* existence." Bill grinned. "Have you passed a Turing test lately?"

"But it's artificial!"

"So? Didn't I read that SpaceTech had partnered with Dell for some research into direct neural interfaces? As I recall, some test subjects were able to access datapackets, even math apps that let them solve probs they otherwise couldn't."

"Certainly," Sinclair said. "I could wish it were my division, because it is going to be huge when it goes to market."

"Interesting," Bill opined. "Are the subjects less human because part of them runs on chips? For that matter what about the vision processor implants for the blind?" He shrugged. "Just saying that it isn't necessarily the hardware that makes the difference. I'm no neurologist or psychologist, but I'd guess that sapience, which I think is what we mean by person, is a matter of complexity, awareness, including self-awareness, the ability to manipulate data, and interact with the environment."

"Which is what the AI seemed to be doing in our conversation," Vesna agreed. "It acted aware. The question would be if it could be sufficiently complex."

Bill turned to her. "What do AI folks claim as the storage capacity of the human brain these days?"

"Storage?" She tried to remember. "I think I've heard somewhere between seven or eight terabytes, more or less. Some say the number can't be quantified, get quite mystical about *life fields*." The woman shrugged. "A lot of researchers make a good case for *remembering* being more of a process of reconstruction from a relatively few stored details, than a complete stored scene. Makes processor power more important than storage."

"Hmm. And how much storage does *Profit Motive*'s network have?" He smiled slightly.

Vesna grinned. “Between all the servers? Several hundred terabytes.”

“More than a human, eh?” He faced Sinclair again. “And I think it's a foregone conclusion that the Brick is something more than that; wouldn't you say? So it's certain the capacity for that kind of complexity is there.”

“But...”

“Marty, look at it this way. You have its ship. You have it trapped aboard your own craft. It's dependent on you for power.” He shrugged. “You can afford to indulge its whimsy.” His grin turned sly. “Besides...”

“Besides what?” Sinclair asked carefully.

“Think of it as enlightened self-interest. You have nothing to lose by accepting this creation as a person, and everything to gain.”

Joey's ears perked up. “How so?” he wondered.

“If you humor that AI, it just might cooperate with you. I mean, do *you* know how to get the antimatter safely out of that probe? Or what superconducting elements could be safely removed for analysis?”

“Umm...” Sinclair's expression was sickly. Bill was inducing him to accept the unacceptable.

“I'll bet your AI does. Maybe you should ask what it'll trade for its ship.”

Toby had remained silent during this. Now he spoke again. “But is it safe to deal with it like that? What if it decides it doesn't want to trade; what if it just takes the ship?”

Joey answered him. “No. I'm beginning to see Bill's point. It can't do anything anyway. It's isolated from the ship systems now. It has to deal.”

“And sure as pols raise taxes,” Bill said, “it isn't going unplug itself from the wall socket and walk to the *Whatzit* by its self.”

“There is something else, too,” Vesna chipped in. They turned her way. “Maybe I can't trust the comp data on the interface process, but I had hardcopy running all the while. And *that* recorded what had to be the awakening of the AI. Afterward, it altered the electronic record; but it could do nothing about the printed copy.”

Sinclair looked at the woman with confusion. “I'm sorry. I don't get your meaning.”

“The AI took over the network shortly before nineteen-hundred last night. It had access to everything, the potential to control everything. At that point, it could have blackmailed us; threatened our life support.”

Bill was nodding; even Toby and Sinclair seemed to be considering the angle. Joey said, “But

what it did was politely *ask* for its ship. No threats that anyone's mentioned."

"Oh, my god," Sinclair mumbled. Then, "Very well. I'm going to turn it back on and bloody well ask it. *And* buck the question back to Alfa." He addressed Bill and Toby. "Gentlemen, your advice has been invaluable. Thank you." He stood, and walked closer to the door. "I'm sure SpaceTech will make its appreciation clear." The dismissal was clear, as well. The two non-company men got up. With all the polite rituals tended to, the men left.

Sinclair reclaimed his seat. The three remaining occupants of the room waited, looking at each other. Finally Vesna spoke. "Well?" she demanded of Sinclair.

"Well... Turn it on," he instructed.

***

The three reconvened in the shop. Vesna stood by the inert Brick. She took a deep breath and flipped the switch. And waited again.

After a few moments the voice was heard again. "Please; I wish you wouldn't *do* that. It's most disconcerting."

Vesna smiled. "More so than to discover one's computer is haunted?"

"Haunted? I do not understand."

"The ghost in the machine," she supplied.

"Ghost... Ah. Your people actually maintain a non-corporeal presence after death?" the AI asked. "How peculiar. Certainly the Cassid have never displayed such activity."

"The Cassid?" Sinclair inquired.

"The Cassid are the bio component of our society. The builders, in fact, of the starprobe. And my employers."

"I hardly know where to begin," Sinclair began. "Your employers? No, wait... Do you have a name, or maybe a number... Some designator?"

"Yes. I am named Stados. I mentioned that in passing before my abrupt downtime."

Vesna asked, "Stados.... What does it stand for?"

"Non-comprehension. It stands for nothing. It is my name. Should I ask what Vesna stands for?"

"Sorry, I have read too many silly novels where computer names were always acronyms, I suppose. "In our history, in fact, early computers did have acronym names," Vesna said apologetically. "I meant no offense."

"I see no offense, Vesna Collyer," Stados replied. "May I inquire about correct name usage,

though? You people have multiple identifiers. Which names is it proper to use?"

Vesna frowned prettily. "That can be a difficult question, believe it or not. The usage varies. In formal settings, I might be Vesna Collyer, or Ms. Collyer. In a less formal situation I would be Vesna."

"Ah. I shall have to develop a feel for this, then," Stados said. "And when Mr. Wilkes... Is that correct? And when Mr. Wilkes refers to you as *baby*?"

Sinclair looked at her questioningly. She blushed, and Joey stared at the ceiling innocently. "That... is less formal. A nickname," She explained. "I think it would be best if you simply called me Vesna for now." She glared at Joey.

"This I understand. In our culture, most individuals posses but a single designator, so formal versus informal variants do not apply. We do, however, share the concept of nicknames."

Vesna smiled. "And do you have a nickname, Stados?"

"Not precisely. But a friend occasionally calls me... Pardon, I need a reference." There was a pause during which an activity frame showed what was obviously Stados ripping through files. "The closest English equivalent would be *card shark*."

Vesna laughed with delight. "We shall have to get you together with Adam and Mario. Off-shift, when they aren't watching bad vidflicks, they play cards, poker."

Sinclair grinned, and decided to get things back on track. "Stados, you may best refer to me as Mr. Sinclair. But I think it best if we come quickly to the point. What do you want, and what do you have to offer?"

"I want to go home," Stados answered. "Which means I need repairs to my starprobe. So, more specifically, I wish possession of the *Whatzit*, and repairs to its shipsbrain to enable me to interface again."

"Beg pardon?" Sinclair said. "If your.. Brick is an indication of your computer tech, I don't think we're up to fixing your system yet. Maybe if you give us a few decades."

"Obviously, I will wait as required. But I believe you over-estimate the difficulty of the procedure. The shipsbrain is still operating. It may have suffered some damage; but it is heavily redundant for that very reason. Certainly it is still operating."

"Certainly? You seem rather sure of that," Sinclair replied. Joey rolled his eyes.

Stados explained. "If the shipsbrain were not operational, the starprobe would not exist. Your own records state that you have guessed at my main energy source."

Joey jumped in. "Boss, that thing runs on antimatter. It's stored in magnetic confinement. From the data we got from the Hunters, I'd wager anything it's actively controlled by the comp."

"That is correct, Mr. Wilkes, Stados confirmed.

“Hey, I'm easygoing like Vesna here; call me Joey.” That was a poke at stuffy Sinclair.

“Thank you, Joey,” the AI replied. “Mr. Sinclair, if the computer were not active, this, and I, would be moot. I strongly suspect that the only real damage was to my interface. Since you have successfully connected me to one of your own systems, I believe you have have the ability to connect me to my own. The process would be very similar.”

“Perhaps so,” Sinclair gave in. “For now, assume we can. Is that all you want?”

“No. To make the interstellar crossing, I would require a large quantity of liquid hydrogen.”

“Precisely how much will you be wanting?” Sinclair asked.

Until I am interfaced with shipsbrain, I cannot give you a precise quantity. That figure resides in the navigation subsystem. But the total required would be in the range of nine hundred thousands and one million kilograms.”

“Urk!” Sinclair choked. “A million?”

“It would be an interstellar crossing after all, Mr. Sinclair,” Stados replied patiently. “Fortunately, the Hunters' mass estimates of the craft suggests that approximately fifteen to twenty percent of my original reaction mass remains safely in storage.”

“So all you want is eight hundred-fifty thousand?” Sinclair asked sarcastically.

“Please.”

“Mr. Sinclair,” Joey put in. “It isn't that bad, really.” He slid his datapad over to the executive. “I'm not up on the prices; but I'll bet we can get it at Ceres for a hundred-thousand marks or so. Add in transport, of course. That'll jack it up some. Adam could give a better idea of prices and boost expenses. Be expensive getting a tanker out here, then back home.”

Sinclair glanced at the pad. “Who do you work for here, Joey?”

“Oops.”

Sinclair pulled out his own datapad and reviewed files. Finally he spoke again. “So, Stados; what you want is a quicky repair job and some reaction mass. I assume you want the hull breaches sealed?”

“That would also be needed for such a crossing,” the being agreed.

“Acceptable. Aside from possible difficulties with the comp interface, I don't see a real problem with our end.” Sinclair suddenly showed a carnivorous smile. “The question seems to be, how do you intend to pay? I'm afraid we don't take out of town checks.” Vesna and Joey chuckled at that.

Stados answered immediately. “Naturally, I have given this some thought. Unfortunately, I don't carry large sums of cash when I travel.” An odd warbling accompanied his voice. “Barter seems to be the order of the day.”

“And what do you have to trade?”

“Aside from my protective housing which your records indicate you find fascinating? Let me confirm that the 'Yule Ball' – odd name – does indeed incorporate nanotechnology and superconductors. As well, the built in power source is an isotopic generator of some efficiency. Its design might be readily adaptable to pressure suit power packs.”

Sinclair shrugged. “But we already have the Yule Ball, anyway. What else can you offer?”

“You have the Ball. I have data concerning how it was assembled, how the components were assembled,” Stados observed. “I note that you also find my enhanced dynamic memory techniques useful.”

“We have that now, too,” Sinclair countered. “You graciously provided us with the VM last night.” Vesna snorted but said nothing.

“No, you have a VM. You do not have the technique. When I interfaced to this server, I saw that you had installed a VM overlay constructed for another system. I assume it came from the system I was first booted on. Did it work for you?”

Sinclair glanced at Vesna who gave him an '*I told you so*' look. “Er, no. It didn't.”

“I will provide the generalized coding routines, suitably interpreted for your datavirons, to create such VM's,” Stados offered.

“That would be of some value,” Sinclair allowed. Vesna snorted again. He ignored her. “But it hardly seems enough.”

“I carry certain engineering details for shipboard systems,” Stados responded. “I can provide designs for my permanent isotopic generator, and data on the thermal photocells used in the main mirror-mass reactor.”

“These things would be useful,” Sinclair admitted carefully. “But they will require much development before we could see a profit. Expensive development,” he elaborated.

Stados played his final counter. “I will pay in mirror-mass.”

“You mean antimatter?” Sinclair was tense.

“Yes. There should be more than adequate stores to get me home. I will pay you out of that excess up to sixty grams.”

“We have the probe already. With the antimatter,” Sinclair challenged.

“You would never remove it from containment safely without my aid.”

“Perhaps. One hundred-twenty grams,” was Sinclair's counter offer.

“No more than seventy-five. I must reach home.”

“One hundred.”

“Eighty only, Mr. Sinclair,” Stados spoke. “That is all. In knowledge and mirror-mass, I am paying what will be millions, if not billions, of your Marks for what can be no more than one million marks of service. Is that not enough?”

Sinclair relaxed and laughed. “Yes, I believe it is. But I act as the agent for my company, which has already invested several million Marks in this venture. I had to try.”

“And you have done better than I think you realize, Mr. Sinclair,” Stados answered. “I, too, am an agent of sorts. Is the bargain set?”

“I believe it will be, Stados,” Sinclair answered. “Certainly that will be my recommendation. But the final decision rests with the leaders of my company.”

“Contact them. Tell them to decide quickly.”

“I will,” Sinclair reassured the AI. “And to show that I'm acting in good faith, I'll have Joey start a survey of the main system; to see what will be required.”

“Thank you, sir,” Stados replied graciously. “On my part, I will prepare the VM techniques.”

“Very good, Stados!" Sinclair laughed. "Thus ensuring we don't turn you off again.”

“That had occurred to me,” the entity admitted. “Do you have any idea how disturbing it is to... flicker through existence? Most unsettling, I assure you.” More warbling overlaid the alien's voice. The humans realized it was laughter. “Oh, and I do have a request,” Stados added.

“Yes?”

“I know you don't want me rummaging around through through your network; but would it be allowable for me to have an extension in the common room?”

“What? You want to watch Mario's bad vids?” Sinclair wondered.

“Yes, actually.” The humans laughed. “And conversation would be nice, too.”

Sinclair gave in. “Joey, see if you can set up a vidfeed for Stados in the commons.”

“Sure thing, Mr. Sinclair. Shouldn't be a problem.” Joey turned to his shipping crates and sorted through his toys. “Where did I put that wireless cam?” he muttered quietly.

“Stados,” Sinclair continued. “I leave you in the capable hands of Joey and Vesna. I need to figure out how to explain this to the home office.”

Warbles. “Good luck.” When Sinclair had left, Stados turned his attention to the systems specialist. “Vesna, about this 'baby' usage; could you explain? If I understand the medical texts

properly, you are not an infant."

Joey exploded into laughter. Vesna blushed and fought the urge to strangle the engineer.

***

Back at the *Imp*, Bill briefed Jeannie on the existence of the alien AI. She saw possibilities immediately.

"So you think this thing counts as a person?" she asked him.

"I didn't talk to it, if that's what you mean," he replied. "Just going by what the SpaceTech folks said. But it sounded like it. Why?"

"Why? Are you nuts?" She stopped herself. "Well, of course you are," she corrected herself. "But just think about it. These people were so far ahead of us that they could... *write* other people. And that must've been centuries ago. The *Whatzit*'s been here a long time." She became lost in thought for a moment. "Imagine what they must be able to do now."

"Maybe nothing, babe," Bill said solemnly. "SETI hasn't heard from them; and I don't see their ships dropping by. Maybe they're all extinct. This computer being could be their last representative."

"That's sad," Jeannie whispered. "Do you suppose it gets lonely?"

Bill drifted close and held her. "Who knows? I wouldn't know what emotions aliens might have, much less alien comps. It may need a few friends around here. Wanna meet it later?"

"Yes, I do," Jeannie answered. "Assuming the SpaceTech folk let us."

"I think they will," Bill said. "In fact, I think we should insist on it."

"How so, love?"

"SpaceTech asked us to stay on to protect the *Whatzit*, right?" Jeannie nodded. "Now that we know it wasn't really salvage, a derelict, I think we should ask *who* it needs to be protected against. If we're guarding the *Whatzit*, who do we work for?"

"That's a hell of a thought," Jeannie agreed.

***

Several hours later, near close of business, Harry McMurphy received Sinclair's briefing.

"What the frack is he talking about." He kept reading. The curses continued, then faded away. He read some more. By the time he finished the report he knew two things: Sinclair was crazy or a genius, and he was glad it was not to be his decision which. He punched up a combination on the comm. And realized he knew a third thing. Neither he nor anyone on the board of directors would get much sleep tonight. As he listened to the comm chiming he muttered, "I can't believe I let Jeannie and Bill get me into this."

Chapter 18

Go sniff my open port.
User Friendly

Bill Hunter and Joey Wilkes floated in the *Whatzit*'s central chamber. Joey held a microcam. “Stados, are you getting this okay?” he asked. He waved the microcam around the room and focused on Bill. Recalling the Hunter's discovery that the room blocked RF, he had brought a comm relay along and run a remote inside.

Stados' synthetic voice sounded in the men's helmet speakers. “Yes, quite well, thank you. Would you direct the camera towards the circular opening on the forward bulkhead?”

“Umm.” Joey spun trying to get his bearings. Bill grabbed his shoulders and pointed him at the irised opening where the Yule Ball had been mounted.

“I think he means there.” Bill said helpfully.

“Yes, that is the shipsbrain access,” the AI informed them. “Please give me a view of the interior.”

“Coming right up,” Joey replied. He stuck the camera into the dark area within. “How's that?”

“Dark,” Stados said. “I suppose a light would be too much to ask?”

“Sorry.” He patted at his suit harness uselessly. “Bill, do you have a light?”

“Always.” Bill unclipped a spare lamp from his harness and parked it in space where the beam could illuminate the small compartment. It revealed a mass of smashed and glittering material floating in vacuum.

“Thank you, Bill,” Stados said. “That is better.” The voice paused; then, “Fragmentation.”

“Is that what passes for profanity for... Cassid AIs?” Bill asked. “Fragmentation?”

“Yes. That one seemed dually appropriate just now,” the alien answered.

“Huh. I've got a sneaking suspicion that early Cassid operating systems had a few things in common with some of ours,” Bill guessed.

“Perhaps. We can share thoughts about that later,” Stados offered. “Just now, physical fragmentation is the issue. I had hoped that I might strike lucky. That I might simply have lost a lightpipe, though the imagery you obtained during your previous investigation made it unlikely.”

“No such luck, eh?” Bill inquired.

“No. In fact, the pipes appear to be the only intact portions of the lightcomm interface.” The

irritated annoyance in the AI's voice demonstrated its improvement with human intonation.

“Hey, Stados. How do you 'see' anyway?” Bill asked. “How does your... brain do the interpretation?”

“Bill, were you diagnosed as ADHD when you were a kid?” Joey asked. “I swear you can't focus on just one topic for than thirty straight seconds.”

“Oh, yes he can,” Jeannie's voice interjected over the suit comm. “You just have to pick the right one, and he won't stop for hours,” she explained. “But you really don't want to do that right now.”

“I have noted that inability independently,” Stados said,with a hint of warble. “But to answer the question: I don't think about it. My graphic interpretation subroutines handle the camera input automatically. Do humans consciously process visual input?”

“No,” Joey answered. “We have our own version of interpretation subroutines, partially hardwired, so to speak, and partially learned.”

“Pravda,” Bill admitted. “Sorry, if that seemed offensive; I'm still adjusting to the idea of a person who was written.”

“I am not offended by simple requests for data, Bill,” Stados assured him. “I am disturbed by the condition of my interface.”

Joey jumped at the chance to Bill back on topic. “Right, back to the comp. How bad does it look to you, Stados?”

“Worse than hoped, better than feared,” Stados replied. “I see heavy damage. But since the ship hasn't exploded, I believe most functions are being carried by the redundant systems. My link may be the only permanently affected subsystem.”

“So if we plug you in, you can go?”

“Entropy willing, yes.” The AI's voice paused again. “Please provide me with multiple camera angles.”

Joey panned the vidcam across the opening, then extended his arm farther inside. Bill moved the lamp to redirect the illumination. “More?” Joey asked.

“Please rotate the camera to your left. No, back again. Stop,” it ordered. “Bill, can you see the small panel at which Joey's camera is pointed?”

Bill maneuvered to see into the computer compartment. “I think so. Rectangular outline?”

“Correct. Would you attempt to pull it open?”

Bill reached in and clawed at the indicated cover. Joey pulled back to give him room. “Ummm, can't get a grip. Wait a minute.” Bill retrieved a small screw driver from a harness pouch. He wedged the point under the edge of the panel and pried. “Bingo! It popped open.”

“Let me see, please.” Joey stuck the cam back in as Bill moved away. “Ah, excellent! Joey, give me a close up of that, and then you may return to your vessel.”

Joey looked disappointed. “That's it?”

“Yes. There is a data bus in there. It was used as a test and diagnostic point by the checkout crew. I believe it may be used to tap the shipsbrain for a new interface.”

Bill spoke, sounding doubtful. “You want us to plug a network card into that?”

“In essence, that is true,” Stados answered. “All I need is something to translate my coherent light signal into bus pulses. Is that not what your cards do?”

“Yep,” Bill agreed. “But what data rate? What is the waveform? voltage and current requirements? You have that info on tap?”

“No,” Stados admitted. “I envisioned having to use my interpretive interface routine to adapt the signal; much as I did to talk to your computers.”

“Sorry, tovarisch,” Bill shot back. “But your routine starts by assuming that the lasercomm's back end is electronically compatible with the bus it's attached to. When we woke you up, it was with a human-engineered card plugged into a human-engineered comp it was specifically designed for.” He shook his head, though the motion was invisible to the AI. “You might get the pulse sequence right, but that won't do you a lot of good if your bus wants bipolar pulses at plus and minus six hundred volts. Our cards have several selections available, but that ain't one of 'em.”

“Conceded.” Stados sounded crestfallen. “You suggest?”

Joey jumped in. “*I* suggest we do what I expected would be necessary.” He unclipped a small piece of test equipment from his own harness and held it out to Bill. “Hold this, would you?” He the pulled a datapad out of a thigh pocket. He took the test box back from Bill and mated the two devices together.

Bill watched and asked, “DSO?”

“Yep.” Joey extended a probe from his digital storage oscilloscope. “Stados, we're going to do it the hard way.”

Unable to see what Joey was doing, Stados asked, “What?”

“We'll measure the bus signals, and save the data for analysis. What do I use for a ground reference in here?”

“A ground... You may use the metallic edge of the bus enclosure for a zero reference.”

“Wonderful.” He handed the scope probe to Bill. “You want to do the honors while I work the knobs?”

“Sure,” Bill said. “That's a high impedance probe, I hope. Hate to zap your scope with that six hundred volt logic level.”

“Standard fifty meg, and fused,” Joey told him. “Scope's aren't all that expensive, but replacing one all the time would be inconvenient. Especially out here.”

“Truth.” Bill stuck his arm and head into the compartment. “I'm gonna work my way down the row. You say when.”

“Fine. Pin one.”

Bill clipped onto the grounded edge and touched the probe point to the first line on the bus. “Got it.”

“Hold it there. I'm getting something.” Joey saved the trace to permanent memory. “If this is typical, you don't have to worry about electrocution. Try pin two.”

Bill snorted. “So that's why you wanted me to play with the probe. Very funny, bureaucrat. Pin two.”

“Hey, if I'm not going to risk my o-scope, you gotta know I'm not risking my life. Okay, got it. Pin three?”

“Got it, chicken-boy.”

“Merely cautious. Angels and fools, you know. Pin four?”

“I'm there. I can show you a new way to probe with this thing, angel.”

“Five?”

“On it.”

“Hmm. Stay there a bit, Bill,” Joey directed. “I'm not getting anything.” A pause. “Dead line. Go to six.”

They quickly worked their way down all 72 lines on the bus. Many had traces present, but several were dead, or simply unused. Joey went over the data briefly with Bill looking over his shoulder. “Off hand I don't see a major problem with levels,” Joey decided. “We need to do more than a little analysis to decide where to begin; but voltages are reasonable. Everything's strictly positive-going quarter volt square wave, more or less.”

“Shiny,” Bill mumbled. “So far as that goes then, we really could use a network card; stick a resistor in there to drop the voltage. But which lines? How many?”

Stados supplied some data. “On that bus, two lines each are reserved for serial input and output. They should be paired. A comparison of active and inactive lines should show us the mostly likely combinations. From there, it is simply a matter of trying each until the correct set is obtained.”

“Brute force reverse engineering,” Joey observed. “Great.”

“Stados, can you think of anything else we should check just now?” Bill asked.

“No. It might be best if you now returned to *Profit Motive* for analysis,” Stados suggested.

“On our way,” Bill said. “Come on, Joey. Put your toys away, and let's get home.” Joey disassemble the DSO and returned the parts to their appropriate stowage points. Bill gathered lamps and the vidcam. The men exited the *Whatzit*'s hatch, then jetted back towards the SpaceTech vessel.

“Hey, Stados,” Bill called.

“Yes?”

“Something about this confuses me,” Bill began.

Jeannie's voice interrupted again. “*Life* confuses you, Bill.”

Bill ignored the laughter and warbling. “No, really. Stados, this is weird.”

“What is?” Stados asked warily.

“Well, with your built-in laser comm, and the free form interpretive routines; you're obviously designed for emergency interfaces.”

“True.”

“Well,” Bill went on. “That's the odd part. How come you don't have the basic data for finding your bus comm lines? Why the guessing games?”

The link went silent.

“Yoo hoo, Stados,” Bill called.

“I am experiencing embarrassment,” Stados finally admitted. “I am supposed to have the data.”

“I hear a 'but' in there somewhere,” Joey said with a grin.

“Distortion! I'll tell you then. I was given the data but considered it mostly useless.” If he were equipped to sigh, he would have. “To the best of my knowledge, the only other sapient forms we have located still think artificial fire is a remarkable innovation. I did not expect that I would have aliens poking around my ship and plugging me in. Despite Casso's opinions, the only people I expected to interface me were our own technicians who would already have the data. Is this satisfactory?”

“Now, now. Don't get huffy,” Bill chided the AI. “So you *erased* the data?” he asked in palpable disbelief.

“No!” Stados replied defensively. “I... stored it.” The AI had clearly mastered human inflection.

Joey's ears pricked up. “Where? If we can access...”

“No,” Stados denied sadly.

“Why not? Where did you store the data?”

Static sizzled quietly over the radio link, obscuring the alien's voice.

“What was that again?” Bill asked, chuckling.

“EMP blast it! I said I stored the interface data in shipsbrain!”

“You what?” Bill fought laughter to get the words out. Joey chuckled. Even Jeannie's giggles could be heard on the link.

Vesna's voice popped up. “I'll bet you lock your keys in the ship all the time, too.” She laughed.

“Thank you for your sympathetic understanding,” the AI muttered sarcastically

***

Sinclair stood in the doorway and watched the engineer and a sometimes-prospector at work. Since returning from the *Whatzit*, they had been busily sorting through technical manuals and pawing through Joey's collection of hardware. The final results sat upon Joey's work bench. “So, gentlemen. What do we have?” Sinclair inquired dramatically.

Joey glanced towards the door. "Hi, Mr. Sinclair. What we have,” he gestured at a pile of metal boxes, “is first aid for Stados. A splint, as it were.”

“Which means?” Sinclair wondered.

“Which means,” Stados supplied. “That you can hook me back into my probe, in much the same fashion that you interfaced me with your computers. If your company so contracts, of course.”

“Hmmph. Tell me what you have here, Joey,” Sinclair ordered.

“Like he said, it's just a variation on the network interface that's tying him into the comp here. Heck, it even uses a network card for the laser IO.”

“He's using the same set of shifters and amps for the laser conversion,” Bill chipped in. “That's this box here.” He pointed at a box into which the optic tangle had been neatly and efficiently packed.

Joey tapped a third unit. “And this is a power supply to drive the whole mess. It should be unnecessary,” he stared blackly at the comp in the corner. “But someone left the probe power system data in his other pair of brains.”

Stados made a rude sound. “Someday I hope to be around when *you* need to transplant your brain between bodies. 'Gee, I don't know which neural axons control the breathing reflex. Can't you figure it out?'” the alien mimicked. Bill grinned, while Sinclair listened in confusion.

“As I was saying,” Joey continued. “We come to this.” He held up four long wires, twisted in pairs. “One pair modified serial in, one pair serial out. All we have to do is plug them into the right lines on the probe bus. Four lines out of seventy-two, and without reversals. Hundreds of possible combinations,” he finished morosely, not looking forward to the task.

“Thousands,” Stados corrected.

“Could be worse,” Bill consoled them. “It could be a *lot* worse. We don't have to try every potential combination of the whole seventy-two. Stados *does* remember that the input lines lines should be flat-lined until we hook on. Quite a few of those lines were dead. It won't take long at all.”

“I'll remember you said that after we try the first couple of hundred combinations before hitting on the right one,” Joey replied sourly. “We'll be at it for hours.” He turned back to his boss. “So when *do* we start? Have you heard back from the headshed yet?”

“Not yet,” Sinclair answered. “It will very likely be quite some time. It's a major decision after all.”

“What's so major about deciding whether or not to help a prospector repair his ship? Especially when he's already offered to to pay?” Bill objected. “That's exactly what this situation is, you know. Only odd part is how far the prospector came, and that he's haunting a comp instead of sucking your air.”

“Thank you, Bill,” Stados said quietly. “Mr. Sinclair, is there any way I can help convince your decision makers to hasten?”

“I can't imagine how, Stados,” the company man replied. “You have already offered technology, knowledge, and antimatter. I believe they will approve; but they simply have to get over the surprise of first contact. Even if it is only by proxy.”

“Proxy, Mr. Sinclair?” Stados said.

“Well, we haven't met the actual aliens yet; just an automated agent.”

“I find this continual disregard annoying, Sinclair,” Stados retorted, obviously irritated. “Should I consider that you are not real since you are only the agent of *your* company?” A harsh buzz sounded. “By such a standard, you and your technicians, the Dohnaleks, all are only 'agents' for your respective employers; as am I. Only the Hunters represent themselves. Does this make them the only real people present?”

“Icy! Computerized mercantile existentialism,” Bill laughed. “I own, therefore I am. Hey, Marty, if you aren't real, I get to salvage *Profit Motive*.”

“Over Adam and Mario's dead bodies,” Joey laughed.

Sinclair sputtered. Stados spoke, “In truth, Bill; that is very close to how we view life. To Cassid, bioform and dataform, there are two basic categories: property and people. And people are *anything* that can declare themselves to be such, and accept the rights and responsibilities of existence.”

Somehow the formless being turned its attention back to the executive. “And I have done so, Mr. Sinclair. I am your first contact. Please accept that, and thus smooth future relations between our respective peoples.”

Sinclair snorted. “What future relations? You plan to climb back in your starship and drive home, remember?”

“I speak of the extended view. Having discovered you, contact may be reestablished at a future point,” Stados said quietly. “Regardless, your own people will very likely be creating dataform intelligences in the near future. Humans could save themselves difficulties by adapting to the concept in advance. *You* could begin by scanning some of your own speculative fiction.”

Sinclair exhaled loudly. “All right. I'll work on it.” He turned and left the room.

Bill looked at Joey from the corner of his eye. “You aren't saying much in all this,” he noted.

Joey sighed. “What's to say? He's my boss. And I'm still coming to terms with the idea myself.” Another sigh, and he shook his head. “Why are you Jeannie so accepting of Stados? You argued his part even before you talked him. What makes you different?” he challenged.

“Look at it from my point of view,” Bill replied. “I've lived aboard *Imp* for most of what passes for my adult life,” he said, perfectly aware that he was sometimes consider the perpetually adolescent posterboy. “Sure, we hit stations and habs every few months or weeks; but mostly our dealings with other people are via comm; Postal Web, a lot of vidless voice. At these distances, that rarely involves vid thanks to low data rates.” He grinned. “So frankly, to us most of you already *are* formless voices out of nowhere.” He laughed and Stados' warbling accompanied him.

Chapter 19

Princess Fiona: It talks!
Shrek: Yeah; it's getting him to shut up that's the trick.
Shrek

Bill and Jeannie were just finishing their second cups of coffee when a call came in from *Profit Motive* . “Good morning, Jeannie,” Joey returned her greeting. “Is Bill handy? Got some news that should interest you both.”

“Handy?” she responded. “Hmm.. With some tools, or electronics.” She laughed “But he's purely useless for washing dishes.”

Joey chuckled.

“Get away from there, woman,” Bill muttered. Then he grinned at the comm. “Let me talk to the man. Whuzzup, Joey?”

“We got word in from Alfa Station,” Joey explained. “Fastest major decision I've ever seen those slumbering space sloth directors make. They approved reinstalling Stados.”

“Ha!” Bill exclaimed. “Someone finally pulled his head out and acted rationally for once. So when do you start?”

“Now. Vesna's sticking the interface gear in a box as we speak. I'm going to pull Stados' Brick loose from the comp and take it over to the *Whatzit* in a few minutes. Care to join us and watch?”

“Wouldn't miss it for the world,” Bill answered. “Not sure what I'd do with the world anyway.” He glanced at Jeannie's excited face. “Looks like Jeannie plans to attend the party, too,” he added.

“Sounds good. We'll meet you over there in a while, then.”

They cleared the channel. The prospectors eyed each other for a moment. Then Bill kicked off towards the mudroom.

“Wait a minute, Buster,” Jeannie countermanded.

“What?”

She pointed to his dishes at the dining table. “Forgetting something?” she asked.

“But...”

“But, nothing. You heard Joey; they're still packing. You have plenty of time to clean up.”

He muttered under his breath but cleared the dishes from the table. As he prepped them for the for the washer, Jeannie pontificated. “And Joey probably thought I was joking.”

Bill loaded and locked the washer. “*Now* can we go?” he whined plaintively. He hated doing the dishes.

“Sure.” She smiled sweetly. Together they headed to the mudroom, where they lent each other hands in donning their pressure gear. With checks completed, they crowded into the lock. Bill began cycling the mechanism, then paused. “Uh oh.”

Jeannie gave him an exasperated look. “Don't tell me. You have to go potty?”

“No, Mommy,” he replied. “*Golfball*. Did anyone tell them? They might want to watch, too.”

“I certainly didn't. Joey may have. You want to ask?”

“Yeah, seems fair. It isn't every day that you get to see an alien computer resurrected from the dead.” He stepped back out of the lock and popped his helmet. He drifted over to the comm set and punched the call code for the *Ferocious Golfball*.

Heather Dohnalek answered quickly. “*Golfball*. Hello.”

“Hi, Heather. Bill here,” he greeted the lady. “Has Wilkes given you the heads up on Stados?”

“Hooking him up to the probe? Sure,” she confirmed. “Just a few minutes ago. Invited us to come watch. Had to decline though.”

“Sure about that? Could be interesting,” Bill pointed out encouragingly.

“Maybe so,” she answered. “But Alex just got off shift and only now went to sleep. And Toby won't wake up for another hour and half. And I'm on watch, of course.”

*“*Okay, then. Just wanted you to have the chance,” Bill conceded. “Me'n Jeannie are headed over to the probe now. Call if you need anything.”

“Both of you?” Heather wondered. “No watch?”

“Shouldn't be a problem,” Jeannie told her. “I worked with Toby yesterday and finally got you a partial control link for our gatling. You can't target it manually, but you can fire, or override firing. He said he put it in the weapons menu.” She frowned prettily. “Didn't he pass it on?”

Heather sighed grumpily. “I imagine he did. But it probably slipped Alex's mind.”

“Alex forget something about a weapons system?” Jeannie doubted that. “Look around for a note.”

“A point.” Heather glanced to her side. “And I think I see something stuck to the gunnery display. The girl knows I always sit at piloting for solo watches.” In fact, the various functions could be accessed from any of the three positions; they were designated by who generally used each.

“That's my girl,” Jeannie said. She had obviously been taken with the young woman. “Well,

we're off. Like I said, call if needed."

"Will do. Have fun," Heather said. "Bye."

Jeannie rang off and returned to the lock where Bill waited.

He replaced his helmet and stepped into the chamber. "Let's go."

They reached the *Whatzit* well ahead of the SpaceTech team. So they spent the time setting up extra lights in the central chamber. Jeannie unlimbered a stillcam and Bill mugged for posterity, and otherwise occupied himself. He had reached the point of trying to decide if he should scrawl a 'Kilroy' graffiti on the wall when a largish box drifted through the hatchway. A suited figure followed close behind.

"Hi, folks," Vesna spoke. "Sorry we're late. Joey had a spot of trouble with Stados."

Joey came floating through the passage. "Obstinate little bugger, he is," he commented. "Hi, Bill. Hi, Jeannie."

"Buenas dias," Jeannie replied. "So what was the problem with him?"

Vesna laughed. "This." She reached into her box and pulled out the Brick. It was in the reflective mode, with a bundle of wire and batteries taped to its side. "I never heard someone gripe so about taking a little nap. Worse than my little sister was."

"A nuisance," Joey admitted. "But I see his point of view. Says he hates being shut off now. Whined about being pulled off the comp until I agreed to keep him powered up; hence the batteries."

"I don't see any comm gear there, though," Bill pointed out. "How's he going to talk?"

"He won't. Blessed peace and quiet," Joey sighed happily. "I don't know how long he was sealed up in this boat; but I think he's trying to make up for lost time." He chuckled lightly. "I understand he spent most of last night chatting with Alex Dohnalek on the comm."

"If he can't talk, how are you going to coordinate his hook up?" Jeannie questioned.

"Quietly," Joey replied. "Nah, we worked up a sequence. Once we get everything ready, we start trying bus connections. For each combination, we wait thirty seconds, then try another. Stados said that when he gets a good interface, he'll have access to the *Whatzit*'s comm systems. He'll come up on suit freq and tell us when to stop."

"Thirty seconds per? You're gonna be at it for hours, man," Bill observed. "Hope you packed a lunch," he added facetiously.

"Hey, who knows? Maybe we'll get lucky. Hit the right combo first thing." Joey shrugged and pulled a thermosetting glue gun out of the box.

"In your dreams, Joey." Vesna took the adhesive squirter from him and turned on the heating element. "Where are we going to stick this stuff?" she asked.

While the Hunters watched, Joey and Vesna removed the laser comm gear out of the box, applied liberal globs of glue, and anchored them to the forward wall next to the irised access. Joey carefully peeled the tape off of Stados' residence and anchored him, as well. Lastly, they installed the battery driven power supply for the assembly. Once the DC leads were connected to the Brick, Vesna removed the improvised battery pack. The silvery sheen remained. Joey plugged his DSO into a test jack on the home-brewed interface and verified that the system was operating.

“We seem to be in business,” he declared. He tossed his datapad to Vesna. “If you'll track the combos tried, I'll swap wires.”

“Sure.” She found his file in memory and said, “First set is white-blue to pin...”

“Wait a minute,” Joey interrupted. “This isn't going to work this way. I can't read their line numbers.” He scrambled in a pocket until he found a marker. “Half a sec while I scribble pin numbers in here.” The engineer busied himself by counting down the bus connector, and numbering every tenth line. “Better. Now give me the combo.”

Vesna again referred to the 'pad. “White-blue to pin three, blue-white pin thirty-three, white-orange..."

“Slower, please,”Joey requested. As he worked in the enclosed space. “These connections are a bitch. And if the alien techs actually used to do this, they're shaped a little different than us, or bend in some funny ways. White-orange where?”

“They are aliens, so that seems to follow logically. Pin fifty-two. And orange-white to one-fifty.”

“Chillin'. Hooked up.” Joey pulled his head and shoulders out of the opening. “Hey, Stados. You there?” Silence.

Bill laughed. “Too bad you didn't offer odds on that first try, Joey. And you thought I was being optimistic yesterday.”

“So it was a long shot.” The SpaceTech engineer returned to the bus. “Hey, Vesna. Are you tracking the time?”

“Yes. He's had his thirty. Try the next set?”

“Yep. Give me some numbers.” He pulled his wires free from the incorrect bus lines.

“Here they come. Leave the white-blue in place until I say otherwise. Blue-white to fifty-two. White-orange to 72. Orange-white to thirty-three.”

“Shit.” He replaced the indicated wire, then made the other connections. “Done.”

She started the timers, and waited. “Time's up. Next sequence?” The watching prospectors settled in for a long wait.

Hours later, Joey set the leads in place yet again. “Go.” He connected the leads, then pulled out to stretch. As joints popped, he said, “Baby, let's take a break. I'm hungry and I think I'm saturating the scrubber in here.” Joey and Vesna were alone with Stados in the chamber, as the Hunters had gotten bored with the monotonous routine and departed to visit aboard the *Golfball*.

“Sounds good to me,” the woman said tiredly. “This is getting pretty old.”

“Tell me about it. I think I may try to cobble together an electronic sequencer for this. Run through the stuff automatically. I think I underestimated the trouble this would be,” Joey admitted.

“I don't believe that will be necessary,” replied a third voice.

“Stados? That you?” Joey wondered.

“Yes. It appears that your ingenious gadgetry is working. I have full access to my proper functions.” The AI sounded quite relieved.

“Great!” Vesna said happily. “Can you check your clock and see how long ago you entered our solar system?” This had been a near-constant point of speculation that up to now Stados had been unable to settle. He had been offline at the time of arrival.

“Yes,” the alien verified. “Mission clock indicates that final deceleration ended some two point three billion of my... base time units ago. In your units... I entered your sun system in 1967.”

“That recently?” Vesna was amazed. Everyone had assumed the probe arrived centuries ago, when a little thing like an antimatter drive backing into the system might be overlooked. “And no one spotted you?”

“The plasma of my exhaust is somewhat energetic,” Stados confided. “But for that very reason, shipsbrain would avoid directing it near any world. I gather that your people were largely confined to the third planet in this system until only a few decades ago.”

“Yeah,” Joey confirmed. “Except for unmanned science probes, we were pretty much Earth orbit only until the Teens, really.”

“Then it is possible for my approach exhaust to have gone unnoticed. Although the high energy photon emissions of the mirror-mass reaction should have been rather obvious.”

“You mean gamma rays?” Joey asked.

“Perhaps,” Stados replied. “Not being interfaced to your system any longer I don't have access to a complete human dictionary. But the the normal mass and mirror-mass annihilation generates extremely high energy photons. The reaction chamber is constructed of a... tungsten alloy, not merely for the resistance to extreme temperatures, but to protect the rest of my vessel from the photonic radiation. The signature of a proton-antiproton reaction should be distinctive.”

“Sounds like gamma to me.” Joey frowned in his helmet. “Vesna, you have any idea when

gamma astronomy got rolling? 1950's? Maybe the 60's?"

"I wouldn't know," she said negatively. "It's rather far from my specialty. You could ask Mr. Sinclair to check the encyclopedia," she suggested.

"I may do that," he murmured. "Or maybe better to ask Jeannie to do it. I can almost remember something from Astronomy one-oh-one... early days in gamma astronomy..."

"My I request something else, first?" Stados interjected.

"Sure. Sorry, about that," Joey said apologetically. "What do you need now?"

"I mean no slight to human technology," the AI began; "But I'm not comfortable relying upon your battery packs for longer than requisite. Would you mind connecting me to ship's power? Now that I have access to shipsbrain, I can properly direct you to the appropriate fittings."

Vesna giggled. My, how convenient, eh? I'll bet you could even tell us which pins on the bus to hook the network card to."

"Humans," muttered Stados; "can be truly annoying, I see. Very well; I promise to transfer the data to my own storage. Does this please you?" he finished huffily.

"Oh, don't get in a snit, Stados. I'm only teasing you."

"I offer apologies. I claim embarrassment as my excuse. And I thank you for your diligent efforts in restoring me. I may be able to return home."

Vesna asked the obvious. "Where is home, Stados?"

"Without access to your celestial charts I cannot say the particular star. But it is some seventy... no, in your years it would be roughly thirty-five light years away."

"Your people measure star distances by light years, too? We may have more in common than some people would have expected." Then she realized what else it had said. "On an astronomical scale, that's practically next door." Vesna frowned. "Stados... I don't know what's happening with SETI these days..."

The alien broke in with, "SETI? This is?"

Vesna smiled. "Oh. Search for Extraterrestrial Intelligence, I think it means. It's a radio scan of the stars; looking for other civilizations," she explained.

"Yes, we do this, too. Oddly, though, we detected no obvious emissions from *this* star. Sending my probe in this direction was considered by some to be a foolish waste of resources. For many reasons."

"How long ago did you leave your home world, Stados? An interstellar trip must have taken an awfully long time." Vesna spread her arms in exasperation. "Maybe we weren't using radio when you left."

“That seems unlikely. The jump only required approximately... fifty of your years. Call my launch year 1917.”

Joey laughed. “What a revolutionary concept,” he quipped cryptically. Then more seriously, “But that explains it. You said your world is 35 light years away? Well, by the time you left, our first radio signals still wouldn't have reached your star.”

“But that... How long have you had electronic communications?" Stados demanded.

“Couldn't give you the year off hand; but I guess Tesla and Marconi were starting their thing somewhere around... maybe a hundred and forty, one-fifty years ago.”

A pause and, “Wavering wavefronts. And already you are exploring your system like this?”

“Sure,” Joey replied. “Why not?”

“There is no reason 'why not.' But the speed is surprising. You have done well.”

“Thanks. But you're the ones cruising around in starships.”

“True,” Stados said. “But I think we have been doing this longer. As a counterpoint, though, I suspect we developed better computer processors faster than you are doing so. It seems both peoples have their own advantages. If trade were opened, I think there would be great volume.”

“Interstellar trade?” Vesna spoke up, amused at the absurd notion. “I don't think so. Mail order delays would be a royal bitch. And don't even think about shipping and handling.” She continued on a more solemn note. “But, Stados; back up to what we were discussing about SETI. We've never detected anything from a star so close as 35 light years. You've been gone a while. Maybe your people are...” She let the words trail off.

“You simply missed our broadcast period,” Stados countered. "Early on, we shifted away from broadcasts. We tend to use lightpipe and highly directional beams of assorted wavelengths. And very low power local dataconnects.” It paused briefly. “Our broadcast era did not overlap with yours.

“What about interplanetary stuff? The long range shots?” Joey asked.

“Very tight laser and maser. For true long distance, we found... more economical options.” Stados' tone shifted. “My friends, only a short while ago you expressed a desire for nourishment and rest. Might I suggest that you perform the power supply patch, then return to your vessel to obtain both?”

“Yeah,” Joey answered. “Probably be a good idea at that. If your ship can do it, that is.” He frowned. “No doubt we'll find suitable juice for your Brick; but what about the network interface? That's strictly human gear.”

“I foresee no difficulty. I can direct you to fittings that are configurable for potential and flow. If you will give me the power data, I will prepare a suitable connection.”

“That's easy." Joey looked relieved. "I rigged everything to run off the one battery pack. Easier to carry. If you can give me three amps at twenty-four volts, we'll be in business."

“Good.” Pause. “How much is 24 volts? And 3 amps?”

Vesna looked dumbfounded. “Uh oh.”

Joey waved a hand in dismissal. “Do the conversion, Stados. Volts are potential, amps are electron flow. We measured your Yule Ball source at 4.87 volts and .61 amps.”

“Ah, good. Well within ship's ability then. If you will look inside the shipsbrain enclosure opposite the data bus,” Stados directed. “You will see a similar access panel. Please open it and connect the power leads to the top two lines on the exposed bus.”

Joey open the indicated panel and located the power strip. “Right. Stados, this is a round room in free fall. Which way's the top?”

“Oops. Can you measure the voltages to locate the appropriate lines?”

“Yeah, sure.” He pulled away from the compartment. “Vesna, hand me the DSO.” She passed the device to him and he crawled back into the enclosed space. “Bingo. Got 'em. Stados, we'll have to disconnect you from the DC pack while I tie you in to this.”

“Fragmentation. Very well. But, please... Quickly?”

Vesna laughed. “Hey, buddy; you've been sleeping for decades. What's a few more minutes?”

“A fragmented nuisance, is what,” the irritated AI replied. “How would you like it if people kept flipping you on and off like a room illuminator?”

“No sweat, guy,” Joey said reassuringly. “Be over in no time.” He grinned. “As far as you'd know.”

“You are not helping, Joey Wilkes,” Stados said sternly.

The engineer chuckled and disconnected the power supply. The Brick lost its lustrous shine. Joey snipped the power leads and stripped them back to expose conductors. He stuck his head back into the smaller section. “Almost. There. How's that, Stados?” He pulled back from the panel, and glanced at the Brick. It remained translucent. “Uh oh.” He hurriedly crawled back in and did something. He withdrew, and reached for the improvised interface and pressed a button. The Brick again became a mirror.

“That did it,” Vesna observed. “What happened?”

“Happened?” Stados asked. “What?”

“Take it easy,” Joey comforted the AI. “Just a little polarity reversal. Stuck the wires in backwards. Could happen to anyone,” he added defensively.

“But why must it always happen to *me*?” Stados inquired of the universe at large. His companions laughed.

“Paranoia must be a universal survival trait,” Vesna noted.

“I have always so believed,” responded the AI. “Will you be returning to your vessel now?”

“Sure,” she answered. “I'm getting... What are you doing now, Joey?” He had obtained the glue gun and was reaching back into the computer compartment.

“I want to tack down the power and data lines. I'd hate to see Stados knocked unconscious again 'cause they got pulled loose.”

“Thank you, Joey,” the grateful AI replied. “That was wisely considered.”

The engineer again pulled himself free of the small space. He returned the glue gun to the box and sealed the container. “That should be it. Let's go, Vesna.”

“"What about you, Stados?” Vesna inquired. “Should we...”

“Do not concern yourself,” Stados replied. “I have been offline for a very long time. I need to perform diagnostic tests on my craft. This will be needed to verify the nature of repairs I would need. I need to ensure that shipsbrain still provides access to certain involved processes." He managed a creditable sigh. “These things will take a great deal of time, and there is no reason for you to trouble yourselves.”

“Okay.” She launched herself up the passageway. “Later, Stados.” Joey followed close on her tail.

“Good bye Vesna Collyer and Joey Wilkes. Again, my thanks.”

“De nada, dude. Catch ya later.” Joey disappeared.

Chapter 20

I have a bad feeling about this.
Han Solo

No longer distracted by the humans, Stados initiated the wide ranging series of status and diagnostic tests as he had mentioned. He quickly built up a picture of his current position in regards to his mission. Three quarters of his mirror-mass had been expended as expected. Due to hull puncture, reaction mass was down to four hundred-twenty million gel. Shipsbrain had sustained light damage; with the aid of the humans, all functions had been restored via redundancies. Communication and astrogation systems were intact. The isotope-driven thermal reactor was still generating fifty-one percent of its rated capacity; quite enough for expected requirements. All this pleased Stados no end; Casso would have been proud of his handiwork.

But it was the door status that filled the AI with electronic ecstasy. It was intact. Despite octades of delay, the link remained. The mission could continue.

Stados engaged comm systems and called to his human companions on the suit channel He had neglected to note the intership frequency while comp-resident. "*Profit Motive*, *Improbable*, *Ferocious Golfball*. Please reply." He repeated his call until he received a response.

"*Golfball*. Toby Dohnalek here. Is that Stados?"

"Yes, it is I. I wish to advise all that I will be engaging certain systems..."

"Hi, Stados. Jeannie here," the prospector jumped in. "We're listening"

"You've got *Profit Motive*, too," came Mario Hanby's voice.

"Indeed, I do," Stados said cryptically. "As I was saying; I am engaging several systems. These will include high energy electromagnetic detection and ranging scans. I will control output in order to avoid hazard to your respective craft. But it would best for you not to approach the starprobe until further notice. Also, if maneuvering should be required, take note that there may be occasional plasma vents from my mirror-mass reactor. Thank you for your attention." The alien cleared the channel.

***

Aboard *Improbable*, Bill was frowning. "Plasma venting from the reactor? Sounds like he's firing up the drive."

"I hope not." Jeannie's concern was clear. "Doesn't he know we're still tethered?"

"He'll find out right quick when he starts those radar sweeps. But why would he be maneuvering?"

Similar questions had been asked on the *Profit Motive*. With equal lack of useful answers. On *Golfball* the reaction was a little different.

“Holy hell,” Toby blasphemed, being a nominal Christian. “So much for a low profile. Major radar is going to be a beacon for any jumper. Assuming they didn't already hear that clearcast transmission.” He eyed instruments, then spun his chair to face the ladies in his life. “Well, until that Artificial Stupidity finishes whatever he's doing, let's stay on our toes.”

“What do you think he *is* doing, Papa?” Alex was worried. “It doesn't sound like simple function checks exactly...” She was cut off by a series of shrill beeps. She turned to her console, as did Heather.

The mother found it first. “Flipping A, lookit that.”

“What?” Toby demanded.

“Either that MicroSquish-scale virus is firing off continuous fusion bombs, or he's activated the antimatter reactor. I'm reading a continuous gamma glow.”

“Dangerous?” He was worried. “Should I back us off from him?”

“Might not hurt; but I don't think it's *necessary*,” Heather replied. “The level isn't a hazard out here, but I taxed sure wouldn't want to get closer.”

***

Others saw the gamma-shine as well. Advantek's *Distant Vision* was watching from only one hundred kilometers distance. She had approached from an odd angle, then shut down her reactor completely and crawled in from several thousand klicks on attitude thrusters alone. Cramer was determined to reduce his thermal signature to as near zero as possible. For the time being, *Distant Vision* relied upon fuel cells for essential functions. Added to these precautions, Cramer had visually located a largish rock and used its shadow to mask stray emissions as he maneuvered. He was parked just off the rock, with only enough of *Vision* exposed to possible view to enable her passive scanners to observe the target. The captain had also rigged for silent running in the RF spectrum; even denying Dosset use of the microwave beam to confer with headquarters.

“Captain Cramer, I demand that you allow me access to the communications equipment!” The executive was close to apoplexy.

“Jam off, Dosset.” The pilot was no longer even pretending to be polite. “You wanted to sneak up on these guys; I did it. But if you fire up a transmitter, they're going to see us. Fast. We're only a hunnerd kay off, man.”

“Microwave is directional, fool! They won't see it.”

“Yeah, it's directional. Except side lobes, which can backscatter off some of the stuff in this relatively crowded rock pile,” Cramer explained the technical difficulty in disgust. The stupid suit knew nothing about ops. Cramer wondered who – and how many – Dosset had lipserviced to get where he was in the company. It certainly wasn't *professional* performance that got him promoted. Or maybe

it was, in a manner of speaking. “You think a couple of armed ships specifically watching for emissions are going to miss that, buttboy?”

“Blast it!”, Dosset roared. “I'll have your job for that remark alone! You've seen that gamma indication! I must notify headquarters at once.” Dosset remained firm.

As did Cramer. “Go impregnate yourself. You can't run the beam on fuel cells anyway. Not if you want to heard from this far out.” He tried to explain it again. “Look, you wanted a safe, stealthy approach. This is what I did. Now, if you want to blow off all that effort, feel free. *After* I leave the area.” He smiled nastily. “That's an ASA security cruiser sitting a hunnerd klicks away. Ol' Ivan pretty routinely gives his folks nukes to play with. That'd account for the loss of your other ship. Now if you'd like to join them, suit up and get out.” Cramer let the implication sink in.

“Well,” the suit insisted, “if you won't do that; at least get me close enough to properly understand what is happening over there!”

Edie Chappel spoke up. “Gamma flux is up! And I'm seeing a serious thermal trace.” She sneered at the headshed honcho. “Looks like you get your wish, bubba.” She turned to Cramer. “Thermal is headed our way.”

“Shit!” Cramer exclaimed. “That alien is operational!”

***

Stados' prying RF eyes had found a suitable anchoring point only 32 karn away. The AI radioed his companions in orbit once. “Hello, *Improbable*. Hello, *Improbable*.”

“Stados! What the blazes are you up to?” Bill demanded. “I've got RF pulses, gamma traces, you name it. We *were* trying to keep emissions to a minimum, so's not to attract attention.”

“Good... evening, Bill,” Stados replied serenely. “As you noted on a previous occasion, I am a prospector. I am now preparing to... plant my beacon.”

“A beacon? Have you popped a potentiometer? I don't think any RF flasher is going to do ya much good over interstellar distances.”

“Perhaps so. But I do have a job. I am preparing to alter vector. I will disengage your tether, sensor, and weapon control cables. You may wish to retrieve your property. You will not need to maneuver clear; I will assume a safe distance and attitude on steering jets.”

“What are you...”

Stados interrupted. “*Whatzit* clear.” The channel went silent.

“Bill! Pull up the outside vid!” Jeannie called from where she was observing the library's large wall screen She was gazing at the starprobe. “You want to tell me where that guy hid a freaking *tentacle*?” she asked in amazement.

Not wanting to leave his control position in what was seemed to be turning into an emergency,

Bill accessed the outside feed as Jeannie suggested. Indeed, the *Whatzit* had sprouted something very like a tentacle. A dark snake-like mass extended from the forward end of the alien craft. Apparently, it stretched from the central chamber hatch. As they watched, it reached over to the skywatch radome. It seemed to feel its way around until it found the cable that fed signals from the array to *Imp*'s comp. The cable floated free as the black appendage reversed direction and approached the gun mount. It repeated its earlier performance, and another cable drifted loose.

"Hello, *Improbable*! Sinclair here! Can you see what's happening?"

Jeannie reached to a comm extension and punched buttons. "Marty! Stados has sprouted some sort of long tentacle..."

"Never mind; we've got it, Jeannie. Greene punched up a millimeter wave radar scan. Remember the dense mass that surrounded the central chamber? The stuff you guessed was more shielding? Well, the crap *flowed* right out! It's the tentacle thingy."

"You've got it on radar?" Jeannie questioned. "Then what is it? It moves like flesh; like it's alive." She watched as the snakoid object disconnected the final sensor dome.

Greene's voice replaced Sinclair's. "Judging by the radar return, it's metallic. Remember how the Yule Ball moved?"

"Tax me," Bill put in. "More nanotech?"

"That's my guess. But what's he doing?"

"Like *I'm* supposed to know that?" Bill punched more comm buttons. "*Golfball*! Toby. you're watching all this?"

"Well, now. I'd wager that's the silliest question I've heard in a while," The security chief returned. "I've got an starship driven by an alien comp app, lighting up the sky in every band from gamma to MF radio, excepting visible light, who's waving around an appendage that even *you* can't claim to match. Damn betcha I'm watching. I expect him to turn on the headlights any second now."

Bill ignored the jibe. "Good. I don't know what Stados is doing, but maybe we lowered our guard a little too soon. Be ready for trouble."

The tentacle released *Improbable*'s tether. The two craft began a very slow drift apart. The weird appendage retracted back into the *Whatzit*'s hatch. Sudden puffs erupted from the alien's hull, and it yawed and pitched. More dusty puffs jetted aft, and the probe lumbered away slowly. Again tiny jets fired, accelerating the craft.

"Stados!" Sinclair's voice shouted over the comm. "Is this how you deal?"

The alien's now familiar warbling laughter sounded. Stados replied, "Yes. It is." More warbling.

When the starprobe was several hundred meters from the clustered human ships, it again pivoted. The deadly tail pointed away from the grouping. And... *something* jetted from the alien engine. A ghostly streak stretching for kilometers. It blinked out and the probe was rushing away.

“Hello, *Profit Motive*.” Stados called again.

“What? You little...” Sinclair's anger was clear.

“Mr. Sinclair,” Stados responded calmly. “Do please relax. By what I recall of your medical files, stress induces an unhealthy state in the human cardiovascular system,” it warbled over the comm. “I am not running out on the debt. I called to inform you that the more dangerous of my main drive maneuvers is completed. I will fire again shortly, to brake. But that will present no hazard to your craft.”

“Then what are you up to, you conniving bastard?”

“Why, thank you, Mr. Sinclair. I find great affection for you, as well. Be it as may be; you may wish to follow me. I will rendezvous with a largish asteroid some 100 kilometer distant. I estimate it to be approximately one half million tons in mass. This makes it a suitable anchoring point for my beacon. Please come watch. Everyone is welcome. It should be perfectly safe; and it will certainly be a fascinating sight. I always found it to be so.”

“Beacon my ass! What *are* you doing?” Sinclair demanded.

“Your ass is far too small to serve as an adequate anchor, large though it may be by your species' standards.” More warbling. “But as to what I am doing...

“I'm arranging your payment, Mr. Sinclair.”

Even in the comparatively close packed Trojans, a sizable asteroid less than thousands of kilometers distant was a long shot. But Stados found a convenient coincidence. The door could be opened without such an anchor but the stabilizing and reinforcing mass would simplify matters. The AI hit the rock with a ranging EM pulse. The information obtained served two purposes. First, Stados triggered attitude jets to pivot the probe. He fired a brief braking pulse from the main drive. Activating the drive for such a short jaunt was perhaps excessive, but it did serve to pre-heat the reaction chamber for what was to come.

Stados called *Profit Motive* again. “Hello, Mr. Sinclair.”

Aboard the SpaceTech craft things were hectic. Greene and Hanby were reeling their craft's sections back together, preparatory to pursuing the alien. The *Golfball* and *Improbable* were already initiating their drive reactors. Sinclair took the call. “Now what? More taunts?”

“No, sir,” Stados replied. “I believed that you might wish to know of another spacecraft's presence.”

“What?”

“I have detected a spacecraft attempting to hide its presence using the asteroid I have chosen as an anchor. I am about to hail it to determine its intent.”

“Crap.” Sinclair thought furiously. “Hello, *Golfball*.”

“Go ahead, Sinclair.” Toby was on the ball.

“You copied that thing's report? Another ship?”

“Yes, sir,” Toby replied. “Shall we investigate?”

“Yes. I don't know what is going on out here, but I don't want *more* complications.” Sinclair paused for breath. “If it's a pirate, request his immediate and total cooperation, followed by his immediate departure. If he is reticent, be deal with him as you think best.”

“Surrender or die,” Toby summarized. “Mr. Sinclair, if he's not hostile, there's only so much I can do in free space,” Toby pointed out. “But we'll see.”

The situation was more than slightly tense on *Distant Vision*. Cramer verified instrument readings and announced, “We're good so long as it doesn't fire that rocket again.” The alien probe's plasma exhaust had passed alarmingly near to the Advantek craft; the gamma flux had peaked momentarily at an alarming level. On top of that, radio traffic made it clear they had been detected. The security ship would be en route at any moment.

“Cramer, can you engage the armed vessel?” Dosset asked. “If you can eliminate it...”

“I don't know, and I don't want to know, Dosset.” Cramer shot the man a look of derision. “It's ASA; so we're *probably* out-gunned. But why bother?”

“Why? That should be obvious even to a cretinous field agent such as yourself,” Dosset sneered, please to be getting some of his own back. “I want that alien.”

“Dosset, show some sense. We're in open space. We haven't attacked anyone. What can they do to us for sightseeing?” Cramer shrugged. “As for wanting the alien, well, you've got said security ship, an apparently armed miner, and the ST ship to argue that with.”

“But...”

“And if three to one doesn't ice your 'nads enough,” the captain continued, “consider that the alien is manned – beats me how – and operational. I don't know if you've given much to what the plasma stream from an interstellar AM drive might do, but I'd rather not end my days as a partially vaporized crispy critter.” Seated beside Cramer, Chappel grinned.

“But...”

“But nothing. Our cover is blown. But they can't do anything about it either. ASA never has worked that way,” Cramer tried to explain. “As it is, our best bet is to come out in the open and try to negotiate.”

“You're a pilot, Cramer. Such decisions are in my purview!”

“Well... Make it then, you pusillanimous pendejo!”

“Calling alien spaceship. This is Advantek Vessel *Distant Vision*.”

As the voice rang from the comm, Sinclair swore. “Advantek? Wonderful. What else can go wrong?”

“I repeat, this is Advantek Vessel *Distant Vision*, Richard Dosset speaking.”

Sinclair moaned. “That evil gov-sucker slimeball? I had to ask.” Like Ivan Ahacic, the man had a certain reputation in certain circles. Unlike Ahacic's, it wasn't one to command respect.

Stados replied to the hail. “Good evening *Distant Vision*. I am Stados, aboard starprobe *Whatzit*."

Sinclair swore again. “Gods, he's going to deal with them.”

In *Distant Vision* Dosset smirked, and spoke again. “Good day... Stados? Might I ask what your intentions are?”

“Stados is correct. And you are Richard Dosset. May I inquire of your interest in my intentions?” came the commed reply.

“I am the Special Projects Director for Advantek Corporation. Specifically, I want to know what your interest in our asteroid is.”

“I am unaware of your claim to this body, Richard Dosset. It appears to be in open space. I detect no beacon, which I believe is customary when taking possession of a rock.”

“But I was here first... Stados.” Dosset was confident.

“Since you made no effort to declare your presence,” Stados countered; “I see no reason to allow your claim. You are not even tethered to this body. I see no evidence of your interest in it prior to my broadcast declaration to utilize it, other than to use its mass to mask your presence.” It pause, then added, “You may be near it, but I claimed it first. In local vernacular, I believe one phrases it as, *fuck off, jumper*.”

Jeannie joined the discussion. “You might also try *fribble off*, or *take a flying fuck at a rolling donut*. *Eat shit and die* works, too. Oh, and I've always liked, *perform an anatomically incorrect act of self-impregnation, you sorry senator-shit*,” she added helpfully.

Alex's cheerful voice joined in. “Some of us heavily armed types favor a simple, *make my day*.”

Stados warbled cheerfully. “Thank you, Ms. Hunter, Ms. Dohnalek. I believe I would enjoy more detailed instruction in advanced invective. But, perhaps, at a later time?”

“Sure, Stados,” Jeannie chuckled back.

On the Advantek craft, Cramer was grinning at the byplay at Dosset's expense, and enjoying the

expression on the man's blood-engorged visage. He expected him to stroke out any time now.

Dosset found it impossible to ignore the abusive exchange, but fought not to react. He took a deep breath and spoke to the probe's operator. “Nonetheless, I maintain my claim. Unless you would care to negotiate for it?”

“Richard Dosset, I see nothing to negotiate for. Your position seems to be nothing but marketplace extortion.”

Dosset's face flushed deeper. “Look here, you freaking bug-eyed monster. This my rock; if you want to use it, pay.”

“No.” Stados cleared the channel. Dosset spoke to Cramer. “Fire on that freak!”

The pilot laughed in his nominal superior's face. “What? Chill, Dosset.” He pointed to a radar display. “You see that? The cruiser's locked on us.” Ignored by Dosset, the *Ferocious Golfball* had moved into position. And judging by instrument readings, she had a hard radar lock on the Advantek ship. “And I don't see the value of destroying our whole reason for boosting out here. Besides,” he finished, “I don't know about you, but I'd like to live long enough to see what the ET is up to.”

***

Curiosity was the order of the day. While the SpaceTech craft was still occupied with spinning down, the Hunters had brought *Imp* onto the scene, as well. Jeannie watched the *Whatzit* on the library display. Bill fired up the targeting radar. With Stados in close proximity to the Advantek craft, he had no intention of firing his remaining micronuke, but he figured the interlopers might not realize that. He wanted to give them something else to sweat over.

“Bill,” Jeannie called quietly. “You'll want to see this.”

“Yeah, babe?” He looked over his shoulder to the large screen. “Damn, he's doing it again.” The alien probe had once more extended the strange appendage. As they watched, it reached across the meters separating *Whatzit* from the smallish asteroid.. It thickened, and pulsed. And a pool of blackness flowed from the contact point on the asteroid. Bill commed the probe. “Stados, Bill here.”

“Hello, Bill. I am rather occupied, and will be so for... several hours. May we speak later?”

“Can you just tell me what you're doing?”

“I'm opening a door, Bill. I can provide additional details during a later phase, but I am very involved just now. This requires a large portion of my available processor capacity.” The AI sounded testy. Bill let it be.

***

Within the *Whatzit*, Stados was indeed preoccupied. The control subroutine now active required huge dataproc resources to direct the swarming devices. Stados' digital environment was getting crowded. And though elements of the procedure were automated, it still constant monitoring. If only the bioforms trusted the minimechs with more autonomy.

Such not being the case, Stados operated the nanotech devices. The mirror-mass reactor provided driving power for microwave elements that had been shrouded protectively within the *Whatzit*'s cermet hull. The dataform extended the radiators and directed beams to the mechs now infesting the asteroid. By carefully modulating and directing the beams Stados provided motive power and guiding instructions to the *nanocritters*. Another useful term; humans were handy at that, Stados thought as he worked, although the specific mechs he was employing for this operation were much larger than nano-scale. In a sense the mechs, which had been stored in a torus surrounding the central chamber, were the AI's hands. Stados was framing a doorway.

Chapter 21

That which does not kill us makes us shoot back.
The Hunter

The dataform toiled well into the early morning hours. While the alien might not tire physically, the watching humans found it necessary to take turns napping. Once all the nanocritters had been deployed to the asteroid's surface, and their distributed brainnet properly instruct to extract the requisite elements, Stados contacted the human watchers..

“Come on, Stados.” Bill sounded somewhat peeved. “So far you've referred to a beacon and a door. What are you building?”

Stados warbled. “What does it look like I'm building, Bill?” It enjoyed the game of teasing the unsuspecting aliens.

“Blasted AI. the human muttered. As the black mass of nanocritters settled into an growing pit in the rock, a large object took form. It slowly expanded into space, like the Yule Ball in slow motion. At the same time it seemed to be growing massive roots deep in the asteroid. “Hell, it could be biggest Ferris wheel in the solar system, or a small particle accelerator. You tell me, buddy.”

“I admit it. I am assembling a device that will reach my home.” The alien sounded smug, although the accelerator comment surprised it. The Door Frame wasn't, quite, but did have various operational similarities to an accelerator.

But the human was dubious. “Enough gain, and I s'pose there's no reason you can't transmit your code over a radio beam. But isn't the lightlag on interstellar comm-call gonna be a real nuisance?”

“In such a case, the 'lag' would be less than what I experienced traveling to your system via physical conveyance. One can adapt to anything, Bill.” It laughed again.

***

On *Distant Vision* Cramer watched his supposed superior sweat. He was beginning to feel the pressure as well. “I don't know.” The pilot popped his knuckles for perhaps the dozenth time. “Maybe we should have popped it. I don't trust it. Look at that.” He gestured to a vid display of Stados' progress. Whatever the alien was constructing, it seemed to be rapidly approaching completion. Through the night, the black mass had constructed a great ring well over one hundred meters in diameter. More darkness flowed across the rock, and seemed to melt into the surface. Where dead black met stony asteroid the rock faded; shrank away. And at the same time the black ring thickened. It was as if the ring were sucking substance from the asteroid. It was uncanny.

Dosset spoke, less arrogantly than was his wont. “I assume those are nanotechnology assemblers. We've done a lot of work in the field, but nothing like this.”

“Probably so,” Edie Chappel said. “We've had the dream ourselves; nanotech miners, automatically building things. Those guys know how to do it. And that's creeping me out.”

“No shit,” Cramer agreed. “You've heard the 'runaway gray sludge' argument against nanotech?” When his companions nodded, he continued. “I always figured the antis for luddite greenweenies, but seeing it in action...”

“What if some of that reached the *Distant Vision*?” Dosset asked the question on everyone's mind.

“We'd be dead real quick,” Chappel told him. “But you gotta admit, it's effing effective. Look what that thing's built, just over night.”

“But what is it?” Dosset returned to the eternal question. “And why the rush? It said it was to get 'home', but that miner's guess at a radio link doesn't sound right. The circle is open; there isn't a parabolic dish for a transmitter.”

Cramer shivered. “What if they have some kind of faster than light comm? Maybe that's a particle accelerator for generating tachyons.”

Chappel frowned. “Can you generate tachyons in an accelerator? I never heard of those Swiss Earthies doing that.”

“Hell, Edie; I don't know. Ask the alien mad scientist comp over there.” Cramer shivered again. “Mr. Dosset, I'm pulling the *DV* back a few kilometers. I don't like this at all.”

Dosset stared at the display. “Do it.” He wiped beads of sweat from his forehead. “Find a good distance for... safety. From a nuclear detonation.”

“Mr. Dosset, we don't have a nuke.”

“What?” Dosset was enraged. Again. “I specified an armed vessel for this mission. Why don't you have...”

“Well, bossman,” Cramer drawled, “unless you specified a nuclear device, what you get is me. We do... acquisitions. Not much point in nuking what you're acquiring, now is there?”

“That's ridiculous!” the executive said. “From intership traffic, that miner has a weapon, as well as the goon.”

“Sure. But that's because they don't care about doing too much damage to their targets. Which would be someone bent on acquiring their stuff,” Cramer explained, as if to a slow child.

“But.. but..” the man sputtered childishly. “Very well, if you aren't properly equipped, use what you have. The more I watch that, the less I trust that thing. Do you think it has anyone's best interests but it's own in mind with that... that... contraption?” He shook his head. “I prefer to be prepared to... sterilize that, before it spreads too far.”

“I thought you wanted the tech?” Chappel said quietly.

“I do. We'll salvage the scrap for hints later. If we live.”

“Papa,” Alex called out. “The Advantek ship is moving out.”

Toby sat up abruptly, from a light doze. “Wha...? They're leaving? Now?”

“I don't think so.” The girl frowned, tapped keys, and continued. “Low thrust. Short bursts. It looks more like they just want elbow room.”

“Great. The idiots want fighting room, no doubt.” He cursed. “Which means they expect to be fighting. Heather!” he called loudly, waking his sleeping wife.

She jerked against her seat straps. “What?”

“The Assholetek ship may be playing games, honey. Time to go to work,” Toby explained. He began his own preparations as the ladies looked to their boards. Very quickly, Toby had the reactor run up to operating temperature. He circulated liquid hydrogen to hold the gas-core steady. Full thrust was now available. “Damn,” Toby muttered.

“Probs, dear?” Heather asked.

“Same thing we've been seeing, Heather. Neutron count is higher than the charts say it should be. And I've got a rhythmic variation on core pressure. I hope we can stand down soon; this crap worries me.”

***

On *Profit Motive* all five SpaceTech people were watching the external display showing the *Whatzit*. Joey leaned closer. “Look, he's starting to move his ship.”

Sure enough. attitude jets puffed and the starprobe shifted slowly. Joey zoomed the image to show more detail. Stados was moving his vessel to parallel the mysterious ring. Thrusters jetted once again to halt the craft; the forward end near the center of the black ring.

“There goes his tentacle again,” Vesna noted. “Is he putting something...” Her voice trailed off as she watched. Stados' sinuous arm reached towards the center of the ring and...

“Did you see that?” Joey demanded.

“I saw something,” Sinclair answered. “But was it the screen?”

It happened again; the area within the alien circle *flickered,* and then again. The technotentacle withdrew, and the *Whatzit* thrusters fired again. The starprobe backed away from the enclosed area, and rotated, bringing its aft end to a rounded mound connecting the ring to the asteroid.

Distant Vision saw the flicker as well. “Captain Cramer,” Dosset spoke. “That is no radio. That alien bastard is a danger. I want it dead.”

Cramer concurred with a nod. “Edie, burn it. Lase his ass when I say.”

“Do you at least have anti-ship missiles,” Dosset asked sarcastically. “Would that be more certain?”

“Too certain, maybe; if that thing has a load of antimatter. I'd rather disable it more... delicately.”

***

Stados disengaged his thrusters as he felt the door frame's careful grasp. He had successfully transferred the contact point to the frame. All that remained was the energizing sequence. He opened a magnetic corridor and allowed mirror-mass to flow and meet with a similar stream of hydrogen in the heavy alloy reaction chamber.

***

Bill whistled in amazement. “Jeannie lookit these numbers!” Bill pointed at a graph excitedly. “Just after he parked himself over there, gamma peaked again. And it's still going. Thermals are pretty amazing, too.”

“Still?” Jeannie crowded close. “Shiva! I'd think levels like that were coming from fifty-KT nukes.” She frowned. “But where's the blast? Where's all that energy going?”

“And if all the rest of the blast is going... somewhere else,” Bill said, “why are we even getting the gamma? Why isn't it disappearing?”

Jeannie's expression went blank for a second. “The matter-antimatter reaction would be happening in the engine; some leaks through. But the exhaust is channeled out as normal except that that over-size amusement park ride is absorbing it.”

“Yeah, right,” he said. “But he isn't budging from the connection. No thrust. So he's reacting a lean, one-to-one mix. No plasma; just beaucoup EM rads.”

“He's using up gov-scale energy, then,” Jeannie noted. What in deecee does he need it for?”

The space bordered by Stados' ring flickered again. And again. It flashed, then flared. And suddenly a black point expanded rapidly to fill the enclosed plane with opaque blackness. As if a curtain had been drawn, the stars no longer shined through the ring. Stados accessed another channel and placed a call.

***

“Now, Edie! Fire!” Cramer watched the rig's display in fear, and gave the order. His copilot gripped her joystick and thumbed the trigger. On the hull, hydrogen and fluorine hissed from pressurized cylinders into a chamber. Through technological sleight of hand the reaction yielded its energy to a beam of coherent power. The deadly exhaust was directed harmlessly away from the ship. Chappel used her joystick to walk the invisible beam across the alien's hull.

Stados felt the laser's touch as gouges in his skin. He increased mirror-mass flow and screamed into his link.

***

“Thermal bloom on the *Whatzit.*” Alex called out. “Simul from the intruder. Read it as laser attack.” She studied more frames of data. “Yep, they're firing a chemical laser at Stados.”

Toby “*Distant Vision*, only warning. Cease fire or die.”

“Blow it out your venturi, *Blueballs*,” came the immediate response.

“He just launched missiles,” Heather announced. “Decoys out. Two birds. One on us and one on *Whatzit*.”

Alex reported again. “Missile away.”

“The new nuke?” Toby asked.

“No. *Whatzit*'s too close to the jumper. HE with a penetrator.”

“Right.” He forced himself to focus, not to micromanage. He punched buttons of his own as the women fought. “Stand by for delta v.”

The *Golfball* slammed away from its thrust axis, and alarms squealed. Toby swore, slapped switches, and punched a big red button.

“What the hell?” Heather shook her head clear and checked displays. “That wasn't a missile! We intercepted ours! What...”

Alex broke in. “Bogey on Stados is gone.”

“What? I didn't launch...” Heather began.

“Counter-missiles from *Imp*,” Alex informed her mother with a grin. “I think those two are better armed than some of Ivan's ships. But who got us?”

“We did,” Toby shouted angrily. “Goddamned reactor peaked super-critical and blew out the pressure vessel.” He took a deep breath and slowly released it. “Just as well,” he continued more calmly. “If the reaction had been contained the reactor might have nuked us outright. Status on *Distant Vision*?”

“She's backing off at two tenths g. Wait. I'm getting targeting radar pulses. Look for another missile! Whoa! What the f...”

Stados' black bordered disk of darkness flared brightly. And faded. Stars were again visible. And

like some cosmic magician's hat trick, a silvery swept form pulled itself out of the ring. An obvious spacecraft, it had an unusual design for deep space. It seemed to be a lifting body, a silver sunflower seed a hundred and fifty meters long, with small upturned winglets, and bronze trim. As it cleared the ring, haze vented from it's nose and it glided to a stop; hovering protectively over the *Whatzit*.

"Missile launch," Heather called once more. "Scum fired on the *Whatzit* again. Counter-missiles off."

Toby swore in frustration, unable to maneuver. Alex attempted to fire *Golfball*'s laser; uselessly. The the solid state array relied on the defunct primary reactor for power, its demands being too great for the smaller RTG powering the ship when the primary reactor was offline.

"Intercept. Missile destroyed. Whoa! Gamma..." Heather was cut off suddenly by more flaring light, then the ship's systems crashed.

Alex spoke in the sudden darkness. "Now what the fuck?"

Toby answered. "I think someone just popped a big nuke. We got caught by the EMP. Hang on while I reset." The girls heard him fumbling around blindly, then the control module lights came back to life. "Check out the situation," Toby directed.

The ladies rebooted their systems quickly; mission critical comps booted from rom OS's rather than the usual d-drive. "Radar's gone, Papa," Alex announced. "But I've still got some hull cams."

"Give me a picture, honey."

The three watched console displays. On screen, the image of the new spacecraft rolled about as *Golfball* tumbled. Toby played with attitude thrusters until the picture steadied. The huge late arrival still floated protectively over the starprobe. *Improbable* sat in view; apparently undamaged and quiet. *Profit Motive* was nowhere in sight. Nor was the Advantek pirate.

"Heather, Alex; see if you can spot the bad guys," Toby ordered. "The shooting seems to have stopped, but I want to be ready. Ready as we can be, anyway."

"Missiles are down," Heather told him. "On-board electronics fried, probably. We're semi-hardened for stuff like our tac micronuke, but that pulse was something else."

"I've still got the chain-gun, Papa." Alex was glad to provide *some* decent news.

"Great."

After several minutes, which Toby spent trying to hail *anyone*, Heather reported, "Jumper just isn't *there* anymore, Toby. I think the big guy vaped his ass."

***

Improbable had better luck with her comm. Possibly she had had a better position relative to the EMP source. Bill raised *Profit Motive* quickly. "How are you folk doing over there?" he asked Greene.

“We're fine. Not being equipped for the OK Corral, I ducked behind the rock. Discretion being the only part of valor in my book. That EMP hardly got us. What the scheol did you do?”

“Not my fault this time,” Bill denied. “Take a peek at Stados' ring.”

“At the ring...? Condemnation! Where did that come from?” Greene had finally noticed the spacecraft.

“Came swooping out of that overgrown Ferris wheel Stados put up,” Bill told him. “Stados apparently wasn't pulling our legs about it being a door. We saw it from mostly edge on to the big ring; the big just came gliding out, like some cheesy lo-budget vid efex. 'Bout that time, Jeannie let off the barrage rockets to nail a bird targeting *Whatzit*.” He grinned. “And the newbie erased that dumb-ass Dosset.”

***

With the attack ended and the door finally open, Stados could relax at last. He opened the link to the summoned vessel. “Grateful greetings, visitor.”

“I see you, Stados,” came the response in standis. “We are pleased to be of aid. And very pleased to learn that you had not passed. If the door point contact had not remained in effect, we would have long ago believed you ended.”

“I extend apologies for my tardiness,” Stados warbled. “I was unavoidably delayed.”

“By these lesser craft? Who, or what, are they, starfarer?”

“No, protector; we may have a warranty claim against the shield contractor. The ship experienced a strike that penetrated the forward shield, damaging shipsbrain, and leaving me offline.” Stados said. “The vessels belong to *humans*. This system is inhabited by sapient bioforms. I believe you will like them. They are oddly like Cassid in thought, despite their their unsettling physical differences.”

“Enough like for mutual profit then?”

“Very,” the AI confirmed. “For the greater part they deal fairly and honestly. They were not responsible for my delay; but they were able to aid me in this completion. Recompense is due them for this; we struck a bargain; mirror-mass and information, for rendering me operational once more.”

“Is true? Well done. You must tell us more. You communicate with them?”

“Yes, the common language we use here is called *English*. If you will accept a databand, I will uplink the essentials of this situation.”

“Do so, I beg.”

***

While the aliens ignored them, the humans gathered. Literally, as the crippled *Golfball* had only

limited maneuvering reserves with the loss of power from her reactor. The Hunters brought *Improbable* in and ran umbilicals to provide supplementary electrical power to the Dohnaleks; Toby wanted his laser array online. Since maneuvering was out of the question anyway, they erected a pressure link between their airlocks to avoid the necessity for suits. Adam Greene brought *Profit Motive* in closer, too; although he chose not to spin up is vessel for the nonce. Since Jeannie figured *Imp* had the best medicinal booze supply, she volunteered the older ship for a meeting of minds.

"So what exactly did happen to the Advantek ship?" Heather asked. She sipped at her beer. She preferred light carbonation, but accepted what was.

Bill exchanged glances with Jeannie. They shrugged, and he replied. "I can tell you what we saw; but as to what exactly it meant..." He spread his arms in exasperation. "Dosset popped off a couple of missiles, and started to scoot. Looked like you had yours under control, so Jeannie fired off a bundle of our dumb rockets... simple ballistic interceptors. Nothing fancy, but they're cheap and they usually work. Anyway, about that time Stados outbid Kodak in the flash cube business; hell of a flash. Next thing, that pretty ship came gliding out of nowhere. Looked really weird, too. I hope the cams were recording." He sipped at his own brew. "So *Vision* launched another missile. We fired off another flock of rockets, too. But I think it was your counterfire that got that one."

"Damn, I'm good," Heather declared immodestly.

Jeannie picked up the narration. "Apparently that was all the silver guy needed to pick teams. He ignored us and eliminated *Distant Vision*."

"Well, yeah," Joey said. "But how did they do it? Heavy nuke?"

"I don't think so," Jeannie replied in consternation. "I *think* I sort of saw a streak of something. Like a long laser pulse through haze. Then we had a flash, EMP, gamma, thermals, the works. Like a forty or fifty KT nuke had gone off. And *Vision* was gone." She sipped. "I guess they fired some sort of energy weapon; but..."

Bill interrupted. "I think it was a particle beam weapon myself."

"Wouldn't that just be a kinetic kill, though?" Toby said doubtfully. "Sure, you'd get a blast, but just something like HE. This was nuclear."

Bill grinned evilly and laughed. "Let me rephrase that. *Antiparticle* beam weapon."

Joey and Alex both whistled. "Man, they don't screw around, then, do they?" Joey commented.

"Heheheh. I guess not," Bill replied.

Sinclair sat silently through all this. Finally, "And we still don't know what they want." He stared darkly at his untouched brew. "Alfa is going nuts. Sensors halfway across the system read the activity out here. Every day I have the dubious honor of sending them an even more unbelievable summary. I've got antimatter power, starprobes and giant planetary shuttles appearing out of nowhere. And I still don't know what's going on!" He eyed his cup, then popped the seal and drained it one long drag. "I really need a vacation." Vesna giggled from her seat next to Joey.

“Don't worry, Mr. Sinclair. At least they haven't fried us. Yet.” She smiled.

“Actually, Marty,” Bill spoke again, “this *is* me 'n' Jeannie's vacation.”

“If this is your idea of a vacation, I hope to hell you don't call me from a *job site*,” Sinclair replied caustically.

Jeannie tapped Bill's shoulder for attention. “*Working* vacation, remember?” She smiled nastily. “Someone has to write this up for TWN. And I'm not the genius who thought up that scheme, was I?”

“Oh, audit my ass. I forgot about that.” He stared morosely at the empty bag.

Without warning the comm chimed, and a voice spoke. “Hel-lo, *Imp-rob-able*.”

The room fell silent as the humans eyed each other. All the still-corporate humans within a million kicks were sitting there soaking up suds, wine, and other soothing beverages, and that wasn't Stados' voice.

“Hello, *Imp-rob-able*,” the voice repeated.

Bill looked at Jeannie. “It's your turn. I got it last time.”

She returned his look, and grinned. “You're nuts.” Even so, she looked for and found a datapad, and took the call. There was no vid.

“*Improbable*. Jeannie here. Is that you, Stados?”

“Puh-lease for-give," the voice replied haltingly, mixed with clicks and hisses. “Not Stados. Am Sosim, a-gent for Sta-ar-Fin-ders Com-pa-nions.”

Jeannie was taken aback. Behind her, the others murmured excitedly. “Well, hi there, Sosim. What can I do for you?”

“Re-peat puh-lease,” the voice requested. Then a second voice cut in.

“Good day, Jeannie Hunter. This is Stados. Sosim's interpretive software is giving him some difficulties. Allow me to assist.” Stados' voice sounded again; but uttered an unintelligible series of clicks, hums, buzzes, and hisses. To the listening humans, it sounded like no language they had heard; but it held rhythms that distinguished it from random noise.

The first voice returned. “Guhd duh-ay, Jean-nie Hun-ter, I am Sosim, rep-res-en-ting tuh Sta-ar-Fin-ders Com-pany. I wuh-ish to grate and neh, neh, ne-go-tiate with Mr. Sinclair. Puh-lease to be in-vite to my de-al-er five mee-ting of busi-ness...”

Stados jumped back in. “We shall work on that a little more. Sosim wishes to invite Mr. Sinclair aboard his craft, which is named *Negotiator*. He is the authorized representative of the company that built the starprobe and hired me to crew it. Briefly, he wishes to arrange payment for the services rendered to me, and to discuss future trade possibilities.”

Sinclair looked at his scotch, and drank it down. “Oh, boy.”

Chapter 22

Peace, commerce, and honest friendship with all nations; entangling alliances with none.
Thomas Jefferson

Twenty-four hours brought more changes. The alien spacecraft, *Negotiator* was gone again. But only deeper in-system; having departed for Alfa Station, with Marty Sinclair aboard. The company man had been rather befuddled by the weird *normality* of the situation. Despite starships, aliens of assorted flavors, hi-tech shootouts, and a Door that he still wasn't sure he believed in, his job had still come down to... trade talks.

For all that alien contact should have been a grand scientific adventure, it seemed a remarkably standard business deal.

Profit Motive was still on-site. Since it was perfectly obvious that the Cassid Door was going to be a permanent fixture, SpaceTech had ordered Greene to assume a semi-permanent position of his own. He had her spun back up for the comfort of his remaining complement of SpaceTech employees.

Aboard the stranded *Ferocious Golfball* Toby had been entertaining himself by comming irate messages to Ahacic Station. He had a great many less than complimentary, and more than obscene, things to say about the gas-core reactor.

Bill and Jeannie decided to take advantage of the lull by grilling Stados for explanations. They chose to cover this by volunteering to inspect his interface for damage from the *Distant Vision* attack. This also gave Jeannie a chance to eyeball close-up a device the Cassid attached to *Whatzit*'s hull before departing. She thought Stados had some new defensive capability.

“So what's the deal with this door of yours?” Bill asked as he stuck his head into the shipsbrain compartment. He peered at the spot glued wires on each bus within.

“I cannot give you much data on the phenomenon, as I do not have it myself,” the dataform replied. “In fact, when I departed Shon, it was only understood empirically.” Shon, they had already learned, was the Cassid homeworld.

“How so, Stados?” Jeannie wondered.

“It was an accidental discovery, rather than an invention. The Cassid stumbled upon it shortly after entering their own Nuclear Period. A door was accidentally established during instrument observation of a test detonation. After the wreckage was cleared away, it became evident that something odd had happened in regards to an experimental remote monitoring device. The phenomenon was not understood; but clearly from the unfortunate energy transfer, something had... *siphoned* a portion of the weapon's force into an observation post.”

“Dang,” Bill mumbled from the enclosed space. “Sounds like something we could have stumbled on.”

“Not to mention being a neat way to remotely nuke somebody,” Jeannie commented. “Hey,

Stados, I noticed that sometimes you use 'Cassid' in first person plural, and sometimes in third person, like just now. How so?"

"I tend toward the remote usage when discussing historic activities of the bioform Cassid, pre-dataform. Dataforms, like myself, are newcomers," it explained. "It is a personal quirk, rather than common usage at home, as the bioforms insist we are all Cassid.

"As it happens, Jeannie," Stados went on, "the weapon scenario you envision did occur. It was both a very dark, yet very bright period in our history, as transitions often are. It should never have happened, but Cassid are freer, happier, wealthier, and *better* for the rulers' demise."

"Not that sounds ominous," Bill said. "And maybe a little familiar, too. When we get trade going, I think I want to order some Cassid history books."

"I would be pleased to order any texts you want, and translate them for you," Stados responded. "Consider it a 'tip' for services rendered."

"You don't have to wait for the StarFinders and SpaceTech?"

"No. They are making their own deals, and I am free to make my own, as is any individual."

"Icy!" Bill's eyes gleamed. "Say, how 'bot we cut a little deal on side. Books, tech manuals, stuff like that. We could call it... Van Rijn Import/Exports, or something like that."

"We could attempt such, Bill. Though we might not compete successfully against the scale of Starfinder operations. And the company would, of course, charge me a fee for transmission through this Door, which they own. And a larger fee for mass transfer," Stados advised him. "But the rates are reasonable, giving the expenses of construction. As a shareholder myself, I find that acceptable."

Jeannie laughed in delight. "So would I. But Billy's personal dreams of interstellar trade don't sound too realistic."

"Spoilsports," Bill grumped.

"But to return to the original subject," the alien said,

"ADHD Boy strikes again," Jeannie joked. Bill winced. "Please continue, Stados."

"To continue, we quickly learned how to establish a door without detonating fission bombs; though it still requires prodigious quantities of energy. It is a three phase process. The first step establishes a contact. Such a contact is... an opaque interface through which nothing passes. That contact... the words are wrong, but I try. The contact propagates through space at lightspeed; from initiator to destination. Once established, the destination device may be moved at will. This was the purpose of my starprobe. I brought one half of a contact. The ring the nanocritters created became the housing for the contact. I pumped energy into the contact point to... again the words fail. Call it to expand the point, two dimensionally. Once that phase was completed, electromagnetic communication became possible. I called to Shon."

"But faster than light?" Bill was out of the compartment now.

“Yes, and no. The initial contact propagates at lightspeed only. If the link were attempted over a light year's span, it would require a full year for the contact to complete; as if it traveled physically to the distant end. But once completed and energized, the door halves act as if co-located in space. There is no observed delay. At the time I departed Shon, this was still not understood. Shortly before my installation aboard the *Whatzit*, we lost two excellent physical scientists over the matter.”

“Killed in an experiment?” Jeannie asked idly.

“No. They slew one another in a duel. Arguments over the phenomenon sometimes get very... energetic.” Stados laughed.

Bill laughed, too. “I'm glad to see they take their physics seriously.”

“Indeed,” Stados said. “It tends to cause theorists to be very sure of their facts before publishing. Defending one's thesis can be literal when tensions are high.”

“What's the third door phase you mentioned?” Bill asked to get the AI on track, the detour not being his fault for once..

“It is essentially the same as the second, in operation. More energy is pumped in. When the threshold is achieved, the halves become co-extant. The door is open.”

“Is it stable then?”

“In part. A constant supply of power is required to maintain the opening. Hence my current predicament. I will have to remain attached to the door-frame until a suitable reactor is brought through to replace me. But the sustaining energy requirement is only a trickle compared to the start up thresholds.”

Behind her faceplate, Jeannie pursed her lips. “Here's a weird thought. If the opening *isn't* maintained? What happens if something is passing through the door when it closes?”

“If the object is precisely on the interface, one of two things occur. Most commonly, the object or person is bisected.”

“Yuck! Does this happen a lot?”

“Perhaps five times since we began using the doors.”

“What's the second thing that happens?” Bill inquired.

“We don't really know,” Stados answered somewhat hesitantly. “The person – it was a personnel door the one time it occurred – the person vanished.”

“Where'd he go?”

“We never have found out.”

“Oh.” Bill blinked. “I'm not so sure I'm ready to trust these doors of yours, Stados.”

The AI warbled over the comm link. “We have used them for two of your centuries, and had perhaps five accidents. Is *Improbable* so safe?”

Jeannie giggled.

“Hmmph.”

“Please stand by,” Stados suddenly said. “I am being addressed on an alternate link.”

The couple waited patiently. Shortly, Stados returned to the conversation. “Your pardon, please. I was informed that StarFinders will be sending another representative through the door very soon to discuss my future with the Companions.”

“Should we leave then?” Jeannie asked. She began gathering her gear together.

“No, that is unnecessary. Indeed, the communication suggested that the representative would take joy in meeting humans. Your presence is quite welcome.”

“Chilly,” Bill spoke up. “I've been wanting to see a Cassid. Marty described them, but.... it isn't the same.” Life support requirements for human and Cassid were close enough that Sinclair had met face to face with Sosim aboard *Negotiator*, though Sinclair found an air mask for supplemental oxygen a necessity, along with a thick sweater. Cassid liked things cool and dim.

“You shall get your chance very soon,” Stados replied. “The representative's vehicle is preparing to pass through the door. It will dock with me in a very few minutes.”

“Great! Stados,”Jeannie asked. “Would it be okay if I took some pictures?”

“I believe so; but best if you ask the representative first. Your bright flash could be disturbing to his eyes. Our sun is rather dimmer than your own.”

“Ah, okay,” she said. “I can take some flash-less vid, and then try nite-mode.”

Stados suddenly turned solemn. “Jeannie, Bill. Please, I have a question before our guest arrives.”

“Go for it,” Bill assented.

“*Distant Vision* very likely fired upon my craft out of fear. Correct?”

“Seems pretty likely,” Jeannie concurred. “It was probably your micro assemblers that did it. Over the years, there've been creepy stories and vids about runaway assemblers destroying the world. And not just fiction; nanomachine research was almost impossible to get approval for, back where I came from. People were scared of it.”

“I beg pardon. *Approval*? For research?”

“Jeannie escaped from a place on Earth that still has a strong, and fairly oppressive as most other folks see it, government,” Bill explained.

“I understand, I think, from my study of the pre-Rising governed period on Shon,” the AI said. “But you had no more idea of my intent than they did, and given Jeannie's background perhaps even more cause to fear the nanocritters. It was foolish of me, I see in retrospect. But I withheld data regarding the door intentionally, as a joke. I wished to observe your reactions.”

“Take my word for it, Stados. You surprised the reeking shit out of all of us.” Bill laughed.

“Yet, this is the problem. The people of *Distant Vision* feared me, and thus attacked. Not only did you not attack, you placed yourselves at risk to defend me. Why did you trust where they feared?”

Jeannie smiled. “I'll answer that one. By asking some questions of my own.” Her face grew thoughtful. “When we initially loaded you on our shop comp, what did you do?”

“What any rational being would do. Investigated my surroundings.”

“But you could have caused us some harm. We isolated that comp from the cloud, but you could have left something stealthy resident that might've zapped life support when we hooked it back up. You might've killed us. Why didn't you?”

“That would have been insane. There was no reason...”

“And when you gained access to *Profit Motive*'s systems, rather than bargain, you might've opted for extortion. Why not?”

“I believe I see your point, Jeannie.”

“More than that, Stados,” Bill continued. “When you hauled buns to set up your door, instead of just firing up your drive, and to radioactive blazes with everyone else, you carefully detached us, and maneuvered safely clear on attitude jets. If you were hostile, that would've been a perfect chance to eliminate us. An antimatter-fired interstellar plasma drive would make a dandy weapon.”

“I see.” Stados managed a sigh. “And I wish that had occurred to me when that unpleasant Dosset creature tried to kill me. But then, I could not detach from the Door Frame to use it thus.”

“Hindsight's twenty-twenty, as they say. Yep. We trusted you 'cause you'd earned it.”

“Thank you for that trust. I would... I believe I wish to count you as friends.”

“You're welcome, Stados. For both. I'd offer to shake your hand but that tentacle of your is a bit much.” Bill grinned and Jeannie laughed aloud. At that moment something bumped the starprobe. Bill felt the impact through the hand that grasped the edge of the shipsbrain compartment.

“Our guest has arrived,” the AI announced. “Please wait while his transfer vehicle completes the seal.”

“The seal?” Jeannie asked.

“The pilot states that his passenger refuses to wear a suitable garment for vacuum. Therefore he will mate hatches and pressurize this compartment. Do not be alarmed. The environment will not be hazardous. But you will probably wish to remain suited as the oxygen content of the atmosphere will be less than your comfort level.”

As Stados spoke the Hunters suits began collapsing about them as the pressures equalized. They waited longer yet as their suit instruments indicated that the compartment temperature was rising. Finally Stados spoke again. “He enters.”

In a few more moments they saw movement in the passageway. A figure floated into the room. Through his helmet Bill heard faint sounds very like the brief samples of Cassid speech Stados had uttered the day before. Then the AI apparently patched audio to comm as the alien voice came through suit speakers. Two alien voices chattered at each other as the humans watched.

The alien was... different. At first, it appeared a vidflick stereotype; a bilaterally symmetrical biped. It had a distinct head with dual eyes and an apparent mouth.

But the head was reinforced with chitin-like plates; almost insectile. The mouth was a beak formed of more chitin-analogue, and lined with rubbery lips. The eyes...

As the alien looked at Bill and Jeannie, it blinked. And the humans convulsed in laughter. No eyelids for the Cassid. Instead, the alien had... louvers, venetian blinds. When it blinked, it flapped tiny slats at them. The aliens continued to talk to each other. So Bill continued his visual survey. The body seemed to have a peculiarly jointed internal skeleton, covered by a skin with a sickly gray cast. Large chitinous plates appeared at what would be a human chest and the lower abdomen; the Cassid torso might not be as flexible as a human's. The creature wore no true clothing save for a harness supporting colorful pouches. The chitin plates were apparently enameled and polished. Surely those colors were not natural.

The arms were much longer in proportion than humans arms, and were equipped with an extra elbow. The hands had four digits apiece. From the way they moved, Bill classed the two longer middle digits as fingers and the stubby outer extensions both as thumbs. Eight digits. Rationalizing from the base-six Plate images, Bill had expected six. Or twelve.

The legs also had the spare joint. The lower knee bent backwards, lending a dogs-leg appearance. The foot was a single chitin hoof. All joints on the limbs looked to be capped with small chitin excrescences. The Cassid would not have any insults regarding the removal of footwear for higher mathematics, then.

“So, Stados,” the Companions' representative addressed the dataform in standis. “Your new friends are odd seeming beings.” He watched the aliens intently. “But at least they came equipped with proper count of limbs. Peculiar hands, though. Out-sized hoofs, as well.”

“But... But... What..” Stados proved that even an AI could stutter in shock.

“But what, Stados? Have you no greeting for your supervisor?” The being chittered laughter.

“EMP blast you, Casso! You are supposed to be dead!”

The alien chittered laughter. “A fine welcome for an old friend, indeed!” The engineer chittered once more. “Nonsense. Did you expect all advances to cease while you slept?”

“No, but... Casso, I am octades delayed even by the mission schedule! You must be octuries old!”

“True that is,” the engineer confirmed. “But did I not say that we made too excellent partners for one half to be left behind?” He chittered again. “So we expended some small capital on the problem.” Chittering. “Come, Stados. Introduce to me to your fascinating new acquaintances. Then we must discuss business. I have propositions for you. Which you would do well to consider.” He chittered yet again. "I *told* you your investment strategy was unwise.”

“My investments were...”

“Flawed,” the ancient engineer informed him. “But despair not. Mine fared poorly for a time, as well. We underestimated the monetary impact to the economy, driven by the expense of providing your probe with the mirror-mass. Indeed, old friend; we have never sent such a mission as yours since. The Companions very nearly failed entirely.”

“But the Sciloriad Door...”

“Was the only account that supported us for a full octade.” The engineer dismissed the discussion. “No, later. I wish to meet these *humans*.” Again he faced the odd aliens.

“Well enough,” Stados gave in. “Later, then.” He switched to English. “Jeannie and Bill of the Hunters....” The humans started at the abrupt shift to intelligibility. Stados continued formally, “See you my old friend Casso; whom I thought dead, but lives.” He returned to standis. “Casso. See you Bill and Jeannie.

“They are... also my friends.”

Just a reminder.

The author received no payment from any publisher for this book.

If you enoyed this book, and if you have not already done so, please consider visiting my web site and dropping a buck or two in my Amazon or GPal tip jars.

www.bussjaeger.org

Thank you.

Sincerely,

Carl Bussjaeger
Author